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Helene and Doris

Preface

The present book *Natural Mycotoxin Contamination in Humans and Animals* ensues as a second edition of *Mycotoxins and Their Metabolites in Humans and Animals*. In contrast to the former volume this second edition focuses on the natural mycotoxin contamination of humans and animals. The artificial mycotoxin contamination of animals has been canceled. The numerous publications dealing with this theme would be beyond the scope of this manual and may be confusing to the reader. More than 460 documented cases of natural mycotoxin contamination in humans and animals verified by the corresponding publications have been found.

Mycotoxins are secondary toxic mold products which are widespread in foods and feeds. The already published books *Mycotoxins in Feedstuffs* second edition and *Mycotoxins in Foodstuffs* second edition give a good overview. It is estimated that 4.5 billion of the world's population are exposed to mycotoxins. They can be found in temperate as well as in continental climates. But, especially, in low-income countries (e.g., parts of Africa, South-East Asia, Central and South America) people are chronically exposed to high levels of mycotoxins. In these countries staple foods like groundnuts and other nuts, maize as well as other cereals are especially affected. E.g., in West Africa the population lives in part on these staple foods. Additionally, in these countries human breast milk is contaminated by aflatoxin. So aflatoxin contamination of humans starts in utero and continues throughout life. Besides, infection with hepatitis B virus (HBV) exposure to high levels of dietary aflatoxins is a major risk for human hepatocellular carcinoma (HCC) in these countries. But also low levels of aflatoxin ingestion can cause a suppression of the immune system and increase susceptibility to diseases in humans as well as animal species.

Besides their acute toxicity, mycotoxins have other harmful effects. They are, e.g., cytotoxic, genotoxic, hepatotoxic, nephrotoxic, mutagenic, neurotoxic, and teratogenic. Human toxicoses due to mycotoxins have been reported, e.g., in China, India, Japan, Kenya, Korea, and Russia. If optimal conditions of temperature, humidity, and a suitable substrate prevail, mycotoxins are produced on agricultural commodities in the field, in storage, and/or during processing. Because mycotoxins are known to have these detrimental effects, many countries have set legal limits for these toxic fungal metabolites in order to limit their intake.

Especially, aflatoxins, fumonisins, ochratoxin A, deoxynivalenol, and zearalenone are of major importance contaminating a wide range of food products around the world. Mainly, they are of plant origin. Foodstuffs originated from animals, except milk and derived products, show a lower contamination rate. Furthermore, the mycotoxin concentration is usually low. Therefore, food items of animal origin generally pose a minor danger to consumers. However, the milk and breast milk mycotoxin AFM_1 which is also found in milk-derived products, can concentrate in these foods. In this connection, the contamination of babies via breast milk (mainly AFM_1) in different parts of the world should not be underestimated. Babies' capacity for biotransformation of carcinogens is generally slower than that in adults. By comparison, foodstuffs of plant origin play a major role in the mycotoxin contamination of human beings. This mycotoxin contamination is directly well documented. Indirectly it is proved by the publications showing mycotoxins in human and animal organs and fluids presented in this book.

Besides the aforementioned mycotoxins many more toxic fungal metabolites do exist, of which all of them pose major or minor danger. They are of great concern from a food perspective regarding human exposure.

This book summarizes results of publications dealing with the natural mycotoxin contamination of humans and animals. Furthermore, results of articles documenting mycotoxin contamination of pets are presented. Moreover, the book gives in part advices whether anti-mycotoxic substances are effective in reducing mycotoxin contamination in men.

Physicians will have a fast and comprehensive overview of countries in which mycotoxin contamination of humans is predominant and which mycotoxins at what concentration are found in human organs, tissues, and fluids. Veterinarians will be informed about the type of mycotoxin and the concentration found naturally in animals. More detailed information (reading the corresponding article) is presented if the index number referring to the corresponding publication at the end of the book is used.

This book may be suitable for physicians, pathologists, epidemiologists, veterinarians, nutritionists, livestock breeders, pet keepers, farmers, the food and feed industry, institutes (e.g., consumer production), ministries (global), libraries, hospitals, health ware stations, UNO, mycologists, mycotoxicologists, microbiologists, biologists, and students of corresponding fields.

The volume exclusively comprises articles treating concentrations of mycotoxins in humans or animals which are of natural origin. Publications or data which express mycotoxins in % values or in other ways are not considered. All articles presented are available as publications of German Scientific Libraries or/and the U.S. National Library of Medicine National Institutes of Health. Articles cited in this book have been selected by preference where a declaration of a mycotoxin concentration or any advice of it is given in the title. Nevertheless, also some articles with no concentration declaration in the title but in the running text are cited. Beside this, only publications written in English have been used. Exceptions exist if an article shows a good and meaningful summary and/or tables in English.

How to handle the book

The different mycotoxins in humans, which can predominantly be found in organs, tissues, or fluids, are listed up and classified by the fungal genus/era which produce/s them. This is also true in the case of animals. Each mycotoxin can furthermore be looked up for natural presence at the end of the book (Tables 1–7).

Each declaration of the mycotoxin contamination of humans or animals comprises six main information:

incidence:	3/7 = 3 positives for e.g. aflatoxin contamination in relation to 7 investigated
sample composition:	distribution of the tested people, animals, organs, fluids, etc.
sample origin:	location, where the sample/s come/s from
contamination:	natural contamination
concentration range:	residue values of the mycotoxin
country:	origin of the publication

Usually the highest mycotoxin value or the lowest and the highest value of mycotoxin contamination are given. The presented concentrations (measuring units) occur in the way they are presented in the published papers. If a variant of a trial should not be listed "no contamination" is recorded. In some cases a variant may be stated although mycotoxin concentration was not detected.

Each item is marked with an index number which is located behind the name of the involved country/countries where the publication has been carried out. This index number stands for the article where the presented results can be checked. It occurs again in the numerical bibliography. The index number refers to the title of the corresponding article. The literature is additionally arranged according to the name of the first author of a publication in the alphabetical bibliography.

If concentration of milk mycotoxins is given this milk more or less directly comes from lactating animals (natural contamination). Additional information about natural mycotoxin contamination of milk, e.g., processed milk (pasteurized, UHT-milk, etc.) can be found in *Mycotoxins in Foodstuffs* second edition. Besides these data of natural mycotoxin contamination data of "cow milk," "human breast milk," "pig kidney," "pig serum," etc. already in part occur in the book *Mycotoxins in Foodstuffs* second edition. For completeness these values as well as newer data have also been published here.

This book is a good reference text for mycotoxin contamination in humans and animals. For detailed information the more interested reader is referred to the points "Co-contamination" and "Further contamination" and, in the end, to the article itself.

The point "Co-contamination" lists, depending on the sample/s investigated, whether two or several mycotoxins contaminate the same sample/s.

The point "Further contamination" gives additional information of other organs, tissues, fluids, etc., which are also contaminated by a mycotoxin/s. These further data of an article can also be found in the present book. For easier finding the reader has to keep in mind, e.g.,

"Further contamination": **Human kidney, AFB_2, literature[2], no EFDV**

- title of item: Human kidney
- mycotoxin: AFB_2
- index number: literature[2]
- specification: no EFDV

With these facts all contaminated/co-contaminated organs, tissues, fluids, etc., presented in the original publication can be found in this book. Furthermore, mycotoxins contaminating the same organ can be determined using this book. Additionally, these data are marked with an index number at the end of the point "Further contamination." With this index number the corresponding article can be selected in the numerical bibliography.

Bonn, Germany Martin Weidenbörner

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My family, especially my wife, is thanked for the patience, valuable advice, and support it gave me in writing this book. I also wish to thank Mrs. Renate Frohn and Mrs. Ursula Kleinheyer-Thomas as well as the whole staff from the Bran Library for Medicine, Science and Agricultural Science, Bonn University for very good support in searching and finding the corresponding publications. I also appreciate my father's very careful review of parts of the manuscript. I also thank my son Vincent as well as Dr. Ursula Monnerjahn-Kabach for valuable advice.

Contents

Abbreviations

af	Affected
AF/AFS	Aflatoxin/s
AF-AA	Aflatoxin-albumin adducts
AFB-AA/AFB$_1$-AA	Aflatoxin B$_1$-albumin adducts
AFB$_1$-eq	Aflatoxin B$_1$ equivalent
AFB-Gual	2,3-Dihydro-2-(7´-guanyl)-3-hydroxy AFB
AFB$_1$-LA	Aflatoxin B$_1$-lysine adduct
AFB-N^7-Gua	Aflatoxin B$_1$-N^7-guanine
AFB-NAC	Aflatoxin B$_1$-mercapturic acid
AFB$_1$	Aflatoxin B$_1$
AFB$_1$-FAPY	Aflatoxin B$_1$-formamidopyrimidine
AFB$_2$	Aflatoxin B$_2$
AFG$_1$	Aflatoxin G$_1$
AFG$_2$	Aflatoxin G$_2$
AF-LA	Aflatoxin B$_1$-lysine adducts
AFL	Aflatoxicol
AFM$_1$	Aflatoxin M$_1$
AFM$_2$	Aflatoxin M$_2$
ALRI	Acute lower respiratory infection
ALT	Alanine aminotransferase
BMI:	Body mass index
ca	Case/s
CKDue	Chronic kidney disease of uncertain etiology
CFS	Chronic fatigue syndrome
CGN	Chronic interstitial glomerular nephropathy
CI	Confidence interval
CIN	Chronic interstitial nephropathy
CINI	Chronic interstitial nephropathy (unknown aetiology)
CIT	Citrinin

CVN	Chronic interstitial vascular nephropathy
col	Collected
conc	Concentration
comp	Composition
DOM-1	Deepoxydeoxynivalenol
DON	Deoxynivalenol
DON-G	Deoxynivalenol glucuronide
DON-3-GlcA	Deoxynivalenol-3-*O*-glucuronide
DON-7-GlcA	Deoxynivalenol-7-*O*-glucuronide
DON-8-GlcA	Deoxynivalenol-8-*O*-glucuronide
DON-15-GlcA	Deoxynivalenol-15-*O*-glucuronide
3-AcDON	3-Acetyldeoxynivalenol
EFDV	Encephalopathy and fatty degeneration of the viscera
ELISA	Enzyme-linked immunosorbent assay
EN	Endemic nephropathy
ENA	Enniatin A
ENA_1	Enniatin A_1
ENB	Enniatin B
ENB_1	Enniatin B_1
ESRD	End-stage renal disease
eq	Equivalent
FB/FBS	Fumonisin/s
fDON	Free deoxynivalenol
GLI	Gliotoxin
GSTM1	Glutathione S-transferase mu 1
GTP	Green tea polyphenols
H	Hour/s
HBC	Hepatitis C virus
HBV	Hepatitis B virus
HBeAG	Hepatitis B e antigen
HB_SAg	Hepatitis B surface antigen (status: carrier or non-carrier)
HCC	Hepatocellular carcinoma
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
HO-CIT	Dihydrocitrinone
HPC	Human papilloma virus
HPLC	High-pressure liquid chromatography
HPLC-f	High-pressure liquid chromatography with fluorescence detection
HT-2	HT-2 toxin

IA	Invasive aspergillosis
IDMS	Isotope dilution mass spectrometry
IMMP	Imported Meat Monitoring Programme
KIN	Karyomegalic interstitial nephritis
LOD	Limit of detection
LOQ	Limit of quantification
MPN	Mycotoxic porcine nephropathy
ncol	Not collected
neg	Negative
NEO	Neosolaniol
no	Number
NWFP	North West Frontier Province
OC	Oesophageal cancer
OTA	Ochratoxin A
OTA ME	Ochratoxin A methyl ester
4R-OTA	4-Hydroxyochratoxin A
OTα	Ochratoxin α
OTα ME	Ochratoxin α methyl ester
OTB	Ochratoxin B
OTS	Ochratoxins A, B, and C
PA	Penicillic acid
PEA	Penitrem A
PEE	Penitrem E
PEM	Protein-energy malnutrition
PLC	Primary liver cancer
pos	Positive
pr	Present
RCC	Conventional type renal cell carcinoma
Rf	Ratio of fronts
ROC	Roquefortine C
sa	Sample/s
TLC	Thin-layer chromatography
THO	Thomitrem
tr	Trace/s
TRICHO	Trichothecene/s
T2TRI	T-2 triol
UC	Upper tract urothelial carcinoma
wt	Weight

ZAL	Zearalanol/s
α-ZAL	α-Zearalanol (zeranol)
ß-ZAL	ß-Zearalanol (taleranol, teranol)
ZAN	Zearalanone
ZEN	Zearalenone
ZEN-14-GlcA	Zearalenone-14-*O*-glucuronide
ZEL	Zearalenol/s
α-ZOL	α-Zearalenol
ß-ZOL	ß-Zearalenol

Notation

kg = kilogram
mg = milligram = 10^{-3} g; 1 mg/kg = 1 : 10^{6} = ppm = parts per million
µg = microgram = 10^{-6} g; 1 µg/kg = 1 : 10^{9} = ppb = parts per billion
ng = nanogram = 10^{-9} g; 1 ng/kg = 1 : 10^{12} = ppt = parts per trillion
pg = picogram = 10^{-12} g; 1 pg/kg = 1 : 10^{15} = ppq = parts per quadrillion
l = litre
ml = millilitre = 10^{-3} l; 1 ml/l = 1 : 10^{3}
µl = microlitre = 10^{-3} ml; 1 µl/l = 1 : 10^{6} = ppm = parts per million

Human

Human amniotic fluid may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 1/1*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.02 μg/l, sample year: November 2011, country: China[226], *1 pregnant woman

- Co-contamination: 1 sa. co-contaminated with AFB_1 and OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human amniotic fluid, OTA, literature[226]; Human breast milk, AFM_1, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 4/22*, sample comp.: people from Germany, sample origin: hospitals, company outpatient clinics and other public health institutions, Germany, contamination: natural, conc. range: <0.06–0.13 ng/ml, sample year: probably end of 1990s, country: Germany[1], *healthy volunteers: 16th week of pregnancy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[1]

incidence: 1/1*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.25 μg/l, sample year: November 2011, country: China[226], *1 pregnant woman

- Co-contamination: 1 sa. co-contaminated with AFB_1 and OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human amniotic fluid, AFB_1, literature[226]; Human breast milk, AFM_1, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM, HT-2, FB_1, FB_2, and ZEN, literature[226]

Human bile may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 3/4*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**–8 μg/kg, sample year: unknown, country: USA/Thailand[2], *children with EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, Human feces, Human intestine, Human kidney, Human liver, Human stomach, AFB_1, AFB_2, literature[2], with EFDV

incidence: 2/6*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**, sample year: unknown, country: USA/Thailand[2], *children dying from causes other than EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, Human intestine, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human brain, Human kidney, AFB_1, AFB_2, no EFDV

For detailed information please see the article.

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Human blood may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxicol

incidence: 3/461*, sample comp.: people from Ghana, Nigeria, and Kenya, sample origin: unknown, contamination: natural, conc. range: 177–280 ng/l, Ø conc.: 223.7 ng/l, sample year: unknown, country: UK[4], *cord blood sa. from babies

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[4], cord; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 1/188*, sample comp.: people from Ghana, sample origin: Accra? (capital), Ghana, contamination: natural, conc.: 117 ng/l, sample year: unknown, country: UK/Ghana/Nigeria[253], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1 & AFB_2, AFG_1, AFG_2, AFM_1 & AFM_2, and AFS, literature[253]; Human breast milk, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[253]

Aflatoxin B_1

incidence: 13/125*, sample comp.: people from Kenya, sample origin: unknown, contamination: natural, conc. range: 89–11,574 ng/l, sample year: unknown, country: UK[4], *maternal blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], maternal; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 6/77*, sample const.: people from Nigeria, sample origin: unknown, contamination: natural, conc. range: 553–10,390 ng/l, Ø conc.: 3,707.66 ng/l, sample year: unknown, country: UK[4], *maternal blood sa. (detected at delivery)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], maternal (delivery); Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 20/461*, sample comp.: people from Ghana, Nigeria, and Kenya, sample origin: unknown, contamination: natural, conc. range: 185–43,822 ng/l, sample year: unknown, country: UK[4], *cord blood sa. from babies

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 64/423*, sample comp.: people from Singapore, sample origin: The Blood Transfusion Service, Ministry of Health, Singapore, contamination: natural, conc. range: 3.0–17 pg/ml, Ø conc.: 5.4 pg/ml, sample year: unknown, country: Singapore[11], *normal subjects (342 male (53 af.) and 81 female (11 af.) persons)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFG_1, literature[11]; Human liver, AFG_1 and AFM_1, literature[11]

incidence: 2/302*, sample comp.: people from Singapore, sample origin: The Blood Transfusion Service, Ministry of Health, Singapore, contamination: natural, conc. range: 7.5–7.9 pg/ml, Ø conc.: 7.7 pg/ml, sample year: unknown, country: Singapore[11], *hepatitis B carriers (253 male (2 af.) and 49 female persons)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFG_1, literature[11]; Human liver, AFG_1 and AFM_1, literature[11]

incidence: 1/58*, sample comp.: people from Singapore, sample origin: The Blood Transfusion Service, Ministry of Health, Singapore, contamination: natural, conc.: 7.4 pg/ml, sample year: unknown, country: Singapore[11], *PHC patients (49 males (1 af.) and 9 females)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFG_1, literature[11]; Human liver, AFG_1 and AFM_1, literature[11]

Aflatoxin B_2

incidence: 2/77*, sample comp.: people from Nigeria, sample origin: unknown, contamination: natural, conc. range: 28–33 ng/l, Ø conc.: 30.5 ng/l, sample year: unknown, country: UK[4], *maternal blood sa. (detected at delivery)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], maternal; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 19/461*, sample comp.: people from Ghana, Nigeria, and Kenya, sample origin: unknown, contamination: natural, conc. range: 10–925 ng/l, sample year: unknown, country: UK[4], *cord blood sa. from babies
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

Aflatoxins B_1 & B_2

incidence: 17/188*, sample comp.: people from Ghana, sample origin: Accra? (capital), Ghana, contamination: natural, conc. range: 11–43.822 ng/l, sample year: unknown, country: UK/Ghana/Nigeria[253], *cord blood sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFG_1, AFG_2, AFL, AFM_1 & AFM_2, and AFS, literature[253]; Human breast milk, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[253]

Aflatoxin G_1

incidence: 4/461*, sample comp.: people from Ghana, Nigeria and Kenya, sample origin: unknown, contamination: natural, conc. range: 611–2,086 ng/l, sample year: unknown, country: UK[4] *cord blood sa. from babies
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 0/423*, sample comp.: people from Singapore, sample origin: The Blood Transfusion Service, Ministry of Health, Singapore, contamination: no contamination, sample year: unknown, country: Singapore[11], *normal subjects (342 males and 81 female persons)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, literature[11]; Human liver, AFG_1 and AFM_1, literature[11]

incidence: 1/58*, sample comp.: people from Singapore, sample origin: The Blood Transfusion Service, Ministry of Health, Singapore, contamination: natural, conc.: 17 pg/ml, sample year: unknown, country: Singapore[11], *PHC patients (49 males (1 af.) and 9 females)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, literature[11]; Human liver, AFG_1 and AFM_1, literature[11]

incidence: 0/58*, sample comp.: people from Singapore, sample origin: The Blood Transfusion Service, Ministry of Health,

Singapore, contamination: no contamination, sample year: unknown, country: Singapore[11], *PHC patients (49 males and 9 females)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, literature[11]; Human liver, AFG_1 and AFM_1, literature[11]

incidence: 3/188*, sample comp.: people from Ghana, sample origin: Accra? (capital), Ghana, contamination: natural, conc. range: 354–1,354 ng/l, Ø conc.: 773 ng/l, sample year: unknown, country: UK/Ghana/Nigeria[253], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1 & AFB_2, AFG_2, AFL, AFM_1 & AFM_2, and AFS, literature[253]; Human breast milk, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[253]

Aflatoxin G_2

incidence: 1/461, sample comp.: people from Ghana, Nigeria, and Kenya, sample origin: unknown, contamination: natural, conc.: 37 ng/l, sample year: unknown, country: UK[4], *cord blood sa. from babies

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFL, AFM_1, and AFM_2, literature[4], cord, maternal; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 1/188*, sample comp.: people from Ghana, sample origin: Accra? (capital), Ghana, contamination: natural, conc.: 37 ng/l, sample year: unknown, country: UK/Ghana/Nigeria[253], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1 & AFB_2, AFG_1, AFL, AFM_1 & AFM_2, and AFS, literature[253]; Human breast milk, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[253]

Aflatoxin M_1

incidence: 3/77*, sample comp.: people from Nigeria, sample origin: unknown, contamination: natural, conc. range: 38–483 ng/l, Ø conc.: 262.0 ng/l, sample year: unknown, country: UK[4], *maternal blood sa. (detected at delivery)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[4], maternal; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 63/461*, sample comp.: people from Ghana, Nigeria, and Kenya, sample origin: unknown, contamination: natural, conc. range: 25–8,942 ng/l, sample year: unknown, country: UK[4], *cord blood sa. from babies

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[4], cord; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

Aflatoxin M_2

incidence: 4/77*, sample comp.: people from Nigeria, sample origin: unknown, contamination: natural, conc. range: 48–3,480 ng/l, Ø conc.: 948.3 ng/l, sample year: unknown, country: UK[4], *maternal blood sa. (detected at delivery)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[4], maternal (delivery); Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 47/461*, sample comp.: people from Ghana, Nigeria, and Kenya, sample origin: unknown, contamination: natural, conc. range: 15–732 ng/l, sample year: unknown, country: UK[4], *cord blood sa. from babies

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[4], cord; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

Aflatoxins M_1 & M_2

incidence: ?/125*, sample comp.: people from Kenya, sample origin: unknown, contamination: natural, conc. range: 12–1,689 pg/l, sample year: unknown, country: UK[4], *maternal blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 21/188*, sample comp.: people from Ghana, sample origin: Accra? (capital), Ghana, contamination: natural, conc. range: 30–7,320 ng/l, sample year: unknown, country: UK/Ghana/Nigeria[253], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1 & AFB_2, AFG_1, AFG_2, AFL, and AFS, literature[253]; Human breast milk, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[253]

Aflatoxin

incidence: 475/479*, sample comp.: people from Benin and Togo, sample origin: 16 villages in 4 geographic zones (4 in each zone): Sudan Savannah, north Guinea Savannah, south Guinea Savannah, and Coastal Savannah, contamination: natural, conc. range: 5–1,064 pg/mg**, sample year: unknown, country: UK/Benin[20], *children, age: 9 months–5 years, **AF-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 119/119*, sample comp.: people from Gambia, sample origin: 5 villages in the west Kiang region, Gambia, contamination: natural, conc. range: 4.8–260.8 pg/mg**, Ø conc.: 40.4 pg/mg** (geometric mean), sample year: unknown, country: UK/Gambia[22], *maternal blood sa., **AF-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 48/99*, sample comp.: people from Gambia, sample origin: 5 villages in the west Kiang region, Gambia, contamination: natural, conc. range: 5.0–89.6 pg/mg**, Ø conc.: 10.1 pg/mg** (geometric mean), sample year: unknown, country: UK/Gambia[22], *cord blood sa. from neonates, **AF-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/118*, sample comp.: people from Gambia, sample origin: 5 villages in the west Kiang region, Gambia, contamination: natural, conc. range: 5.0–30.2 pg/mg albumin, Ø conc.: 8.7 pg/mg** (geometric mean), sample year: unknown, country: UK/Gambia[22], *infant blood sa. (after 16 weeks of birth), **AF-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: ?/?*, sample comp.: people from Guinea, sample origin: 20 villages in the Kindia prefecture, lower Guinea, contamination: natural, Ø conc.: 5.5 pg/mg** ***, sample year: 1999, country: UK/Guinea[23], *control (male and female persons, Ø age: 33.7 years), **AF-AA, ***blood level measured immediately after peanut harvest

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/?*, sample comp.: people from Guinea, sample origin: 20 villages in the Kindia prefecture, lower Guinea,

contamination: natural, Ø conc.: 7.2 pg/mg** ***, sample year: 1999, country: UK/Guinea[23], *intervention group (male and female persons, Ø age: 28.6 years), **AF-AA, ***blood level measured immediately after peanut harvest
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/?*, sample comp.: people from Guinea, sample origin: 20 villages in the Kindia prefecture, lower Guinea, contamination: natural, Ø conc.: 18.7 pg/mg** ***, sample year: 1999/2000, country: UK/ Guinea[23], *control (male and female persons, Ø age: 33.7 years), **AF-AA, ***blood level measured after 5 months of peanut storage
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/?*, sample comp.: people from Guinea, sample origin: 20 villages in the Kindia prefecture, lower Guinea, contamination: natural, Ø conc.: 11.7 pg/mg** ***, sample year: 1999/2000, country: UK/Guinea[23], *intervention group (male and female persons, Ø age: 28.6 years), **AF-AA, ***blood level measured after 5 months of peanut storage
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/?*, sample comp.: people from Guinea, sample origin: 20 villages in the Kindia prefecture, lower Guinea, contamination: natural, Ø conc.: 18.7 pg/mg** ***, sample year: February/March 2000, country: UK/Guinea[23], *control (male and female persons, Ø age: 33.7 years), **AF-AA, ***blood level measured at the end of the study
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/?*, sample comp.: people from Guinea, sample origin: 20 villages in the Kindia prefecture, lower Guinea, contamination: natural, Ø conc.: 8.0 pg/mg** ***, sample year: 2000, country: UK/Guinea[23], *intervention group (male and female persons, Ø age: 28.6 years), **AF-AA, ***blood level measured at the end of the study
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

Aflatoxins

incidence: 16/77*, sample comp.: people from Nigeria, sample origin: Nigeria, contamination: natural, conc. range: pr., sample year: unknown, country: UK/ Ghana/Nigeria[253], *maternal blood sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1 & AFB_2, AFG_1, AFG_2, AFL, and AFM_1 & AFM_2, literature[253]; Human breast milk, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[253]

incidence: 9/78*, sample comp.: people from Nigeria, sample origin: Nigeria, contamination: natural, conc. range: pr., sample year: unknown, country: UK/ Ghana/Nigeria[253], *cord blood sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1 & AFB_2, AFG_1, AFG_2, AFL, and AFM_1 & AFM_2, literature[253]; Human breast milk, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[253]

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 14/20*, sample comp.: people from Tunisia, sample origin: Jendouba (region), Tunisia, contamination: natural, conc. range: 0.1–5 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 21/33*, sample comp.: people from Tunisia, sample origin: Jendouba (region), Tunisia, contamination: natural, conc. range: 5.0–151 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons with chronic renal failure, age: 30–67 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/20*, sample comp.: people from Tunisia, sample origin: Gafsa (region), Tunisia, contamination: natural, conc. range: 0.1–3.2 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15/69*, sample comp.: people from Tunisia, sample origin: Gafsa (region), Tunisia, contamination: natural, conc. range: 1.2–1,136 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons with chronic renal failure, age: 30–67 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12/25*, sample comp.: people from Tunisia, sample origin: Sfax (region), Tunisia, contamination: natural, conc. range: 0.1–8.8 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 84/200*, sample comp.: people from Tunisia, sample origin: Sfax (region), Tunisia, contamination: natural, conc. range: 1.8–216 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons with chronic renal failure, age: 30–67 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/21*, sample comp.: people from Tunisia, sample origin: Tunis (region), Tunisia, contamination: natural, conc. range: 0.1–4.5 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 42/200*, sample comp.: people from Tunisia, sample origin: Tunis (region), Tunisia, contamination: natural, conc. range: 1.3–249 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons with chronic renal failure, age: 30–67 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 23/54*, sample comp.: people from Tunisia, sample origin: Monastir (region), Tunisia, contamination: natural, conc. range: 0.1–7 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 35/108*, sample comp.: people from Tunisia, sample origin: Monastir (region), Tunisia, contamination: natural, conc. range: 1–219 ng/ml, sample year: unknown, country: Tunisia/France[26], *male and female persons with chronic renal failure, age: 30–67 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 39/39*, sample comp.: people from Sweden, sample origin: Västerbotten (county), middle north of Sweden, contamination: natural, conc. range: 90–940 ng/l, Ø conc.: 167 ng/l, sample year: late 1990/early 1991, country: Sweden[29], *lactating women
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, OTA ME, literature[29]; Human breast milk, OTA and OTA ME, literature[29]

incidence: 9/216, sample comp.: people from Poland, sample origin: unknown,

contamination: natural, conc. range: ≤4.8 ng/cm^3, sample year: unknown, country: Poland[30]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/2*, sample comp.: people from France, sample origin: Centre Hospitalier et Universitaire de Rouen (city), Hôpital de Boisguillaume, France, contamination: natural, conc. range: 20.5–1,001 ng/ml, Ø conc.: 511 ng/ml, sample year: unknown, country: France[31], *siblings (male and female)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[31]

incidence: ?/30*, sample comp.: people from Pakistan, sample origin: Department of Urology, Karachi (city), Pakistan, contamination: natural, conc. range: 0.036–1.239 ng/ml, sample year: unknown, country: Pakistan/Germany[40], *non-diseased local controls
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/87*, sample comp.: people from Pakistan, sample origin: Department of Urology, Karachi (city), Pakistan, contamination: natural, conc. range: 0.032–3.409 ng/ml, sample year: unknown, country: Pakistan/Germany[40], *bladder cancer patients
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/694*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–15 ng/ml, sample year: 1981, country: Yugoslavia/Sweden[41], *blood sa. from endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/242*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–10 ng/ml, sample year: 1981, country: Yugoslavia/Sweden[41], *blood sa. from non-endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 26/1049*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–50 ng/ml, sample year: 1982, country: Yugoslavia/Sweden[41], *blood sa. from endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/242*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–30 ng/ml, sample year: 1982, country: Yugoslavia/Sweden[41], *blood sa. from non-endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 45/1872*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–30 ng/ml, sample year: 1983, country: Yugoslavia/Sweden[41], *blood sa. from endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/738*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 10–15 ng/ml, sample year: 1983, country: Yugoslavia/Sweden[41], *blood sa. from non-endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 28/2165*, sample comp.: people from Yugoslavia, sample origin: Slavonski

Brod (county), Yugoslavia, contamination: natural, conc. range: 5–50 ng/ml, sample year: 1984, country: Yugoslavia/Sweden[41], *blood sa. from endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/227*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–10 ng/ml, sample year: 1984, country: Yugoslavia/Sweden[41], *blood sa. from non-endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/1490*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 10–15 ng/ml, sample year: 1985, country: Yugoslavia/Sweden[41], *blood sa. from endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/375*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–50 ng/ml, sample year: 1985, country: Yugoslavia/Sweden[41], *blood sa. from non-endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 32/1887*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–35 ng/ml, sample year: 1986, country: Yugoslavia/Sweden[41], *blood sa. from endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/401*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: no contamination, sample year: 1986, country: Yugoslavia/Sweden[41], *blood sa. from non-endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/2073*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–50 ng/ml, sample year: 1987, country: Yugoslavia/Sweden[41], *blood sa. from endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/156*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: no contamination, sample year: 1987, country: Yugoslavia/Sweden[41], *blood sa. from non-endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/1554*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: natural, conc. range: 5–100 ng/ml, sample year: 1988, country: Yugoslavia/Sweden[41], *blood sa. from endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/570*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: no contamination, sample year: 1988, country: Yugoslavia/Sweden[41], *blood sa. from non-endemic villages for Balkan nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/1013*, sample comp.: people from Yugoslavia, sample origin: Slavonski

Brod (county), Yugoslavia, contamination: natural, conc. range: 5–20 ng/ml, sample year: 1989, country: Yugoslavia/Sweden[41], *blood sa. from endemic villages for Balkan nephropathy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/427*, sample comp.: people from Yugoslavia, sample origin: Slavonski Brod (county), Yugoslavia, contamination: no contamination, sample year: 1989, country: Yugoslavia/Sweden[41], *blood sa. from non-endemic villages for Balkan nephropathy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/18*, sample comp.: people from France, sample origin: Rangueil Hospital, Toulouse (city), France, contamination: natural, conc. range: LOD–2.49 mg/l, sample year: unknown, country: France/Canada/Croatia/Serbia[272], *patients suffering from nephropathy and urothelial cancer, age: 53–83 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney, OTA, literature[272]

Ochratoxin A Methyl Ester

incidence: 7/39*, sample comp.: people from Sweden, sample origin: Västerbotten (county), middle north of Sweden, contamination: natural, conc. range: 110–1,040 ng/l, Ø conc.: 339 ng/l, sample year: late 1990/early 1991, country: Sweden[29], *lactating women

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, OTA, literature[29]; Human breast milk, OTA and OTA ME, literature[29]

see also **Human plasma, Human plasma/serum, Human serum**

Human brain may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxicol

incidence: 7*/18**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 22–1,785 pg/g, Ø conc.: 539 pg/g, sample year: unknown, country: Nigeria/UK[44], *4 male and 3 female children af., **children dying from kwashiorkor

- Co-contamination: 2 sa. co-contaminated with AFL and AFM_2; 1 sa. co-contaminated with AFG_1 and AFL; 1 sa. co-contaminated with AFL and AFM_1; 3 sa. contaminated solely with AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[44]

incidence: 6*/19**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 27–831 pg/g, Ø conc.: 368 pg/g, sample year: unknown, country: Nigeria/UK[44], *4 male and 2 female children af., **children dying from miscellaneous diseases

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFL; 1 sa. co-contaminated with AFB_2 and AFL; 1 sa. co-contaminated with AFG_1 and AFL; 1 sa. co-contaminated with AFL and AFM_2; 2 sa. contaminated solely with AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[44]

For detailed information please see the article.

Aflatoxin B_1

incidence: 13/18*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**, sample year: unknown, country: USA/Thailand[2], *children with EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity

- Co-contamination: taking this into account: 1 sa. co-contaminated with AFB_1 and AFB_2; 12 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, AFB_1, literature[2], with EFDV; Human brain, AFB_2, literature[2], with EFDV; Human feces, Human intestine, Human kidney, Human liver, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 7/13*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**, sample year: unknown, country: USA/Thailand[2], *children and 2 adolescents dying from causes other than EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity

- Co-contamination: taking this into account: 1 sa. co-contaminated with AFB_1 and AFB_2; 6 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human feces, Human intestine, Human kidney, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human brain, Human kidney, AFB_2, no EFDV

For detailed information please see the article.

incidence: 4*/18**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 1,233–3,913 pg/g, Ø conc.: 2,700 pg/g, sample year: unknown, country: Nigeria/UK[44], *3 male and 1 female child/ren af., **children dying from kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2 and AFG_1, 1 sa. co-contaminated with AFB_1 and AFG_1, 1 sa. co-contaminated with AFB_1 and AFG_2, 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[44]

incidence: 1*/19**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc.: 12,423 pg/g, sample year: unknown, country: Nigeria/UK[44], *1 female child af., **children dying from miscellaneous diseases

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[44]

For detailed information please see the article.

Aflatoxin B_2

incidence: 1/18*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc.: tr**, sample year: unknown, country: USA/Thailand[2], *children with EFDV, **a blue fluorescent spot similar to that of AFB_2 but insufficient for confirmation of identity

- Co-contamination: taking this into account: 1 sa. co-contaminated with AFB_1 and AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human brain, AFB_1, literature[2], with EFDV; Human feces, Human intestine, Human kidney, Human liver, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 1/13*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc.: tr**, sample year: unknown, country: USA/Thailand[2], *children dying from causes other than EFDV, **a blue fluorescent spot similar to that of AFB_2 but insufficient for confirmation of identity

- Co-contamination: taking this into account: 1 sa. co-contaminated with AFB_1 and AFB_2

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human brain, Human feces, Human intestine, Human kidney, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human kidney, AFB_2, literature[2], no EFDV

For detailed information please see the article.

incidence: 1*/18**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc.: 21 pg/g, sample year: unknown, country: Nigeria/UK[44], *1 female child af., **children dying from kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2 and AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[44]

incidence: 2*/19**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 4–113 pg/g, Ø conc.: 58.5 pg/g, sample year: unknown, country: Nigeria/UK[44], *1 male and 1 female child af., **children dying from miscellaneous diseases

- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFL; 1 sa. co-contaminated with AFB_2 and AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[44]

For detailed information please see the article.

Aflatoxin G_1

incidence: 4*/18**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 395–107,700 pg/g, Ø conc.: 33,704 pg/g, sample year: unknown, country: Nigeria/UK[44], *1 male and 3 female child/ren af., **children dying from kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2 and AFG_1; 1 sa. co-contaminated with AFB_1 and AFG_1; 1 sa. co-contaminated with AFG_1 and AFL; 1 sa. contaminated solely with AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_2, AFL, AFM_1, and AFM_2, literature[44]

incidence: 5*/19**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 2,267–71,742 pg/g, Ø conc.: 25,755.4 pg/g, sample year: unknown, country: Nigeria/UK[44], *3 male and 2 female children af., **children dying from miscellaneous diseases

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFG_1, and AFL; 1 sa. co-contaminated with AFG_1 and AFL; 1 sa. co-contaminated with AFG_1 and AFM_2; 2 sa. contaminated solely with AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_2, AFL, AFM_1, and AFM_2, literature[44]

For detailed information please see the article.

Aflatoxin G_2

incidence: 2*/18**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 193–212 pg/g, Ø conc.: 203 pg/g, sample year: unknown, country: Nigeria/UK[44], *2 male children af., **children dying from kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFG_2; 1 sa. contaminated solely with AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_1, AFL, AFM_1, and AFM_2, literature[44]

incidence: 2*/19**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural,

conc. range: 8–13 pg/g, Ø conc.: 10.5 pg/g, sample year: unknown, country: Nigeria/UK[44], *2 male children af., **children dying from miscellaneous diseases
- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFG_2; 1 sa. co-contaminated with AFG_2 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_1, AFL, AFM_1, and AFM_2, literature[44]

For detailed information please see the article.

Aflatoxin M_1

incidence: 1*/18**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc.: 3,943 pg/g, sample year: unknown, country: Nigeria/UK[44], *1 female child af., **children dying from kwashiorkor
- Co-contamination: 1 sa. co-contaminated with AFL and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[44]

incidence: 1*/19**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc.: 5,092 pg/g, sample year: unknown, country: Nigeria/UK[44], *1 male child af., **children dying from miscellaneous diseases
- Co-contamination: 1 sa. co-contaminated with AFG_2 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[44]

For detailed information please see the article.

incidence: 2/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc. range: 1,229–13,314 pg/g, Ø conc.: 7,272 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 male and 5 female persons
- Co-contamination: 2 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

Aflatoxin M_2

incidence: 3*/18**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 1,007–1,854 pg/g, Ø conc.: 1,503 pg/g, sample year: unknown, country: Nigeria/UK[44], *2 male and 1 female child/ren af., **children dying from kwashiorkor
- Co-contamination: 2 sa. co-contaminated with AFL and AFM_2; 1 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[44]

incidence: 5*/19**, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 717–5,290 pg/g, Ø conc.: 2,040 pg/g, sample year: unknown, country: Nigeria/UK[44], *4 male and 1 female child/ren af., **children dying from miscellaneous diseases
- Co-contamination: 1 sa. co-contaminated with AFL and AFM_2; 4 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human brain, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[44]

For detailed information please see the article.

incidence: 3/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc. range: 348–5,244 pg/g, Ø conc.: 2,337 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 male and 5 female persons

- Co-contamination: 2 sa. co-contaminated with AFM_1 and AFM_2; 1 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human kidney, Human lung, Human spleen, AFM_2, literature[45]

Human breast may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 2/5* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 0.43–3.36 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 1.895 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *1 male and 4 female patient/s (2 af.), **sa. from cadavers at autopsy, normal tissue (but cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human cervix, Human colon, Human liver, Human pancreas, AFB_1, literature[46], autopsy

For detailed information please see the article.

Human breast milk may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxicol

incidence: 6/800, sample comp.: human breast milk of women from Sudan, Kenya and Ghana, sample origin: Children's Hospital, Khartoum (capital), Sudan, Consolata Hospital, Embu, Kenya, Children's Hospital, Accra (capital), Ghana, contamination: natural, conc. range: 14–270 ng/l, sample year: unknown, country: UK[4]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord, maternal; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[4]

incidence: 41/113, sample comp.: human breast milk of women from Sierra Leone, sample origin: "Under-Five Clinics" at Njala University Health Centre and Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.005–50.9 ng/ml, sample year: unknown, country: Sierra Leone/UK[47]

- Co-contamination: 3 sa. co-contaminated with AFB_1, AFL, and OTA; 5 sa. co-contaminated with AFL, AFM_1, and OTA; 9 sa. co-contaminated with AFL, AFM_2, and OTA; 16 sa. co-contaminated with AFL and OTA (only combinations of OTA and aflatoxins were cited)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFG_1, AFG_2, AFM_1, AFM_2, and OTA, literature[47]

incidence: 3/264, sample comp.: human breast milk of women from Ghana, sample origin: Accra (capital), Ghana, contamination: natural, conc. range: 64–270 ng/l, Ø conc.: 154 ng/l, sample year:

mid dry season/onset wet season, country: UK/Ghana/Nigeria[253]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFB_2, AFM_1, and AFM_2, literature[253]; Human blood, AFB_1 & AFB_2, AFG_1, AFG_2, AFL, AFM_1 & AFM_2, and AFS, literature[253]

Aflatoxin B_1

incidence: 41/800, sample comp.: human breast milk of women from Sudan, Kenya and Ghana, sample origin: Children's Hospital, Khartoum (capital), Sudan, Consolata Hospital, Embu, Kenya, Children's Hospital, Accra (capital), Ghana, contamination: natural, conc. range: 150–55,792 ng/l, sample year: unknown, country: UK[4]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord, maternal; Human breast milk, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 20/113, sample comp.: human breast milk of women from Sierra Leone, sample origin: "Under-Five Clinics" at Njala University Health Centre and Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.05–372 ng/ml, sample year: unknown, country: Sierra Leone/UK[47]
- Co-contamination: 3 sa. co-contaminated with AFB_1, AFL, and OTA; 3 sa. co-contaminated with AFB_1, AFM_1, and OTA; 3 sa. co-contaminated with AFB_1, AFM_2, and OTA; 7 sa. co-contaminated with AFB_1 and OTA (only combinations of OTA and aflatoxins were cited)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[47]

incidence: 1/231, sample comp.: human breast milk of women from Italy, sample origin: Hospitals of Cremona, Lecco, Lodi, Merate, Milano, Pavia (cities), located in urban and plain areas and Sondrio (city), located in urban and mountain area, Italy, contamination: natural, conc.: 11.4 ng/l, sample year: March–July 2000, country: Italy[48]
- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_1 (no further information)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and OTA, literature[48]

incidence: 75/75, sample comp.: human breast milk of women from Turkey, sample origin: Department of Pediatrics, Section of Neonatology, Hacettepe University Faculty of Medicine, Turkey, contamination: natural, conc. range: 94–129 ng/l (17 sa.), 130–149 ng/l (15 sa.), 150–199 ng/l (25 sa.), 200–300 ng/l (10 sa.), >300–4,123.80 ng/l (8 sa.), sample year: October 2007–March 2008, country: Turkey[49]
- Co-contamination: 75 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/443*, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: pr., sample year: unknown, country: Finland/UK/Egypt[61], *healthy donors, Ø age: 24 years
- Co-contamination: 7 sa. co-contaminated with AFB_1 and AFM_1 (no further information)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/264, sample comp.: human breast milk of women from Ghana, sample origin: Accra (capital), Ghana, contamination: natural, conc. range: 130–8,218 ng/l, sample year: mid dry season/onset wet season, country: UK/Ghana/Nigeria[253]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_2, AFL, AFM_1, and AFM_2, literature[253]; Human blood, AFB_1 & AFB_2, AFG_1, AFG_2, AFL, AFM_1 & AFM_2, and AFS, literature[253]

Aflatoxin B_2

incidence: 10/800, sample comp.: human breast milk of women from Sudan, Kenya, and Ghana, sample origin: Children's Hospital, Khartoum (capital), Sudan, Consolata Hospital, Embu, Kenya, Children's Hospital, Accra (capital), Ghana, contamination: natural, conc. range: 49–623 ng/l, sample year: unknown, country: UK[4]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord, maternal; Human breast milk, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 0/113, sample comp.: human breast milk of women from Sierra Leone, sample origin: "Under-Five Clinics" at Njala University Health Centre and Bo Government Hospital, southern province of Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone/UK[47]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[47]

incidence: 11/443*, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: pr., sample year: unknown, country: Finland/UK/Egypt[61], *healthy donors, Ø age: 24 years

- Co-contamination: 8 sa. co-contaminated with AFB_2 and AFM_1 (no further information)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/224, sample comp.: human breast milk of women from Brazil, sample origin: Human Milk Banks in the Federal District, Brazil, contamination: natural, conc. range: 0.005 ng/ml, Ø conc.: 0.005 ng/ml, sample year: May 2011–February 2012, country: Brazil[228]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/264, sample comp.: human breast milk of women from Ghana, sample origin: Accra (capital), Ghana, contamination: natural, conc. range: 49–50 ng/l, Ø conc.: 49.5 ng/l, sample year: mid dry season/onset wet season, country: UK/Ghana/Nigeria[253]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFL, AFM_1, and AFM_2, literature[253]; Human blood, AFB_1 & AFB_2, AFG_1, AFG_2, AFL, AFM_1 & AFM_2, and AFS, literature[253]

Aflatoxin G_1

incidence: 4/800, sample comp.: human breast milk of women from Sudan, Kenya, and Ghana, sample origin: Children's Hospital, Khartoum (capital), Sudan, Consolata Hospital, Embu, Kenya, Children's Hospital, Accra (capital), Ghana, contamination: natural, conc. range: 1,890–5,180 ng/l, sample year: unknown, country: UK[4]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord, maternal; Human breast milk, AFB_1, AFB_2, AFG_2, AFL, AFM_1, and AFM_2, literature[4]

incidence: 22/113, sample comp.: human breast milk of women from Sierra Leone, sample origin: "Under-Five Clinics" at Njala University Health Centre and Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.005–139 ng/ml, sample year: unknown, country: Sierra Leone/UK[47]

- Co-contamination: 6 sa. co-contaminated with AFG_1 and OTA (only combinations of OTA and aflatoxins were cited)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast

milk, AFB_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[47]

incidence: 3/5, sample comp.: human breast milk of women from Gambia, sample origin: unknown, contamination: natural, conc. range: 18–114 pg/ml, Ø conc.: 67.33 pg/ml, sample year: unknown, country: USA/France/UK[50]

- Co-contamination: 3 sa. co-contaminated with AFG_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 30/443*, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: pr., sample year: unknown, country: Finland/UK/Egypt[61], *healthy donors, Ø age: 24 years

- Co-contamination: 27 sa. co-contaminated with AFG_1 and AFM_1 (no further information)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin G_2

incidence: 3/800, sample comp.: human breast milk of women from Sudan, Kenya, and Ghana, sample origin: Children's Hospital, Khartoum (capital), Sudan, Consolata Hospital, Embu, Kenya, Children's Hospital, Accra (capital), Ghana, contamination: natural, conc. range: 10–87 ng/l, sample year: unknown, country: UK[4]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord, maternal; Human breast milk, AFB_1, AFB_2, AFG_1, AFL, AFM_1, and AFM_2, literature[4]

incidence: 25/113, sample comp.: human breast milk of women from Sierra Leone, sample origin: "Under-Five Clinics" at Njala University Health Centre and Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.003–366 ng/ml, sample year: unknown, country: Sierra Leone/UK[47]

- Co-contamination: 7 sa. co-contaminated with AFG_2 and OTA (only combinations of OTA and aflatoxins were cited)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFG_1, AFL, AFM_1, AFM_2, and OTA, literature[47]

incidence: 7/443*, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: pr., sample year: unknown, country: Finland/UK/Egypt[61], *healthy donors, Ø age: 24 years

- Co-contamination: 4 sa. co-contaminated with AFG_2 and AFM_1 (no further information)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin M_1

incidence: 121/800, sample comp.: human breast milk of women from Sudan, Kenya, and Ghana, sample origin: Children's Hospital, Khartoum (capital), Sudan, Consolata Hospital, Embu, Kenya, Children's Hospital, Accra (capital), Ghana, contamination: natural, conc. range: 5–1,379 ng/l, sample year: unknown, country: UK[4]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord, maternal; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[4]

incidence: 87/125, sample comp.: human breast milk of women from Egypt, sample origin: Minoufiya (governorate), Egypt, contamination: natural, conc. range: 7.3–328.6 ng/l, sample year: March–August 2010, country: Egypt[13]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/99, sample comp.: human breast milk of women from Sudan, sample origin:

Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 5–64 pg/ml, Ø conc.: 19 pg/ml, sample year: unknown, country: UK/Sudan[15]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 & AFM_2, and AFM_2, literature[15]; Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 23/37, sample comp.: human breast milk of women from Egypt, sample origin: outpatient clinic AbBo El-Rish Hospital—Cairo University, Egypt, contamination: natural, conc. range: 0.06–0.24 ng/ml (7 sa.), 0.3–0.5 ng/ml (11 sa.), 1.06–2.09 ng/ml (5 sa.), sample year: April–June 2000, country: Egypt[17]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, Human urine, AFM_1, literature[17]; Human breast milk, Human plasma, OTA, literature[17]

incidence: 16/45, sample comp.: human breast milk of women from Egypt, sample origin: outpatient clinic AbBo El-Rish Hospital—Cairo University, Egypt, contamination: natural, conc. range: 0.07–0.2 ng/ml (4 sa.), 0.3–0.5 ng/ml (9 sa.), 1.41–1.9 ng/ml (3 sa.), sample year: September–December 2001, country: Egypt[17]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, Human urine, AFM_1, literature[17]; Human breast milk, Human plasma, OTA, literature[17]

incidence: 27/38, sample comp.: human breast milk of women from Egypt, sample origin: outpatient clinic AbBo El-Rish Hospital—Cairo University, Egypt, contamination: natural, conc. range: 0.07–0.11 ng/ml (7 sa.), 0.2–0.5 ng/ml (14 sa.), 0.3–1.64 ng/ml (6 sa.), sample year: January–May 2002, country: Egypt[17]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, Human urine, AFM_1, literature[17]; Human breast milk, Human plasma, OTA, literature[17]

incidence: 35/113, sample comp.: human breast milk of women from Sierra Leone, sample origin: "Under-Five Clinics" at Njala University Health Centre and Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.2–99 ng/ml, sample year: unknown, country: Sierra Leone/UK[47]

- Co-contamination: 3 sa. co-contaminated with AFB_1, AFM_1, and OTA; 5 sa. co-contaminated with AFL, AFM_1, and OTA; 5 sa. co-contaminated with AFM_1, AFM_2, and OTA; 10 sa. co-contaminated with AFM_1 and OTA (only combinations of OTA and aflatoxins were cited)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFG_1, AFG_2, AFL, AFM_2, and OTA, literature[47]

incidence: 1/231, sample comp.: human breast milk of women from Italy, sample origin: Hospitals of Cremona, Lecco, Lodi, Merate, Milano, Pavia (cities), located in urban and plain areas and Sondrio (city), located in urban and mountain area, Italy, contamination: natural, conc.: 194 ng/l, sample year: March–July 2000, country: Italy[48]

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_1 (no further information)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1 and OTA, literature[48]

incidence: 75/75, sample comp.: human breast milk of women from Turkey, sample origin: Department of Pediatrics, Section of Neonatology, Hacettepe University Faculty of Medicine, Turkey, contamination: natural, conc. range: 60–79 ng/l (13 sa.), 80–99 ng/l (24 sa.), 100–299.99 ng/l (38 sa.), sample year: October 2007–March 2008, country: Turkey[49]

- Co-contamination: 75 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/5, sample comp.: human breast milk of women from Gambia, sample origin: unknown, contamination: natural, conc. range: ≤1.4 pg/ml, sample year: unknown, country: USA/France/UK[50]

- Co-contamination: 3 sa. co-contaminated with AFG_1 and AFM_1; 2 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 129/140, sample comp.: human breast milk of women from UAE and other countries, sample origin: Al Ain Hospital, Al Ain (city), UAE, contamination: natural, conc. range: ≤3,400 pg/ml, sample year: January 1999–December 2000, country: UAE[51]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/15*, sample comp.: human breast milk of women from Australia, sample origin: Nursing Mother's Association (Anglo-Celtic ethnic background) of Australia, contamination: natural, conc. range: 28–78 pg/ml, Ø conc.: 57.5 pg/ml, sample year: June–August 1991, country: Australia/UK[52], *fresh human breast milk sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/14*, sample comp.: human breast milk of women from Australia, sample origin: Middle Eastern ethnic background, Australia, contamination: natural, conc. range: 48–63 pg/ml, Ø conc.: 56.3 pg/ml, sample year: June–August 1991, country: Australia/UK[52], *fresh human breast milk sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/44*, sample comp.: human breast milk of women from Australia, sample origin: Royal Women's Hospital, Melbourne (city), Victoria (state), Australia, contamination: natural, conc. range: <10–1,031 pg/ml, sample year: November–December 1992, country: Australia/UK[52], *fresh human breast milk sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/11*, sample comp.: human breast milk of women from Thailand, sample origin: unknown, contamination: natural, conc. range: <10–1,736 pg/ml, sample year: 1991, country: Australia/UK[52], *freeze-dried human breast milk sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/61, sample comp.: human breast milk of women from Turkey, sample origin: Istanbul (capital), Turkey, contamination: natural, conc. range: 5.10–6.90 ng/l, Ø conc.: 5.68 ng/l, sample year: 2006/2007, country: Turkey[53]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[53]

incidence: 4/82, sample comp.: human breast milk of women from Italy, sample origin: singleton physiological pregnancies admitted to Maternal, Fetal, and Neonatal Health Department, Italy, contamination: natural, conc. range: 7 ng/l (1 sa.), >10–50 ng/l (2 sa.), 140 ng/l (1 sa.), Ø conc.: 55.35 ng/l, sample year: January–December 2006, country: Italy[54]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[54]

incidence: 138/388, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 5.6–5,131.0 pg/ml, sample year: May–September 2003, country: Finland/UK/Egypt[55]

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 10/64*, sample comp.: human breast milk of women from UAE, sample origin: Corniche Maternity Hospital and Al-Nahyan Clinic for Maternity and Childhood, Abu Dhabi (capital), UAE, contamination: natural, conc. range: 0.3–1.3 ng/ml, Ø conc.: 0.77 ng/ml, sample year: unknown, country: UAE/UK[56], *donors between 17 and 43 years (AFM_1 measurement: two dimensional TLC)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Camel milk, raw, AFM_1, literature[56]

incidence: 15/15*, sample comp.: human breast milk of women from UAE, sample origin: Corniche Maternity Hospital and Al-Nahyan Clinic for Maternity and Childhood, Abu Dhabi (capital), UAE, contamination: natural, conc. range: 7–23 pg/ml, sample year: unknown, country: UAE/UK[56], *donors between 17 and 43 years (AFM_1 measurement: HPLC)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Camel milk, raw, AFM_1, literature[56]

incidence: 443/445, sample comp.: human breast milk of women from Arabic, European and Asiatic countries, sample origin: Corniche Maternity Hospital and Al-Nahyan Clinic for Maternity and Childhood, Abu Dhabi (capital), UAE, contamination: natural, conc. range: 2–3,000 pg/ml, sample year: November 1989–June 1990, country: UAE/UK[57]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 157/160*, sample comp.: human breast milk of women from Iran, sample origin: clinics in Tehran (capital), Iran, contamination: natural, conc. range: 0.3–26.7 ng/kg, sample year: May–September 2006, country: Iran[58], *mothers age: 19–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/10, sample comp.: human breast milk of women from Egypt, sample origin: unknown, contamination: natural, conc. range: 0.5–5 ppb, Ø conc.: 2.75 ppb, sample year: 1999–2000, country: Egypt[59]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[59]

incidence: 1/50, sample comp.: human breast milk of women from Brazil, sample origin: Human Milk Bank of the Southern Regional Hospital, São Paulo (city), Brazil, contamination: natural, conc.: 0.024 ng/ml, sample year: winter 2001/2002 and summer 2002, country: Brazil[60]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[60]

incidence: 12/50* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 4.2–108 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in January, **healthy donors, Ø age: 24 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/49* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 4.8–275 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in February, **healthy donors, Ø age: 24 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 28/50* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 5.0–181 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in March, **healthy donors, Ø age: 24 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/50* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 5.7–889 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in April, **healthy donors, Ø age: 24 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 23/26* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 4.6–609 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in May, **healthy donors, Ø age: 24 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/26* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 4.5–228 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in June, **healthy donors, Ø age: 24 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 24/26* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 6.3–497 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in July, **healthy donors, Ø age: 24 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 22/29* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 4.5–127 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in August, **healthy donors, Ø age: 24 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 24/29* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 4.3–63 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in September, **healthy donors, Ø age: 24 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 22/29* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 5.3–110 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in October, **healthy donors, Ø age: 24 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 21/29* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 4.9–360 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in November, **healthy donors, Ø age: 24 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 16/50* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 9.2–61 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. collected in December, **healthy donors, Ø age: 24 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 248/443* **, sample comp.: human breast milk of women from Egypt, sample origin: New El-Qalyub Hospital, Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 4.2–889 pg/ml, sample year: unknown, country: Finland/UK/Egypt[61], *sa. data summarized, **healthy donors, Ø age: 24 years

- Co-contamination: 27 sa. co-contaminated with AFG_1 and AFM_1; 8 sa. co-contaminated with AFB_2 and AFM_1; 7 sa. co-contaminated with AFB_1 and AFM_1; 4 sa. co-contaminated with AFG_2 and AFM_1 (no further information)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/54, sample comp.: human breast milk of women from Zimbabwe, sample origin: regions of Mashonaland West, Zimbabwe, contamination: natural, Ø conc.: 3.6 pg/ml, sample year: 1985, country: Zimbabwe[62]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): wrong data, not considered

incidence: 1/3*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.07 µg/l, sample year: November 2011, country: China[226], *3 lactating women

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

incidence: 59/264, sample const.: human breast milk of women from Ghana, sample origin: Accra (capital), Ghana, contamination: natural, conc. range: 20–1,816 ng/l, sample year: mid dry season/onset wet season, country: UK/Ghana/Nigeria[253]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFB_2, AFL, and AFM_2, literature[253]; Human blood, AFB_1 & AFB_2, AFG_1, AFG_2, AFL, AFM_1 & AFM_2, and AFS, literature[253]

incidence: 20/91, sample comp.: human breast milk of women from Iran, sample origin: urban areas of Tabriz (city), Iran, contamination: natural, conc. range: 5.1–8.1 pg/ml, sample year: March/April 2007, country: Iran[256]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 80/80, sample comp.: human breast milk of women from Jordan, sample origin: clinics in Amman (capital), Jordan, contamination: natural, conc. range: 9.71–137.81 ng/kg, Ø conc.: 67.78 ng/kg, sample year: February–July 2011, country: Jordan[266]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[266]

incidence: 24/87, sample comp.: human breast milk of women from Iran, sample origin: 7 rural health centers in Khorrambid (city), Iran, contamination: natural, conc. range: 0.13–4.91 pg/ml, Ø conc.: 0.56 pg/ml, sample year: June/July 2011, country: Iran[456]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin M_2

incidence: 103/800, sample comp.: human breast milk of women from Sudan, Kenya, and Ghana, sample origin: Children's Hospital, Khartoum (capital), Sudan, Consolata Hospital, Embu, Kenya, Children's Hospital, Accra (capital), Ghana, contamination: natural, conc. range: 3–6,368 ng/l, sample year: unknown, country: UK[4]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[4], cord, maternal; Human breast milk, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[4]

incidence: 11/99, sample comp.: human breast milk of women from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 3–20 pg/ml, Ø conc.: 12.2 pg/ml, sample year: unknown, country: UK/Sudan[15]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 70/113, sample comp.: human breast milk of women from Sierra Leone, sample origin: "Under-Five Clinics" at Njala University Health Centre and Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.07–77.5 ng/ml, sample year: unknown, country: Sierra Leone/UK[47]

- Co-contamination: 3 sa. co-contaminated with AFB_1, AFM_2, and OTA; 9 sa. co-contaminated with AFL, AFM_2, and OTA; 5 sa. co-contaminated with AFM_1, AFM_2, and OTA; 25 sa. co-contaminated with AFM_2 and OTA (only combinations of OTA and aflatoxins were cited)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and OTA, literature[47]

incidence: 18/264, sample comp.: human breast milk of women from Ghana, sample origin: Accra (capital), Ghana, contamination: natural, conc. range: 16–2,075 ng/l, sample year: mid dry season/onset wet season, country: UK/Ghana/Nigeria[253]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFB_2, AFL, and AFM_1, literature[253]; Human blood, AFB_1 & AFB_2, AFG_1, AFG_2, AFL, AFM_1 & AFM_2, and AFS, literature[253]

Aflatoxin M_1 & M_2

incidence: 13/99, sample comp.: human breast milk of women from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 3–84 pg/ml, Ø conc.: 34.7 pg/ml, sample year: unknown, country: UK/Sudan[15]

- Co-contamination: 13 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

Aflatoxin

incidence: 8/18, sample comp.: human breast milk of women from Sudan and Ghana, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 1–45 pg/ml, sample year: unknown, country: France/Zimbabwe[63]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/54*, sample comp.: human breast milk of women from Zimbabwe, sample origin: agricultural region in the northern part of Zimbabwe, contamination: natural, conc. range: tr–50.5 pg/ml, sample year: March/April 198?, country: France/Zimbabwe[63], *mothers age: 18–37 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aspergillus and *Penicillium* Toxins

Ochratoxin A

incidence: 11/37, sample comp.: human breast milk of women from Egypt, sample origin: outpatient clinic AbBo El-Rish Hospital—Cairo University, Egypt, contamination: natural, conc. range: 5–10 ng/ml (6 sa.), 20–30 ng/ml (3 sa.), >40 ng/ml (45.01 ng/ml?) (2 sa.), sample year: April–June 2000, country: Egypt[17]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, Human urine, AFM_1, literature[17]; Human milk, AFM_1, literature[17]; Human plasma, OTA, literature[17]

incidence: 16/45, sample comp.: human breast milk of women from Egypt, sample origin: outpatient clinic AbBo El-Rish Hospital—Cairo University, Egypt, contamination: natural, conc. range: 5–10 ng/ml (9 sa.), 20–30 ng/ml (2 sa.), >40 ng/ml (45.01 ng/ml?) (5 sa.), sample year: September–December 2001, country: Egypt[17]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, Human urine, AFM_1, literature[17]; Human breast milk, AFM_1, literature[17]; Human plasma, OTA, literature[17]

incidence: 16/38, sample comp.: human breast milk of women from Egypt, sample origin: outpatient clinic AbBo El-Rish Hospital—Cairo University, Egypt, contamination: natural, conc. range: 5–10 ng/ml (1 sa.), 20–30 ng/ml (8 sa.), >40 ng/ml (45.01 ng/ml?) (7 sa.), sample year: January–May 2002, country: Egypt[17]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, Human urine, AFM_1, literature[17]; Human breast milk, AFM_1, literature[17]; Human plasma, OTA, literature[17]

incidence: 38/92*, sample comp.: human breast milk of women from Hungary, sample origin: Maternity Ward of the Hospital of Kaposvár (city), Hungary, contamination: natural, conc. range: 0.22–1 ng/ml (13 sa.), 1–2 ng/ml (12 sa.), 2–3 ng/ml (8 sa.), 3–5 ng/ml (3 sa.), 5–≤7.63 ng/ml (2 sa.), sample year: August–October 1992, country: Hungary[27], *from women (first 24 h post partum)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma/serum, OTA, literature[27]

incidence: 23/40, sample comp.: human breast milk of women from Sweden, sample origin: Vásterbotten (county), middle north of Sweden, contamination: natural, conc. range: 10–40 ng/l, sample year: late 1990/early 1991, country: Sweden[29]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, OTA and OTA ME, literature[29]; Human milk, OTA ME, literature[29]

incidence: 5/13, sample comp.: human breast milk of women from Poland, sample origin: Mother and Child Institute, Warsaw (capital), Poland, contamination: natural, conc. range: 0.0053–0.017 ng/ml, Ø conc.: 0.01026 ng/ml, sample year: October 1998–April 1999, country: Poland[37]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[37], maternal; Human serum, OTA, literature[37], foetal

incidence: 40/113, sample comp.: human breast milk of women from Sierra Leone, sample origin: "Under-Five Clinics" at

Njala University Health Centre and Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.2–337 ng/ml, sample year: unknown, country: Sierra Leone/UK[47]

- Co-contamination: 3 sa. co-contaminated with AFB_1, AFL, and OTA; 3 sa. co-contaminated with AFB_1, AFM_1, and OTA; 3 sa. co-contaminated with AFB_1, AFM_2, and OTA; 5 sa. co-contaminated with AFL, AFM_1, and OTA; 9 sa. co-contaminated with AFL, AFM_2, and OTA; 5 sa. co-contaminated with AFM_1, AFM_2, and OTA; 7 sa. co-contaminated with AFB_1 and OTA; 6 sa. co-contaminated with AFG_1 and OTA; 7 sa. co-contaminated with AFG_2 and OTA; 16 sa. co-contaminated with AFL and OTA; 10 sa. co-contaminated with AFM_1 and OTA; 25 sa. co-contaminated with AFM_2 and OTA (only combinations of OTA and aflatoxins were cited)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, literature[47]

incidence: 198/231, sample comp.: human breast milk of women from Italy, sample origin: Hospitals of Cremona, Lecco, Lodi, Merate, Milano, Pavia (cities), located in urban and plain areas and Sondrio (city), located in urban and mountain area, Italy, contamination: natural, conc. range: ≤57.00 ng/l, sample year: March–July 2000, country: Italy[48]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFB_1 and AFM_1, literature[48]

incidence: 61/82, sample comp.: human breast milk of women from Italy, sample origin: singleton physiological pregnancies admitted to Maternal, Fetal, and Neonatal Health Department, Italy, contamination: natural, conc. range: 5–10 ng/l (28 sa.), >10–50 ng/l (27 sa.), >50–405 ng/l (6 sa.), Ø conc.: 30.43 ng/l, sample year: January–December 2006, country: Italy[54]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1, literature[54]

incidence: 3/10, sample comp.: human breast milk of women from Egypt, sample origin: unknown, contamination: natural, conc. range: 3–15 ppb, Ø conc.: 8.87 ppb, sample year: 1999–2000, country: Egypt[59]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1, literature[59]

incidence: 2/50, sample comp.: human breast milk of women from Brazil, sample origin: Human Milk Bank of the Southern Regional Hospital, São Paulo (city), Brazil, contamination: natural, conc. range: 0.011–0.024 ng/ml, Ø conc.: 0.0175 ng/ml, sample year: winter 2001/2002 and summer 2002, country: Brazil[60]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1, literature[60]

incidence: 9/50, sample comp.: human breast milk of women from Italy, sample origin: different areas in Italy, contamination: natural, conc. range: 1.7–6.6 ng/ml, Ø conc.: 4.19 ng/ml, sample year: 1989–1990, country: Italy[64]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 74/85, sample comp.: human breast milk of women from Italy, sample origin: different areas in Italy, contamination: natural, conc. range: 0.02 ng/ml (26 sa.), 0.1 ng/ml (34 sa.), 0.5 ng/ml (7 sa.), >1.0 ng/ml (7 sa.), sample year: unknown, country: Italy[65]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[65]

incidence: 2/100, sample comp.: human breast milk of women from Australia, sample origin: Victoria (state), Australia, contamination: natural, conc. range:

3.0–3.6 ng/ml, Ø conc.: 3.3 ng/ml, sample year: unknown, country: Australia[66]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/13, sample comp.: human breast milk of women from Germany, sample origin: Krankenhaus III. Orden, Munich (city), Germany, contamination: natural, conc. range: 0.024–0.030 µg/kg, Ø conc.: 0.027 µg/kg, sample year: 1986, country: Germany[67]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney, OTA, literature[67]; Human serum, OTA, literature[67]; Pig kidney, Pig serum, OTA, literature[67]

incidence: 2/23, sample comp.: human breast milk of women from Germany, sample origin: Städtisches Krankenhaus, Bayreuth (city), Germany, contamination: natural, conc. range: 0.017–0.024 µg/kg, Ø conc.: 0.0205 µg/kg, sample year: 1986, country: Germany[67]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney, Human serum, Pig kidney, Pig serum, OTA, literature[67]

incidence: 17/80*, sample comp.: human breast milk of women from Norway, sample origin: area of Oslo (capital), Norway, contamination: natural, conc. range: 10–182 ng/l, Ø conc.: 30 ng/l, sample year: July 1995–September 1996, country: Norway[68], *healthy women, age: 19–35 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/48, sample comp.: human breast milk of women from Norway, sample origin: Bodø (city, north coast), Norway, contamination: natural, conc. range: 10–40 ng/l (6 sa.), 56 ng/l (1 sa.), sample year: May–August 1994, country: Norway[69]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/19, sample comp.: human breast milk of women from Norway, sample origin: Trondheim (city, middle coast), Norway, contamination: natural, conc. range: 10–40 ng/l (6 sa.), >40–102 ng/l (5 sa.), sample year: May–August 1994, country: Norway[69]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/48, sample comp.: human breast milk of women from Norway, sample origin: Elverum (city, south-east inland), Norway, contamination: natural, conc. range: 10–40 ng/l (12 sa.), >40–130 ng/l (8 sa.), sample year: May–August 1994, country: Norway[69]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/40, sample comp.: human breast milk of women from Switzerland, sample origin: Kantonales Frauenspital, Neonatology Department, Berne, Switzerland, contamination: natural, conc. range: 5 pg/g (3 sa.), 14 pg/g (1 sa.*), sample year: August 1992–February 1993, country: Switzerland[70], *diabetic patient
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[70]

incidence: 36/50*, sample comp.: human breast milk of women from Egypt, sample origin: outpatient Clinic of Zagazig and Mansoura University Hospital, Egypt, contamination: natural, Ø conc.: 1.89 ng/ml**, sample year: unknown, country: Egypt[71], *healthy mothers, **all sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[71], mothers; Human serum, OTA, literature[71], infants

incidence: 23/76, sample comp.: human breast milk of women from Slovakia, sample origin: The Clinic of Children and Adolescents in Martin (city), Slovakia, contamination: natural, conc. range: LOQ

(14 sa.), 2.3–60.3 ng/l (9 sa.), sample year: March–August 2007, country: Slovakia[72]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 50/67*, sample comp.: human breast milk of women from Italy, sample origin: Italy, contamination: natural, conc. range: LOD/LOQ–0.90 µg/l (48 sa.), 1.0–2.35 µg/l (2 sa.), sample year: 2000, country: EU[73], *all sucks
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human funiculum, Human placenta, Human plasma, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 46/75*, sample comp.: human breast milk of women from Italy, sample origin: Italy, contamination: natural, conc. range: LOD/LOQ–0.90 µg/l (45 sa.), 1.66 µg/l (1 sa.), sample year: 2000, country: EU[73], *2nd and 3rd suck
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human funiculum, Human placenta, Human plasma, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 38/115*, sample comp.: human breast milk of women from Netherlands, sample origin: Netherlands, contamination: natural, conc. range: LOD/LOQ–0.90 µg/l (38 sa., maximum: 0.13 µg/l), sample year: 1998, country: EU[73], *individual suck
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human funiculum, Human placenta, Human plasma, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 75/75, sample comp.: human breast milk of women from Turkey, sample origin: inpatient Department of Pediatrics, Hacettepe University Faculty of Medicine, Ankara (capital), Turkey, contamination: natural, conc. range: 600–1,499 ng/l (28 sa.), 1,500–2,499 ng/l (31 sa.), 2,500–2,999 ng/l (3 sa.), 3,000–3,499 ng/l (3 sa.), 3,500–13,111.30 ng/l (10 sa.), sample year: October 2007–March 2008, country: Turkey[74]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 41/52*, sample comp.: human breast milk of women from Italy and elsewhere, sample origin: Department of Obstetrics and Gynaecology of the "G. da Saliceto" Hospital, Piacenza (city), Italy, contamination: natural, conc. range: >1–2 ng/l (4 sa.), >2–4 ng/l (17 sa.), >4–5 ng/l (3 sa.), >5–10 ng/l (6 sa.), >10–20 ng/l (5 sa.), >20–30 ng/l (4 sa.), >30–≤75.1 ng/l (2 sa.), Ø conc.: 10 ng/l, sample year: January–June 2007, country: Italy[223], *Italian and non-Italian women
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[223]

incidence: 9/9* **, sample comp.: human breast milk of women from Chile, sample origin: Higueras Hospital in Talcahuano City, Chile, contamination: natural, conc. range: 71–184 ng/l, Ø conc.: 117 ng/l, sample year: October 2008–January 2009, country: Germany/Chile[262], *female persons, age: 20–41 years, weight: 55–80 kg, **only the first sa. considered
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTα, literature[262]

incidence: 84/87, sample comp.: human breast milk of women from Iran, sample origin: health centers of Khorrambid Town, Fars Province, Iran, contamination: natural, conc. range: 1.6–60 ng/l, Ø conc.: 24.6 ng/l, sample year: June–July 2011, country: Iran[461]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Ochratoxin A Methyl Ester

incidence: 7/39*, sample comp.: human breast milk of women from Sweden, sample origin: Västerbotten (county), middle north of Sweden, contamination: natural, conc. range: <10–40 ng/l, sample year: late 1990/early 1991, country: Sweden[29], *lactating women

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, OTA and OTA ME, literature[29]; Human breast milk, OTA, literature[29]

Ochratoxin α

incidence: 8/9* **, sample comp.: human breast milk of women from Chile, sample origin: Higueras Hospital in Talcahuano City, Chile, contamination: natural, conc. range: <LOQ–100 ng/l, sample year: October 2008–January 2009, country: Germany/Chile[262], *female persons, age: 20–41 years, weight: 55–80 kg, **only the first sa. considered

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[262]

Fusarium Toxins

Enniatin A

incidence: 2/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: 20.1–25.2 ng/ml, Ø conc.: 22.65 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]

- Co-contamination: 1 sa. co-contaminated with ENA, ENA_1, ENB, ENB_1 and NEO; 1 sa. co-contaminated with ENA, ENA_1, ENB, and ENB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Enniatin A_1

incidence: 2/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: 42.1–51.1 ng/ml, Ø conc.: 46.6 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]

- Co-contamination: 1 sa. co-contaminated with ENA, ENA_1, ENB, ENB_1 and NEO; 1 sa. co-contaminated with ENA, ENA_1, ENB, and ENB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Enniatin B

incidence: 2/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: 99.8–110.3 ng/ml, Ø conc.: 105.1 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]

- Co-contamination: 1 sa. co-contaminated with ENA, ENA_1, ENB, ENB_1 and NEO; 1 sa. co-contaminated with ENA, ENA_1, ENB, and ENB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Enniatin B_1

incidence: 2/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: 90.7–101.1 ng/ml, Ø conc.: 95.9 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]

- Co-contamination: 1 sa. co-contaminated with ENA, ENA_1, ENB, ENB_1 and NEO; 1 sa. co-contaminated with ENA, ENA_1, ENB, and ENB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

HT-2 Toxin

incidence: 10/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: 12.2–62.5 ng/ml, Ø conc.: 36.49 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]

- Co-contamination: 4 sa. co-contaminated with HT-2, NEO, and ZEN; 2 sa. co-

contaminated with HT-2 and ZEN; 1 sa. co-contaminated with HT-2 and NEO; 3 sa contaminated solely with HT-2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Neosolaniol

incidence: 7/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: 10.3–36.9 ng/ml, Ø conc.: 17.86 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]
- Co-contamination: 4 sa. co-contaminated with HT-2, NEO, and ZEN; 1 sa. co-contaminated with ENA, ENA_1, ENB, ENB_1 and NEO; 1 sa. co-contaminated with HT-2 and NEO; 1 sa. co-contaminated with NEO, NIV, α-ZOL, and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Nivalenol

incidence: 3/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: 53.1–69.7 ng/ml, Ø conc.: 63.3 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]
- Co-contamination: 1 sa. co-contaminated with NEO, NIV, α-ZOL, and ß-ZOL; 1 sa. co-contaminated with NIV and ZEN; 1 sa. contaminated solely with NIV
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

α-Zearalenol

incidence: 1/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc.: 16.7 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]
- Co-contamination: 1 sa. co-contaminated with NEO, NIV, α-ZOL, and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

ß-Zearalenol

incidence: 1/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc.: 39.8 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]
- Co-contamination: 1 sa. co-contaminated with NEO, NIV, α-ZOL, and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Zearalenone

incidence: 13/35, sample comp.: human breast milk of women from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: 2.1–14.3 ng/ml, Ø conc.: 9.36 ng/ml, sample year: January–December 2012, country: Spain/Czech Republic/France[275]
- Co-contamination: 4 sa. co-contaminated with HT-2, NEO, and ZEN; 2 sa. co-contaminated with HT-2 and ZEN; 1 sa. co-contaminated with NIV and ZEN; 6 sa. contaminated solely with ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Human bronchial lavage fluid may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 1/100*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc.: pr, sample year: unknown, country: Italy[142], *78 male and 22 female patients with lung cancer, age: 40–75 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1 and AFS, literature[142]

Human cervix may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 3/5* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 0.48–4.9 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 2.69 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *female patients, **sa. from cadavers at autopsy, normal tissue (but cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast, Human colon, Human liver, Human pancreas, AFB_1, literature[46], autopsy

For detailed information please see the article.

incidence: 16/22*, sample comp.: people from Mexico, sample origin: Gynecologic Obstetric Hospital "Castelazo Ayala" of the Mexican Institute of Social Security, Mexico City (capital), Mexico, contamination: natural, conc. range: 60–5,500 pg AFB_1-FAPY adducts/mg DNA, Ø conc.: 1,847.94 pg AFB_1-FAPY adducts/mg DNA, sample year: June 1997–May 1999, country: Mexico[227], *women with cervical cancer (HPV type 16)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/18*, sample comp.: people from Mexico, sample origin: Gynecologic Obstetric Hospital "Castelazo Ayala" of the Mexican Institute of Social Security, Mexico City (capital), Mexico, contamination: natural, conc. range: 90–2,500 pg AFB_1-FAPY adducts/mg DNA, Ø conc.: 1,012.01 pg AFB_1-FAPY adducts/mg DNA, sample year: June 1997–May 1999, country: Mexico[227], *women with cervical cancer (HPV type 18)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/14*, sample comp.: people from Mexico, sample origin: Gynecologic Obstetric Hospital "Castelazo Ayala" of the Mexican Institute of Social Security, Mexico City (capital), Mexico, contamination: natural, conc. range: ≤30 pg AFB_1-FAPY adducts/mg DNA, sample year: June 1997–May 1999, country: Mexico[227], *healthy women (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Human colon may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 3/8* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 0.17–0.62 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 0.34 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *10 unknown gender patients, **sa. from cadavers at autopsy, normal tissue (but cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast, Human cervix, Human liver, Human pancreas, AFB_1, literature[46], autopsy

incidence: 6/6* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 0.04–3.07 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 1.62 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *3 male, 1 female, and 2 unknown gender patients, **sa. from normal tissue (but cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human rectum, AFB_1, literature[46], normal tissue

incidence: 1/3* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc.: 1.0 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *1 male and 2 female (1 af.) patients, **sa. from tumorous tissue (cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human rectum, AFB_1, literature[46], tumorous tissue

incidence: 4/9* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 0.41–2.2 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 1.27 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *3 male (1 af.) and 6 female (3 af.) patients, **sa. from normal sigmoid colon tissue (but cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human rectum, AFB_1, literature[46]

incidence: 3/4* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 4.1–56.9 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 22.4 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *3 male (2 af.) and 1 female (af.) patient/s, **sa. from tumorous sigmoid colon tissue (cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human rectum, AFB_1, literature[46]

incidence: 1/3* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc.: 5.9 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *3 female (1 af.) patients, **sa. from tumorous right colon tissue (cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human rectum, AFB_1, literature[46]

incidence: 0/1* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: no contamination, sample year: unknown, country: UK/Mexico[46], *1 female patient, **sa. from normal transverse colon tissue (but cancer patient)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human rectum, AFB_1, literature[46]

incidence: 0/1* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: no contamination, sample year: unknown, country: UK/Mexico[46], *1 male patient, **sa. from tumorous transverse colon tissue (cancer patient)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human rectum, AFB_1, literature[46]

incidence: 0/1* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: no contamination, sample year: unknown, country: UK/Mexico[46], *1 male patient, **sa. from tumorous left colon tissue (cancer patient)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human rectum, AFB_1, literature[46]

For detailed information please see the article.

Human colostrum see **Human breast milk**

Human endometrium may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Zearalenone

incidence: 25/49*, sample comp.: people from Poland, sample origin: gynecologic clinic in Poland, contamination: natural, conc. range: 47.8 ng/ml (Ø value, 3 sa.°), 167 ng/ml (Ø value, 22 sa.°°), sample year: 1995–1996, country: Poland[75], *female persons, °endometrial hyperplasia, °°endometrial adenocarcinoma

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Human feces may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxicol

incidence: 5/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 0.4 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 0.01 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with underweight

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 3/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 1.1 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 6/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 0.7 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], kwashiorkor; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 1/5*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc.: 27 ng on day 7**, 16 ng on day 8**, 1,668 ng on day 9**, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet, **aflatoxin excretion in stool per day

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFM_1, and AFM_2, literature[180], kwashiorkor; Human urine, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[180], kwashiorkor

incidence: 0/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: no contamination, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFM_1, and AFM_2, literature[180], marasmic kwashiorkor; Human urine, AFB_1, AFB_2, AFM_1, and AFM_2, literature[180], marasmic kwashiorkor

For detailed information please see the article.

Aflatoxin B_1

incidence: 7/18*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**–123.0 µg/kg, sample year: unknown, country: USA/Thailand[2], *children with EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity

- Co-contamination: 4 sa. co-contaminated with AFB_1 and AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, AFB_1, literature[2], with EFDV; Human feces, AFB_2, literature[2], with EFDV; Human brain, Human intestine, Human kidney, Human liver, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 3/5*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**, sample year: unknown, country: USA/Thailand[2], *children dying from causes other than EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human intestine, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human brain, Human kidney, AFB_1 and AFB_2, no EFDV

For detailed information please see the article.

incidence: 2/40*, sample comp.: people from Ghana, sample origin: greater Accra region, Ghana, contamination: natural, Ø conc.: 47.9 pg/g (wet weight), sample year: late April 19?? (wet season), country: Ghana[76], *apparently healthy adults (29 male and 11 female persons), age: 30–73 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFG_1, AFM_1, AFQ_1, literature[76], Human serum, AFB_1, AFG_1, AFQ_1, literature[76], Human urine, AFB_1 and AFG_1, literature[76]

incidence: 11/20, sample comp.: people from Egypt, sample origin: rural area of Egypt, contamination: natural, conc. range: 1.8–6 µg/kg, sample year: unknown, country: Australia/Finland[78], *normally healthy volunteers (12 male and 8 female (11 af.) persons), age: 20–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 5/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 29 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 21 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with underweight

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 3/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 26 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 7/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 19 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], kwashiorkor; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 2/5*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc. range: 28 or 2,279 ng on day 3**, 8 or 1,223 ng on day 4**, 149 ng on day 5**, 1,896 ng on day 6**, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet, **aflatoxin excretion in stool per day

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_2; 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFL, AFM_1, AFM_2, literature[180], kwashiorkor; Human urine, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[180], kwashiorkor

incidence: 1/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc.: 176 ng on day 1**, 1,408 ng on day 6**, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet, **aflatoxin excretion in stool per day

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFM_1 and AFM_2, literature[180], marasmic kwashiorkor; Human urine, AFB_1,

AFB_2, AFM_1, AFM_2, literature[180], marasmic kwashiorkor

For detailed information please see the article.

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.02 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with AFB_1 and FB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, ZEN, literature[226]; Human feces, FB_1, NEO, OTA, T2TRI, α-ZOL, ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1, OTA, literature[226]

Aflatoxin B_2

incidence: 4/18*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: 4–19 µg/kg, Ø conc.: 12.8 µg/kg, sample year: unknown, country: USA/Thailand[2], *children with EFDV

- Co-contamination: 4 sa. co-contaminated with AFB_1 and AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human feces, AFB_1, literature[2], with EFDV; Human brain, Human intestine, Human kidney, Human liver, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 0/5*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: no contamination, sample year: unknown, country: USA/Thailand[2], *children dying from causes other than EFDV

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human feces, Human intestine, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human brain, Human kidney, AFB_1 and AFB_2, no EFDV

For detailed information please see the article.

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 149 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. showing marasmus, **children, ***serial aflatoxin estimation after 6 h

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 1/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 1.0 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 1.5 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with underweight

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 0/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone[118], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 0/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], kwashiorkor; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

Aflatoxin G_1

incidence: 34/40*, sample comp.: people from Ghana, sample origin: greater Accra region, Ghana, contamination: natural, Ø conc.: 129.6 pg/g (wet weight), sample year: late April 19?? (wet season), country: Ghana[76], *apparently healthy adults (29 male and 11 female persons), age: 30–73 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFM_1, AFQ_1, literature[76], Human serum, AFB_1, AFG_1, AFQ_1, literature[76], Human urine, AFB_1 and AFG_1, literature[76]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 4,372 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. showing marasmus, **children, ***serial aflatoxin estimation after 0 h

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 9,028 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. showing marasmus, **children, ***serial aflatoxin estimation after 12 h

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 243 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. showing marasmus, **children, ***serial aflatoxin estimation after 24 h

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 6/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 11 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 0/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone[118], *children with underweight

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 0/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern Province of Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone[118], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 4/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 15 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], kwashiorkor; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

Aflatoxin G_2

incidence: 1/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 0.4 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 0/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: no

contamination, sample year: unknown, country: Sierra Leone[118], *children with underweight

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 0/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern Province of Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone[118], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 2/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 0.30 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, OTB, literature[118], kwashiorkor; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

Aflatoxin M_1

incidence: 3/40*, sample comp.: people from Ghana, sample origin: greater Accra region, Ghana, contamination: natural, Ø conc.: 58.7 pg/g (wet weight), sample year: late April 19?? (wet season), country: Ghana[76], *apparently healthy adults (29 male and 11 female persons), age: 30–73 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFG_1, AFG_1, and AFQ_1, literature[76], Human serum, AFB_1, AFG_1, and AFQ_1, literature[76], Human urine, AFB_1 and AFG_1, literature[76]

incidence: 3/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 1.6 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_2, OTA, 4R-OTA, OTB, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 0/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone[118], *children with underweight

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_2, OTA, 4R-OTA, OTB, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 0.6 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with marasmus
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_2, OTA, 4R-OTA, OTB, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 7/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 2.7 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_2, OTA, 4R-OTA, OTB, literature[118], kwashiorkor; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 2/5*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc. range: 20 ng on day 1**, 86 ng on day 2**, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet, **aflatoxin excretion in stool per day
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFL, AFB_1, and AFM_2, literature[180], kwashiorkor; Human urine, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[180], kwashiorkor

incidence: 2/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc. range: 1 or 190 ng on day 1**, 504 ng on day 4**, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet, **aflatoxin excretion in stool per day
- Co-contamination: 1 sa. co-contaminated with AFM_1 and AFM_2; 1 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1 and AFM_2, literature[180], marasmic kwashiorkor; Human urine, AFB_1, AFB_2, AFM_1, and AFM_2, literature[180], (marasmic kwashiorkor)

For detailed information please see the article.

Aflatoxin M_2

incidence: 6/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 3.70 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, OTA, 4R-OTA, and OTB, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 0.10 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with underweight
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces,

AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, OTA, 4R-OTA, and OTB, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 0.60 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, OTA, 4R-OTA, and OTB, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 5/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 1.10 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, OTA, 4R-OTA, OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118], kwashiorkor; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 4/5*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc. range: 1,997 ng on day 1**, 108 or 52,522 ng on day 2**, 515 or 5,313 ng on day 3**, 721 ng on day 4**, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet, **aflatoxin excretion in stool per day

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_2; 3 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFL, AFB_1, and AFM_1, literature[180], kwashiorkor; Human urine, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[180], kwashiorkor

incidence: 2/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc. range: 102 ng on day 1**, 63 and 9,193 ng on day 2**, 8 ng on day 3**, 445 ng on day 4**, 690 ng on day 5**, 4,608 ng on day 6**, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet, **aflatoxin excretion in stool per day

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_2, 1 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1 and AFM_1, literature[180], marasmic kwashiorkor; Human urine, AFB_1, AFB_2, AFM_1, and AFM_2, literature[180], marasmic kwashiorkor

For detailed information please see the article.

Aflatoxin Q_1

incidence: 5/40*, sample comp.: people from Ghana, sample origin: greater Accra region, Ghana, contamination: natural, Ø conc.: 101.3 pg/g (wet weight), sample year: late April 19?? (wet season), country: Ghana[76], *apparently healthy adults (29 male and 11 female persons), age: 30–73 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, and AFM_1, literature[76], Human serum, AFB_1, AFG_1, and AFQ_1, literature[76], Human urine, AFB_1 and AFG_1, literature[76]

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 1/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 1.60 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 2.00 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with underweight

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 2?/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 8.30 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 5/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 2.50 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[118], kwashiorkor; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 1.32 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with NEO, OTA, T2TRI, α-ZOL, and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

4-Hydroxyochratoxin A

incidence: 1/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 1.00 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces,

AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 1.20 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with underweight

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 2/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 0.10 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 7/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 0.40 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118], kwashiorkor; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

Ochratoxin B

incidence: 2/11*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 8.4 ng/ml, sample year: unknown, country: Sierra Leone[118], *children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[118], control; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/4*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 31 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with underweight

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[118], underweight; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 4/5*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 27 ng/ml, sample year: unknown,

country: Sierra Leone[118], *children with marasmus
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[118], marasmus; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 7/12*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, Ø conc.: 29 ng/ml, sample year: unknown, country: Sierra Leone[118], *children with kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[118], kwashiorkor; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

Fusarium Toxins

Fumonisin B_1

incidence: 7/20*, sample comp.: people from South Africa, sample origin: Vulamehlo (municipality), rural district school south of Durban (city), South Africa, contamination: natural, conc. range: 6.0–19.56 mg/g, Ø conc.: 10.72 mg/g, sample year: unknown, country: South Africa[79], *rural school-children, age: 6–12 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/23*, sample comp.: people from South Africa, sample origin: Durban metropolitan area, South Africa, contamination: natural, conc. range: 3.5–16.2 mg/g, Ø conc.: 9.85 mg/g, sample year: unknown, country: South Africa[79], *urban adults, age: 12–60 years

For whole literature[79]:
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.6 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s
- Co-contamination: 1 sa. co-contaminated with AFB_1 and FB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, NEO, OTA, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

incidence: 13/40*, sample comp.: people from South Africa, sample origin: Mphise and Ngcolosi (villages), Tugela Valley, South Africa, contamination: natural, conc. range: 0.5–39.0 mg/kg, Ø conc.: 9.0 mg/kg, sample year: unknown, country: South Africa[230], *rural persons

incidence: 3/44*, sample comp.: people from South Africa, sample origin: Mphise and Ngcolosi? (villages), Tugela Valley?, South Africa, contamination: natural, conc. range: 0.6–16.2 mg/kg, Ø conc.: 6.8 mg/kg, sample year: unknown, country: South Africa[230], *urban persons (control)

For whole literature[230]:
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 41/41*, sample comp.: people from South Africa, sample origin: Mapate village, Limpopo Province (Venda), South Africa, contamination: natural, conc. range: 0.3–464 µg/kg, Ø conc.: 86 µg/kg, sample year: unknown, country: South Africa[274], *rural persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Neosolaniol

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.83 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with NEO, OTA, T2TRI, α-ZOL, and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

T-2 Triol

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.56 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with NEO, OTA, T2TRI, α-ZOL, and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

α-Zearalenol

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.35 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with NEO, OTA, T2TRI, α-ZOL, and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

ß-Zearalenol

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.46 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with NEO, OTA, T2TRI, α-ZOL, and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, and α-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

Human funiculum may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 6/28*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (4 sa.), 1.0–1.9 µg/l (2 sa., maximum: 1.21 µg/l), Ø conc.: 0.78 µg/l, sample year: 1998, country: EU[73], *healthy pregnant women

incidence: 3/12*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (2 sa.), 9.4 µg/l (1 sa.), Ø conc.: 3.60 µg/l, sample year: 1998, country: EU[73], *pregnant women with pathologies
For whole literature[73]:

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human placenta, Human plasma, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

Human hair may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Fumonisin B_1

incidence: 5/5*, sample comp.: people from South Africa, sample origin: barber shops in Bizana (town, north-eastern region), Butterworth and Centane (towns, south-western region), districts of Transkei, South Africa, contamination: natural, conc. range: tr–93.5 µg/kg, sample year: unknown, country: South Africa[80], *composite bulk hair

- Co-contamination: 2 sa. co-contaminated with FB_1, FB_2, and FB_3; 2 sa. co-contaminated with FB_1 and FB_2; 1 sa. contaminated solely with FB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Fumonisin B_2

incidence: 4/5*, sample comp.: people from South Africa, sample origin: barber shops in Bizana (town, north-eastern region), Butterworth and Centane (towns, south-western region), districts of Transkei, South Africa, contamination: natural, conc. range: tr–23.5 µg/kg, sample year: unknown, country: South Africa[80], *composite bulk hair

- Co-contamination: 2 sa. co-contaminated with FB_1, FB_2, and FB_3; 2 sa. co-contaminated with FB_1 and FB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Fumonisin B_3

incidence: 2/5*, sample comp.: people from South Africa, sample origin: barber shops in Bizana (town, north-eastern region), Butterworth and Centane (towns, south-western region), districts of Transkei, South Africa, contamination: natural, conc. range: tr, sample year: unknown, country: South Africa[80], *composite bulk hair

- Co-contamination: 2 sa. co-contaminated with FB_1, FB_2, and FB_3
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Human heart may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 3/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc. range: 830–2,355 pg/g, Ø conc.: 1,454.7 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFB_2; 2 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

Aflatoxin B_2

incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 19.0 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFB_2

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

Human intestine may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 4/5*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**–81 µg/kg***, sample year: unknown, country: USA/Thailand[2], *children with EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity, ***contents of intestine

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFB_2; 3 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, AFB_1, literature[2], with EFDV; Human intestine, AFB_2, literature[2], with EFDV; Human brain, Human feces, Human kidney, Human liver, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 3/9*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr*** ***, sample year: unknown, country: USA/Thailand[2], *children dying from causes other than EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity, ***contents of intestine

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human feces, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human brain, Human kidney, AFB_1 and AFB_2, no EFDV

For detailed information please see the article.

Aflatoxin B_2

incidence: 1/5*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc.: 10 µg/kg**, sample year: unknown, country: USA/Thailand[2], *children with EFDV, ***contents of intestine

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human intestine, AFB_1, literature[2], with EFDV; Human brain, Human feces, Human kidney, Human liver, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 0/9*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: no contamination**, sample year: unknown, country: USA/Thailand[2], *children dying from causes other than EFDV, **contents of intestine

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human feces, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human brain, Human kidney, AFB_1 and AFB_2, no EFDV

For detailed information please see the article.

Human kidney may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxicol

incidence: 7/24*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 55–722 pg/g, Ø conc.: 206.9 pg/g, sample year: unknown, country: Nigeria/UK[270], *15 male (4 af.) and 9 female (3 af.) children died from kwashiorkor, age: 6–72 months

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFL; 1 sa. co-contaminated with AFG_2 and AFL; 1 sa. co-contaminated with AFM_2 and AFL; 4 sa. contaminated solely with AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

incidence: 3/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 156–608 pg/g, Ø conc.: 308.6 pg/g, sample year: unknown, country: Nigeria/UK[270], *12 male (1 af.) and 8 female (2 af.) children died from miscellaneous diseases, age: 1.5–168 months

- Co-contamination: 1 sa. co-contaminated with AFG_1, AFG_2, and AFL; 1 sa. co-contaminated with AFG_1 and AFL; 1 sa. contaminated solely with AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[270], miscellaneous diseases

Aflatoxin B_1

incidence: 11/14*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**, sample year: unknown, country: USA/Thailand[2], *children with EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, AFB_1, literature[2], with EFDV; Human kidney, AFB_2, literature[2], with EFDV; Human brain, Human feces, Human intestine, Human liver, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 6/11*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**, sample year: unknown, country: USA/Thailand[2], *children and adolescents dying from causes other than EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity

- Co-contamination: take this into account: 1 sa. co-contaminated with AFB_1 and AFB_2; 5 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human brain, Human feces, Human intestine, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human brain, Human kidney, AFB_2, no EFDV

For detailed information please see the article.

incidence: 2/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc. range: 200–336 pg/g, Ø conc.: 268 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_1; 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human liver, Human lung, Human

spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 0/24*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: no contamination, sample year: unknown, country: Nigeria/UK[270], *15 male and 9 female children died from kwashiorkor, age: 6–72 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

incidence: 1/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc.: 752 pg/g, sample year: unknown, country: Nigeria/UK[270], *12 male and 8 female (1 af.) children died from miscellaneous diseases, age: 1.5–168 months

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

Aflatoxin B_2

incidence: 0/14*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: no contamination, sample year: unknown, country: USA/Thailand[2], *children with EFDV

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human kidney, AFB_1, literature[2], with EFDV; Human brain, Human feces, Human intestine, Human liver, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 1/11*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc.: tr**, sample year: unknown, country: USA/Thailand[2], *children and adolescents dying from causes other than EFDV, **a blue fluorescent spot similar to that of AFB_2 but insufficient for confirmation of identity

- Co-contamination: taking this into account: 1 sa. co-contaminated with AFB_1 and AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human brain, Human feces, Human intestine, Human kidney, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human brain, AFB_2, no EFDV

For detailed information please see the article.

incidence: 3/24*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 6–440 pg/g, Ø conc.: 187 pg/g, sample year: unknown, country: Nigeria/UK[270], *15 male (2 af.) and 9 female (1 af.) children died from kwashiorkor, age: 6–72 months

- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFG_2; 2 sa. contaminated solely with AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

incidence: 1/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc.: 1,843 pg/g, sample year: unknown, country: Nigeria/UK[270], *12 male and 8 female (1 af.) children died from miscellaneous diseases, age: 1.5–168 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

Aflatoxin G_1

incidence: 2/24*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 7,871–42,452 pg/g, Ø conc.: 25,161.5 pg/g, sample year: unknown, country: Nigeria/UK[270], *15 male (2 af.) and 9 female children died from kwashiorkor, age: 6–72 months

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFL; 1 sa. contaminated solely with AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

incidence: 2/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 4,885–23,626 pg/g, Ø conc.: 14,255.5 pg/g, sample year: unknown, country: Nigeria/UK[270], *12 male (2 af.) and 8 female children died from miscellaneous diseases, age: 1.5–168 months

- Co-contamination: 1 sa. co-contaminated with AFG_1, AFG_2, and AFL; 1 sa. contaminated solely with AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_2, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

Aflatoxin G_2

incidence: 5/24*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 6–927 pg/g, Ø conc.: 233.6 pg/g, sample year: unknown, country: Nigeria/UK[270], *15 male (3 af.) and 9 female (2 af.) children died from kwashiorkor, age: 6–72 months

- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFG_2; 1 sa. co-contaminated with AFG_2 and AFL; 3 sa. contaminated solely with AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

incidence: 6/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 10–272 pg/g, Ø conc.: 122.2 pg/g, sample year: unknown, country: Nigeria/UK[270], *12 male (6 af.) and 8 female children died from miscellaneous diseases, age: 1.5–168 months

- Co-contamination: 1 sa. co-contaminated with AFG_1, AFG_2, and AFL; 1 sa. co-contaminated with AFG_2 and AFM_1; 4 sa. contaminated solely with AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

Aflatoxin M_1

incidence: 3/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc. range: 877–18,521 pg/g, Ø conc.: 6,911.33 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_1; 1 sa. co-contaminated with AFM_1 and AFM_2; 1 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 0/24*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: no contamination, sample year: unknown, country: Nigeria/UK[270], *15 male and 9 female children died from kwashiorkor, age: 6–72 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[270], miscellaneous diseases

incidence: 1/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc.: 358 pg/g, sample year: unknown, country: Nigeria/UK[270], *12 male (1 af.) and 8 female children died from miscellaneous diseases, age: 1.5–168 months

- Co-contamination: 1 sa. co-contaminated with AFG_2 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], miscellaneous diseases

Aflatoxin M_2

incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 445.0 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human lung, Human spleen, AFM_2, literature[45]

incidence: 1/24*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc.: 243 pg/g, sample year: unknown, country: Nigeria/UK[270], *15 male and 9 female (1 af.) children died from kwashiorkor, age: 6–72 months

- Co-contamination: 1 sa. co-contaminated with AFL and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, and AFL, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and

AFM_2, literature[270], miscellaneous diseases

incidence: 3/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 950–1,250 pg/g, Ø conc.: 1,115.3 pg/g, sample year: unknown, country: Nigeria/UK[270], *12 male (2 af.) and 8 female (1 af.) children died from miscellaneous diseases, age: 1.5–168 months

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_2; 2 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[270], kwashiorkor; Human kidney, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[270], miscellaneous diseases

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 3/46, sample comp.: people from Germany, sample origin: pathological institute of the city hospital, Fürth (city), Germany, contamination: natural, conc. range: 0.1–0.3 µg/kg, Ø conc.: 0.20 µg/kg, sample year: 1982/1983, country: Germany[67]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human serum, Pig kidney, Pig serum, OTA, literature[67]

incidence: 19/19*, sample comp.: people from Poland, sample origin: Urology Department of the Biziel's Hospital, Poland, contamination: natural, conc. range: <LOQ–0.45 ng/g, sample year: unknown, country: Poland[243], *male and female healthy persons with kidney tumour, age: 50–68 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[243], tumour

incidence: 1/1*, sample comp.: person from Poland, sample origin: Urology Department of the Biziel's Hospital, Poland, contamination: natural, conc.: 0.19 ng/g, sample year: unknown, country: Poland[243], *person with kidney cirrhosis, age: 55 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[243], cirrhosis

incidence: 12/30, sample comp.: people from Czech Republic, sample origin: Hradec Kralove (city), Czech Republic, contamination: natural, conc. range: 0.1–0.2 µg/kg, sample year: 2001, country: Czech Republic/France[268]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/18*, sample comp.: people from France, sample origin: Rangueil Hospital, Toulouse (city), France, contamination: natural, conc. range: 0.44–1.76 ng/g, Ø conc.: 1.02 ng/g, sample year: unknown, country: France/Canada/Croatia/Serbia[272], *patients suffering from nephropathy and urothelial cancer, age: 53–83 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, OTA, literature[272]

see also **Human renal tissue**

Human liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxicol

incidence: 2*/15**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc. range: 280–2,157 pg/g, Ø conc.: 1,218.5 pg/g, sample year: unknown, country: Kenya/UK[16], *post mortem biopsies of an 18 months old male baby

(marasmic kwashiorkor) and a 52 year old man (cirrhosis), **9 male and 6 female patients (age: 0.6–52 years?) with HCC, cirrhosis, hepatitis, stomach cancer, cerebral malaria, death in pregnancy, marasmic kwashiorkor, and peritonitis

- Co-contamination: 1 sa. co-contaminated with AFL and AFM_1; 1 sa. co-contaminated with AFG_1 and AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1, literature[16]; Human serum, AFG_1, AFM_1, and AFM_2, literature[16]; Human urine, AFM_1 and AFM_2, literature[16]

incidence: 1/10*, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: Liberia, Nigeria, and South Africa, contamination: natural, conc.: 188 pg/g, sample year: unknown, country: UK[81], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1 and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 4/6*, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: Liberia, Nigeria, and South Africa, contamination: natural, conc. range: 108–8,500 pg/g, sample year: unknown, country: UK[81], *children with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1 and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 0/3*, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: Liberia, Nigeria, and South Africa, contamination: no contamination, sample year: unknown, country: UK[81], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1 and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 2/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 1,004–4,370 pg/g, Ø conc.: 2,687 pg/g, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1 and AFB_2, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/11*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *10 children with marasmus and 1 child with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 1*/13**, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 68,936 pg/g, sample year: unknown, country: Sudan/UK[82], *child with neonatal hepatitis with micronodular cirrhosis, **children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 2/22*, sample comp.: people from Ghana, sample origin: Ghana, contamination: natural, conc. range: 12–99 pg/g, Ø conc.: 55.5 pg/g, sample year: unknown, country: Ghana/UK[83], *children with kwashiorkor and additionally other clinical findings
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, literature[83]

Aflatoxin B_1

incidence: 17/19*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**–93.0 µg/kg, sample year: unknown, country: USA/Thailand[2], *children with EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity
- Co-contamination: 2 sa. co-contaminated with AFB_1 and AFB_2; 15 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, AFB_1, literature[2], with EFDV; Human liver, AFB_2, literature[2], with EFDV; Human brain, Human feces, Human intestine, Human kidney, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 8/13*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**, sample year: unknown, country: USA/Thailand[2], *children dying from causes other than EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human feces, Human intestine, Human stomach, AFB_1, literature[2], no EFDV; Human brain, Human kidney, AFB_1 and AFB_2, no EFDV

For detailed information please see the article.

incidence: 16/37*, sample comp.: people from USA, sample origin: Arizona, Mississippi, Ohio (states), USA, contamination: natural, conc. range: <1–62 ng/g, sample year: unknown, country: USA[7], *15 children with Reye's-syndrome thereof 11 as well as 5 children of the control AFB_1-pos.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[7]

For detailed information please see the article.

incidence: 6/7*, sample comp.: people from USA, sample origin: Pediatric Neurology Service (Hospital), Mississippi (state), USA, contamination: natural, conc. range: 2.23–17.33 ng/ml, Ø conc.: 9.18 ng/ml, sample year: January 1975–May 1978, country: USA[8], *children with Reye's-syndrome
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[8]

incidence: 2*/15**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc. range: 2,232–92,978 pg/g, Ø conc.: 47,605 pg/g, sample year: unknown, country: Kenya/UK[16], *2 male adults (HCC), **9 male and 6 female patients (age: 0.6–52 years?) with HCC, cirrhosis, hepatitis, stomach cancer, cerebral malaria, death in pregnancy, marasmic kwashiorkor and peritonitis
- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_1; 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_2, AFG_1, AFG_2, AFL, and AFM_1,

literature[16]; Human serum, AFG_1, AFM_1, and AFM_2, literature[16]; Human urine, AFM_1 and AFM_2, literature[16]

incidence: 6/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc. range: 532–3,176 pg/g, Ø conc.: 1,309.8 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFG_1, and AFM_1; 1 sa. co-contaminated with AFB_1, AFB_2, and AFM_1; 4 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 10/24* **, sample comp.: people from UK, Africa, and Southeast Asia, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 0.23–19.8 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 3.42 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *3 male (1 af.), 12 female (5 af.), and 8 unknown gender (4 af.) patients, **sa. from cadavers at autopsy, normal tissue (but cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast, Human cervix, Human pancreas, AFB_1, literature[46], autopsy

incidence: 4/8*, sample comp.: people from Africa and Southeast Asia, sample origin: unknown, contamination: natural, conc. range: 1.5–19.8 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 7.35 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *8 unknown gender patients (4 af.), sa. from normal tissue (but cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 9/10*, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: Liberia, Nigeria, and South Africa, contamination: natural, conc. range: 391–8,350 pg/g, sample year: unknown, country: UK[81], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFL and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 0/6*, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: Liberia, Nigeria, and South Africa, contamination: no contamination, sample year: unknown, country: UK[81], *children with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFL and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 0/3*, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: Liberia, Nigeria, and South Africa, contamination: no contamination, sample year: unknown, country: UK[81], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces,

AFB_2 and AFG_1, literature[81]; Human liver, AFL and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 2/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 32,174–33,206 pg/g, Ø conc.: 32,690 pg/g, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_2 and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/11*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *10 children with marasmus and 1 child with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 0/13*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 20/22*, sample comp.: people of Ghana, sample origin: Ghana, contamination: natural, conc. range: 62–4,409 pg/g, Ø conc.: 1,009.5 pg/g, sample year: unknown, country: Ghana/UK[83], *children with kwashiorkor and additional clinical findings

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFL, literature[83]

incidence: 1*/1*, sample comp.: person from USA, sample origin: USA, contamination: natural, conc.: 520 ng/g wet liver, sample year: unknown, country: USA[84], *56-year-old male Caucasian rural resident of Missouri

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/20*, sample comp.: people from USA, sample origin: USA, contamination: natural, conc.: 22.5 µg/kg, sample year: February 1974, country: USA[85], *adults and children of both gender with Reye-syndrome (8 ca.) thereof 1 AFB_1-pos. (15-year-old girl), acute encephalopathy (2 ca.) and 10 ca. without any liver disease

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/15*, sample comp.: people from Czechoslovakia, sample origin: Czechoslovakia, contamination: natural, conc. range: 0.36–5.2 µg/kg, Ø conc.: 3.312 µg/kg, sample year: unknown, country: France/Czechoslovakia[86], *8 male (3 af.) and 7 female (2 af.) persons with liver cancer

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/2*, sample comp.: people from New Zealand, sample origin: New Zealand, contamination: natural, conc. range: 5–50 µg/kg wet weight (estimates), sample year: unknown, country: New Zealand[87], *children (Polynesian boy (22-month-old) and a Caucasian girl (8-month-old))

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2*/8**, sample comp.: people from Taiwan, sample origin: National Taiwan University Hospital, Taiwan, contamination: natural, conc. range: 1.2–1.7 µmol/mol DNA***, Ø conc.: 1.45 µmol/mol DNA***, sample year: unknown, country: USA/Taiwan[88], *1 male and 1 female person af., age: 22–61 years, **histology = adjacent-normal tissue, ***AFB_1-FAPy adducts

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7*/9**, sample comp.: people from Taiwan, sample origin: National Taiwan University Hospital, Taiwan, contamination: natural, conc. range: 1.2–3.5 µmol/mol DNA**, Ø conc.: 2.23 µmol/mol DNA**, sample year: unknown, country: USA/Taiwan[88], *6 male and 1 female person/s af., age: 22–61 years, **histology = tumor tissue or focal nodule, ***AFB_1-FAPy adducts

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 6/100*, sample comp.: people from France, sample origin: Bordeaux (city) and its region, France, contamination: natural, conc. range: tr–20 µg/kg, sample year: 1971–1975, country: France/Senegal[89], *55 male (4 af.) and 45 female (2 af.) persons, age: 24–84 years (34 cases younger than 60 years)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/8*, sample comp.: people from Czechoslovakia, sample origin: Czechoslovakia, contamination: natural, conc. range: 0.63–3.51 pmol AFB_1/mg DNA, Ø conc.: 1.72 pmol AFB_1/mg DNA, sample year: unknown, country: UK/Czechoslovakia[90], *6 male (6 af.) and 2 female (1 af.) patients, age: 5–86 years (7 cases older than 60 years)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/23*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospitals, Zaria and Kano (cities), Nigeria, contamination: natural, conc. range: tr–15 µg/kg, sample year: unknown, country: Nigeria[91], *included 5 HCC cases thereof 4 AFB_1-pos. (3 males and 1 female, age: 35–70 years)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/2*, sample comp.: people from Kenya, sample origin: hospitals in the Machakos (district), Kenya, contamination: natural, conc. range: 39–89 ppb, Ø conc.: 64 ppb, sample year: March–June 1981, country: Kenya[92], *children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 35/50*, sample comp.: people from Taiwan, sample origin: Kaohsiung Medical College Hospital, Taiwan, contamination: natural, conc. range: pr.**, country: Taiwan/USA[93], *42 male (29 af.) and 8 female (6 af.) HCC patients, age: 41–84 years, **AFB_1-DNA adducts significantly higher in younger HCC patients (83 %) than in older ones (58 %)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/20*, sample comp.: people from Czechoslovakia, sample origin: Institute of Pathology in Prague (capital), Most, Ostrava, and Pisek (cities), Czechoslovakia, sample year: 1972–1977, contamination: natural, conc. range: <LOQ–2,760 µg/kg, country: Czechoslovakia[238], *10 male and 10 female children with Reye's syndrome, age: 3 days–8 years

- Co-contamination: 4 sa. co-contaminated with AFB_1 and AFM_1; 16 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFM_1, literature[238], 3 days–8 years

incidence: 3/3*, sample comp.: people from Czechoslovakia, sample origin: Czechoslovakia, contamination: natural, conc. range: <LOQ, sample year: 1972–1977, country: Czechoslovakia[238], *1 male and 2 female children with Reye's syndrome, age: 3–8 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/4*, sample comp.: people from Czechoslovakia, sample origin: Czechoslovakia, contamination: natural, conc. range: 80–1,126 µg/kg, Ø conc.: 436 µg/kg, sample year: 1972–1977, country: Czechoslovakia[238], *3 male and 1 female children with Reye's syndrome, age: 4 months–8 years (female child: material not available)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 1/1*, sample comp.: person from Czechoslovakia, sample origin: Czechoslovakia, contamination: natural, conc.: 550 µg/kg, sample year: 1978, country: Czechoslovakia[239], *agricultural worker

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFB_1, literature[239]

Aflatoxin B_2

incidence: 2/19*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: 6.0–11.0 µg/kg, Ø conc.: 8.5 µg/kg, sample year: unknown, country: USA/Thailand[2], *children with EFDV

- Co-contamination: taking this into account: 2 sa. co-contaminated with AFB_1 and AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human liver, AFB_1, literature[2], with EFDV; Human brain, Human feces, Human intestine, Human kidney, Human stomach, AFB_1 and AFB_2, literature[2], with EFDV

incidence: 0/13*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: no contamination, sample year: unknown, country: USA/Thailand[2], *children dying from causes other than EFDV

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human feces, Human intestine, Human liver, Human stomach, AFB_1, literature[2], no EFDV; Human brain, Human kidney, AFB_1 and AFB_2, no EFDV

For detailed information please see the article.

incidence: 1*/15**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc.: 13 pg/g, sample year: unknown, country: Kenya/UK[16], *1 female adult (HCC), **9 male and 6 female patients (age: 0.6–52 years?) with HCC, cirrhosis, hepatitis, stomach cancer, cerebral malaria, death in pregnancy, marasmic kwashiorkor and peritonitis

- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFG_1, AFG_2, AFL, and AFM_1, literature[16]; Human serum, AFG_1, AFM_1, and AFM_2, literature[16]; Human urine, AFM_1 and AFM_2, literature[16]

incidence: 3/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.

range: 43–121 pg/g, Ø conc.: 69 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFG_1, and AFM_1; 1 sa. co-contaminated with AFB_1, AFB_2, and AFM_1; 1 sa. co-contaminated with AFB_2 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 1/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 1,786 pg/g, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1 and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/11*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *10 children with marasmus and 1 child with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 0/13*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

Aflatoxin G_1

incidence: 2/154*, sample comp.: people from Singapore, sample origin: The Blood Transfusion Service, Ministry of Health, Singapore, contamination: natural, conc. range: 22–27 pg/ml, Ø conc.: 24.5 pg/ml, sample year: unknown, country: Singapore[11], *normal subjects (121 male and 33 female persons)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1, literature[11]; Human liver, AFM_1, literature[11]

incidence: 2*/15**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc. range: 128.0–3,186.0 pg/g, Ø conc.: 1,657.0 pg/g, sample year: unknown, country: Kenya/UK[16], *post mortem biopsy of an 18 months old male baby (marasmic kwashiorkor) and a female adult (HCC), **9 male and 6 female patients (age: 0.6–52 years?) with HCC, cirrhosis, hepatitis, stomach cancer, cerebral malaria, death in pregnancy, marasmic kwashiorkor and peritonitis

- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFG_1; 1 sa. co-contaminated with AFG_1 and AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver,

AFB_1, AFB_2, AFG_2, AFL, and AFM_1, literature[16]; Human serum, AFG_1, AFM_1, and AFM_2, literature[16]; Human urine, AFM_1 and AFM_2, literature[16]

incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 9,116 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFG_1, AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 0/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/11*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *10 children with marasmus and 1 child with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 1*/13**, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 154,817 pg/g, sample year: unknown, country: Sudan/UK[82], *child with micronodular cirrhosis with portal hypertension, **children with miscellaneous diseases

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

Aflatoxin G_2

incidence: 1*/15**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc.: 13.0 pg/g, sample year: unknown, country: Kenya/UK[16], *post mortem biopsy of a 6 months old male baby (peritonitis), **9 male and 6 female patients (age: 0.6–52 years?) with HCC, cirrhosis, hepatitis, stomach cancer, cerebral malaria, death in pregnancy, marasmic kwashiorkor and peritonitis

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, AFG_1, AFL, and AFM_1, literature[16]; Human serum, AFG_1, AFM_1, and AFM_2, literature[16]; Human urine, AFM_1 and AFM_2, literature[16]

incidence: 0/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/11*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *10 children with marasmus and 1 child with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 2*/13**, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 158–274 pg/g, Ø conc.: 216 pg/g, country: Sudan/UK[82], *child with tuberculosis or schistosomiasis, **children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

Aflatoxin M_1

incidence: 8/154*, sample comp.: people from Singapore, sample origin: The Blood Transfusion Service, Ministry of Health, Singapore, contamination: natural, conc. range: 22–142 pg/ml, Ø conc.: 82 pg/ml, sample year: unknown, country: Singapore[11], *normal subjects (121 male and 33 female persons)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, AFB_1 and AFL, literature[11]; Human liver, AFG_1, literature[11]

incidence: 3*/15**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc. range: 423–15,909 pg/g, Ø conc.: 5,916.7 pg/g, sample year: unknown, country: Kenya/UK[16], *post mortem biopsy of 2 male adults (cirrhosis, stomach cancer) and 1 male adult (HCC), **9 male and 6 female patients (age: 0.6–52 years?) with HCC, cirrhosis, hepatitis, stomach cancer, cerebral malaria, death in pregnancy, marasmic kwashiorkor and peritonitis

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_1; 1 sa. co-contaminated with AFL and AFM_1; 1 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[16]

incidence: 5/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc. range: 284–14,537 pg/g, Ø conc.: 4,900.4 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFG_1, and AFM_1; 1 sa. co-contaminated with AFB_1, AFB_2, and AFM_1; 1 sa. co-contaminated with AFB_2 and AFM_1; 2 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 0/10*, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: Liberia, Nigeria, and South Africa, contamination: no contamination, sample year: unknown, country: UK[81], *children with kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1 and AFL, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1/6*, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: Liberia, Nigeria, and South Africa, contamination: natural, conc.: 15 pg/g, sample year: unknown, country: UK[81], *children with marasmic kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1 and AFL, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 0/3*, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: Liberia, Nigeria, and South Africa, contamination: no contamination, sample year: unknown, country: UK[81], *children with marasmus
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1 and AFL, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 4/20*, sample comp.: people from Czechoslovakia, sample origin: Institute of Pathology in Prague (capital), Most, Ostrava, and Pisek (cities), Czechoslovakia, contamination: natural, conc. range: 0.8–20 µg/kg, Ø conc.: 7.95 µg/kg, sample year: 1972–1977, country: Czechoslovakia[238], *10 male and 10 female children with Reye's syndrome, age: 3 days–8 years
- Co-contamination: 4 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, literature[238], 3 days–8 years

incidence: 0/3*, sample comp.: people from Czechoslovakia, sample origin: Czechoslovakia, contamination: no contamination, sample year: 1972–1977, country: Czechoslovakia[238], *1 male and 2 female children with Reye's syndrome, age: 3–8 months
- Co-contamination: not reported
- Further contamination (organs, fluids, mycotoxins etc.): not reported

incidence: 0/4*, sample comp.: people from Czechoslovakia, sample origin: Czechoslovakia, contamination: no contamination, sample year: 1972–1977, country: Czechoslovakia[238], *3 male and 1 female children with Reye's syndrome, age: 4 months–8 years (female child: material not available)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

Aflatoxin M_2

incidence: 0/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82];

Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/11*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *10 children with marasmus and 1 child with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 2*/13**, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 1,474–3,158 pg/g, Ø conc.: 2,316 pg/g, sample year: unknown, country: Sudan/UK[82], *child with micronodular cirrhosis with portal hypertension or schistosomiasis, **children with miscellaneous diseases

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFM_2; 1 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, and AFL, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

Aflatoxin

incidence: 1/13*, sample comp.: people from USA, sample origin: southeastern USA, contamination: natural, conc.: 0.04 ppb (detected but not confirmed), sample year: unknown, country: USA[94], *3 male and 10 female (1 af., having Reye's-syndrome) children and thereof 12 Reye's-syndrome ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Human lung may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxicol

incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 27 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 4/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 20–280 pg/g, Ø conc.: 111 pg/g, sample year: unknown, country: Nigeria/UK[95], *12 male (2 af.) and 8 female (2 af.) children with kwashiorkor, age: 4–72 months

- Co-contamination: 1 sa. co-contaminated with AFG_2 and AFL; 3 sa. contaminated solely with AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFG_1, AFG_2, and AFM_2, literature[95], kwashiorkor

incidence: 3/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 7–85 pg/g, Ø conc.:

52 pg/g, sample year: unknown, country: Nigeria/UK[95], *12 male (2 af.) and 8 female (1 af.) children with miscellaneous diseases, age: 4–168 months

- Co-contamination: 1 sa. co-contaminated with AFG_1, AFL, and AFM_1; 2 sa. co-contaminated with AFM_2 and AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFG_1, AFG_2, and AFM_2, literature[95], miscellaneous diseases

Aflatoxin B_1

incidence: 5/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc. range: 38–3,465 pg/g, Ø conc.: 1,103.0 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa, co-contaminated with AFB_1 and AFL; 4 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 3*/6**, sample comp.: people from Czechoslovakia, sample origin: dust-laden areas (textile factory), Czechoslovakia, contamination: natural, conc. range: 10–54 ng/g, Ø conc.: 27.96 ng/g, sample year: unknown, country: Czechoslovakia[96], *illness began as an acute lung disease, **male (af.) and female (af.) persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/1, sample comp.: person from Japan, sample origin: Japan, contamination: natural, conc.: 0.635 µg/ml, sample year: unknown, country: Japan[97], *male patient, age: 41 years, with neutropenia following induction therapy for acute myelogenous leukemia

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFB_2 and AFM_1, literature[97]

incidence: 1/1*, sample comp.: person from Czechoslovakia, sample origin: Czechoslovakia, contamination: natural, conc.: 2,640 µg/kg, sample year: 1978, country: Czechoslovakia[239], *agricultural worker

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, literature[239]

Aflatoxin B_2

incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 48 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. contaminated solely with AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 1/1, sample comp.: person from Japan, sample origin: Japan, contamination: natural, conc.: 0.0273 µg/ ml, sample year: unknown, country: Japan[97], *male patient, age: 41 years, with neutropenia following induction therapy for acute myelogenous leukemia

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFB_1 and AFM_1, literature[97]

Aflatoxin G_1

incidence: 3/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 3,414–52,099 pg/g, Ø conc.: 31,647.66 pg/g, sample year: unknown, country Nigeria/UK[95], *12 male (2 af.) and 8 female (1 af.) children with kwashiorkor, age: 4–72 months

- Co-contamination: 2 sa. co-contaminated with AFG_1 and AFM_2; 1 sa. contaminated solely with AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFG_2, AFL, and AFM_2, literature[95], kwashiorkor

incidence: 6/20*, sample comp.: people from Nigeria (children), sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 132–84,807 pg/g, Ø conc.: 20,400 pg/g, sample year: unknown, country: Nigeria/UK[95], *12 male (3 af.) and 8 female (3 af.) children with miscellaneous diseases, age: 4–168 months

- Co-contamination: 2 sa. co-contaminated with AFG_1 and AFM_2; 1 sa. co-contaminated with AFG_1, AFM_2, and AFL; 3 sa. contaminated solely with AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFG_2, AFL, and AFM_2, literature[95], miscellaneous diseases

Aflatoxin G_2

incidence: 3/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 94–550 pg/g, Ø conc.: 334.66 pg/g, sample year: unknown, country: Nigeria/UK[95], *12 male (1 af.) and 8 female (2 af.) children with kwashiorkor, age: 4–72 months

- Co-contamination: 1 sa. co-contaminated with AFG_2 and AFL; 2 sa. contaminated solely with AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFG_1, AFL, and AFM_2, literature[95], kwashiorkor

incidence: 3/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 8–1,837 pg/g, Ø conc.: 636 pg/g, sample year: unknown, country: Nigeria/UK[95], *12 male (2 af.) and 8 female (1 af.) children with miscellaneous diseases, age: 4–168 months

- Co-contamination: 2 sa. co-contaminated with AFG_2 and AFM_2; 1 sa. contaminated with AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFG_1, AFL, and AFM_2, literature[95], miscellaneous diseases

Aflatoxin M_1

incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 1,289 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

incidence: 1/1, sample comp.: person from Japan, sample origin: Japan, contamination:

natural, conc.: 0.0525 µg/ml, sample year: unknown, country: Japan[97], *male patient, age: 41 years, with neutropenia following induction therapy for acute myelogenous leukemia

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFB_1 and AFB_2, literature[97]

Aflatoxin M_2

incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 1,595 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human spleen, AFM_2, literature[45]

incidence: 11/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 210–2,723 pg/g, Ø conc.: 894.27 pg/g, sample year: unknown, country: Nigeria/UK[95], *12 male (6 af.) and 8 female (5 af.) children with kwashiorkor, age: 4–72 months

- Co-contamination: 2 sa. co-contaminated with AFG_1 and AFM_2; 9 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFG_1, AFG_2, and AFL, literature[95], kwashiorkor

incidence: 9/20*, sample comp.: people from Nigeria, sample origin: Obafemi Awolowo Teaching Hospital Complex, Ile-Ife (city), Nigeria, contamination: natural, conc. range: 100–3,058 pg/g, Ø conc.: 1,088.4 pg/g, sample year: unknown, country: Nigeria/UK[95], *12 male (4 af.) and 8 female (5 af.) children with miscellaneous diseases, age: 4–168 months

- Co-contamination: 2 sa. co-contaminated with AFG_1 and AFM_2; 2 sa. co-contaminated with AFG_2 and AFM_2; 1 sa. co-contaminated with AFG_1, AFL, and AFM_2; 2 sa. co-contaminated with AFL and AFM_2; 2 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human lung, AFG_1, AFG_2, and AFL, literature[95], miscellaneous diseases

Human maternal milk see **Human breast milk**

Human milk see **Human breast milk**

Human pancreas may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 6/12* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 0.21–0.47 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 0.33 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *3 male (2 af.), 8 female (4 af.), and 1 unknown gender patient/s, **sa. from cadavers at autopsy, normal tissue (but cancer patients)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast, Human cervix, Human colon, Human liver, AFB_1, literature[46], autopsy

For detailed information please see the article.

Human placenta may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 40/60*, sample comp.: people from Taiwan, sample origin: uncomplicated pregnancies at Taipei Chang Gung Memorial Hospital, Taiwan, contamination: natural, conc. range: 0.6–6.3 µmol/mol DNA**, Ø conc.: 2.55 µmol/mol DNA**, sample year: August 1990, country: Taiwan[9], *sa. from female persons collected in summer, **AFB_1-DNA adducts

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[9], summer

incidence: 29/60*, sample comp.: people from Taiwan, sample origin: uncomplicated pregnancies at Taipei Chang Gung Memorial Hospital, Taiwan, contamination: natural, conc. range: 0.9–3.4 µmol/mol DNA**, Ø conc.: 2.06 µmol/mol DNA**, sample year: January 1991, country: Taiwan[9], *sa. from female persons collected in winter, **AFB_1-DNA adducts

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[9], winter

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 7/28*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (1 sa.), 2.0–5.0 µg/l (2 sa.), >5.0 µg/l (4 sa., maximum: 10.57 µg/l), Ø conc.: 6.33 µg/l, sample year: 1998, country: EU[73], *healthy pregnant women

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human plasma, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 4/12*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (1 sa.), 1.0–1.9 µg/l (1 sa.), 2.0–5.0 µg/l (1 sa.), 9.29 µg/l (1 sa.), Ø conc.: 3.47 µg/l, sample year: 1998, country: EU[73], *pregnant women with pathologies

For whole literature[73]:

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids etc.): Human breast milk, Human funiculum, Human plasma, Human plasma/serum, Human serum Human urine, OTA, literature[73], ethnic, normal, vegetarian

Human plasma may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 64/64*, sample comp.: people from Ghana, sample origin: Ejura Sekyedumase (district), Kumasi (region), Ghana, contamination: natural, conc. range: 0.3325–2.2703 pmol/mg albumin**, Ø conc.: 0.9972 pmol/mg albumin**, sample year: unknown, country: USA/Ghana[10], *34 male and 30 female persons, **AFB_1-albumin adducts

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 140/140*, sample comp.: people from Ghana, sample origin: Dromankuma, Nkwanta, Hiawoanwu, and Kasei (villages), Ejura Sekyedumase (district), Ashanti (region), Ghana, contamination: natural, conc. range: 0.12–3.00 pmol/mg albumin, Ø conc.: 0.89 pmol/mg albumin, sample year: June–August 2002, country: USA/Ghana[12], *male and female persons at the age of 19–86 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[12]

For detailed information please see the article.

incidence: 5/62*, sample comp.: people from Turkey, sample origin: Ankara University School of Medicine, Gastroenterology Clinic, Turkey, contamination: natural, Ø conc.: 101.2 pg/ml, sample year: January 2006–June 2007, country: Turkey[98], *33 male and 29 female persons (healthy controls)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, AFB_2, AFG_1, and AFG_2, literature[98], control

incidence: 50/203*, sample comp.: people from Turkey, sample origin: Ankara University School of Medicine, Gastroenterology Clinic, Turkey, contamination: natural, Ø conc.: 36.1 pg/ml, sample year: January 2006–June 2007, country: Turkey[98], *119 male and 84 female patients thereof 93 with chronic hepatitis, 64 with cirrhosis, and 46 with HCC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, AFB_2, AFG_1, and AFG_2, literature[98], hepatitis, cirrhosis

incidence: 140/140*, sample comp.: people from Ghana, sample origin: Dromankuma, Nkwanta, Hiawoanwu, and Kasei (villages), Ejura Sekyedumase (district), Ashanti (region), Ghana, contamination: natural, conc. range: 0.12–2.995 pmol/mg albumin**, sample year: unknown, country: USA/Ghana[248], *69 male and 71 female persons, age: 19–86 years, thereof 64 with malaria, 23 with HBV, 20 with HCV, 3 with both, and 3 with HIV, **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 154/155*, sample comp.: people from Ghana, sample origin: area of Ashanti (region), Ghana, contamination: natural, conc. range: ≤3.48 pmol/mg albumin**, sample year: unknown, country: USA/Ghana[249], *HIV-positive persons, **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 159/159*, sample comp.: people from Ghana, sample origin: area of Ashanti (region), Ghana, contamination: natural, conc. range: 0.12–3.00 pmol/mg albumin**, sample year: unknown, country: USA/Ghana[249], *HIV-negative persons, **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 145/145*, sample comp.: people from Ghana, sample origin: Ejura Sekyedumase (district), Ashanti (region), southern Ghana, contamination: natural, conc. range: 0.120–2.994 pmol/mg albumin** (median conc.), Ø conc.: 0.899 pmol/mg albumin** (median conc.), sample year: unknown, country: USA/Ghana[265], *adults, age: ≥19 years, **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[265]

For detailed information please see the article.

Aflatoxin B_2

incidence: 3/62*, sample comp.: people from Turkey, sample origin: Ankara University School of Medicine, Gastroenterology Clinic, Turkey, contamination: natural, Ø conc.: 18.8 pg/ml, sample year: January 2006–June 2007, country: Turkey[98], *33 male and 29 female persons (healthy controls)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human

plasma, AFB_1, AFG_1, and AFG_2, literature[98], control

incidence: 35/203*, sample comp.: people from Turkey, sample origin: Ankara University School of Medicine, Gastroenterology Clinic, Turkey, contamination: natural, Ø conc.: 28.4 pg/ml, sample year: January 2006–June 2007, country: Turkey[98], *119 male and 84 female patients thereof 93 with chronic hepatitis, 64 with cirrhosis, and 46 with HCC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, AFB_1, AFG_1, and AFG_2, literature[98], hepatitis, cirrhosis

Aflatoxin G_1

incidence: 6/62*, sample comp.: people from Turkey, sample origin: Ankara University School of Medicine, Gastroenterology Clinic, Turkey, contamination: natural, Ø conc.: 32.5 pg/ml, sample year: January 2006–June 2007, country: Turkey[98], *33 male and 29 female persons (healthy controls)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, AFB_1, AFB_2, and AFG_2, literature[98], control

incidence: 46/203*, sample comp.: people from Turkey, sample origin: Ankara University School of Medicine, Gastroenterology Clinic, Turkey, contamination: natural, Ø conc.: 92.0 pg/ml, sample year: January 2006–June 2007, country: Turkey[98], *119 male and 84 female patients thereof 93 with chronic hepatitis, 64 with cirrhosis, and 46 with HCC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, AFB_1, AFB_2, and AFG_2, literature[98], hepatitis, cirrhosis

Aflatoxin G_2

incidence: 2/62*, sample comp.: people from Turkey, sample origin: Ankara University School of Medicine, Gastroenterology Clinic, Turkey, contamination: natural, Ø conc.: 10.4 pg/ml, sample year: January 2006–June 2007, country: Turkey[98], *33 male and 29 female persons (healthy controls)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, AFB_1, AFB_2, and AFG_1, literature[98], control

incidence: 37/203*, sample comp.: people from Turkey, sample origin: Ankara University School of Medicine, Gastroenterology Clinic, Turkey, contamination: natural, Ø conc.: 18.2 pg/ml, sample year: January 2006–June 2007, country: Turkey[98], *119 male and 84 female patients thereof 93 with chronic hepatitis, 64 with cirrhosis, and 46 with HCC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, AFB_1, AFB_2, and AFG_1, literature[98], hepatitis, cirrhosis

Aflatoxin M_1

incidence: 5/20*, sample comp.: people from Egypt, sample origin: outpatient clinic AbBo El-Rish Hospital—Cairo University, Egypt, contamination: natural, conc. range: 0.1–2.10 ng/ml, Ø conc.: 1.18 ng/ml, sample year: 2000–2002, country: Egypt[17], *female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and OTA, literature[17]; Human urine, AFM_1, literature[17]; Human plasma, OTA, literature[17]

Aflatoxin

incidence: 119/124*, sample comp.: people from Guinea, sample origin: Kindia (prefecture), lower Guinea, contamination: natural, conc. range: 8.8–11.0 pg/mg albumin (95 % CI), Ø conc.: 9.9 pg/mg albumin, sample year: March/May 2002, country: UK/Guinea/USA[24], *children (age: 2–5 years) with peanuts as a dietary staple

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aspergillus and ***Penicillium*** Toxins

Citrinin

incidence: 8/8*, sample comp.: people from Germany, sample origin: Dortmund (city), Germany, contamination: natural, conc. range: 0.10–0.25 ng/ml, sample year: winter 2010, country: Germany[224], *4 male and 4 female persons, age: 16–58 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, CIT and HO-CIT, literature[224]

Ochratoxin A

incidence: 2/13*, sample comp.: people from Egypt, sample origin: outpatient clinic AbBo El-Rish Hospital—Cairo University, Egypt, contamination: natural, conc. range: 3.22–4.12 ng/ml, Ø conc.: 3.67 ng/ml, sample year: 2000–2002, country: Egypt[17], *female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and OTA, literature[17]; Human plasma, Human urine, AFM_1, literature[17]

incidence: 14/21*, sample comp.: people from Tunisia, sample origin: Blood Bank, Tunisia, contamination: natural, conc. range: 0.1–2.3 ng/ml, sample year: unknown, country: Tunisia/France[32], *healthy persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 33/33*, sample comp.: people from Tunisia, sample origin: Nephrology Departments, Tunisia, contamination: natural, conc. range: 0.7–1,136 ng/ml, Ø conc.: 80.6 ng/ml, sample year: unknown, country: Tunisia/France[32], *nephropathy patients under dialysis
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 195/200*, sample comp.: people from Sweden, sample origin: Uppsala and Visby (cities), Sweden, contamination: natural, conc. range: ≤0.88 ng/ml, sample year: 1994, country: EU[34], *healthy persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 130/160*, sample comp.: people from Italy, sample origin: regional, Italy, contamination: natural, conc. range: <0.9 ng/ml (128 sa.), 2.0–4.9 ng/ml (2 sa., maximum: 2.83 ng/ml), sample year: 1993/1994, country: EU[34], *healthy persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 267/309*, sample comp.: people from Germany, sample origin: Thuringia (federal state), Germany, contamination: natural, conc. range: <0.9 ng/ml (254 sa.), 1.0–1.9 ng/ml (9 sa.), 2.0–4.9 ng/ml (3 sa.), 7.9 ng/ml (1 sa.), sample year: 1994, country: EU[34], *healthy persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/16*, sample comp.: people from Chile, sample origin: Colbún, central-south agricultural area of Chile, contamination: natural, conc. range: 0.10–2.75 ng/ml, sample year: March/July 2004, country: Chile[38], *male healthy blood donors
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 16/28*, sample comp.: people from Chile, sample origin: Colbún, central-south agricultural area of Chile, contamination: natural, conc. range: 0.07–2.75 ng/ml, sample year: March/July 2004, country: Chile[38], *female healthy blood donors
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 16/19*, sample comp.: people from Chile, sample origin: San Vicente de Tagua—Tagua, central-south agricultural area of Chile, contamination: natural, conc.

range: 0.22–1.31 ng/ml, sample year: October 2004, country: Chile[38], *male healthy blood donors
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 24/25*, sample comp.: people from Chile, sample origin: San Vicente de Tagua—Tagua, central-south agricultural area of Chile, contamination: natural, conc. range: 0.29–2.12 ng/ml, sample year: October 2004, country: Chile[38], *female healthy blood donors
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 202/202*, sample comp.: people from Norway, sample origin: Blood Bank of Ullevaal University Hospital, Oslo (capital), Norway, contamination: natural, Ø conc.: 0.18 ng/ml, sample year: February 1998, country: Sweden/Norway[39], *104 male and 98 female blood donors, Ø age: 41 years (men), 38 years (women), Ø wt.: 84 kg (men), 64 kg (women)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 191/191*, sample comp.: people from Sweden, sample origin: Blood Bank of Visby Hospital, Visby (city), Sweden, contamination: natural, conc. range: 0.03–1.23 ng/ml, Ø conc.: 0.21 ng/ml, sample year: November 1997, country: Sweden/Norway[39], *133 male and 58 female blood donors, Ø age: 44 years (men), 43 years (women), Ø wt.: 84 kg (men), 68 kg (women)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 104/104*, sample comp.: people from Netherlands, sample origin: Netherlands, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (maximum: 0.51 µg/l), Ø conc.: 0.17 µg/l, sample year: 1998, country: EU[73], *male persons, Ø age: 41 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 98/98*, sample comp.: people from Netherlands, sample origin: Netherlands, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (maximum: 0.78 µg/l), Ø conc.: 0.20 µg/l, sample year: 1998, country: EU[73], *female persons, Ø age: 38 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 131/133*, sample comp.: people from Sweden, sample origin: Sweden, contamination: natural, conc. range: 1.0–1.9 µg/l (maximum: 1.23 µg/l), Ø conc.: 0.21 µg/l, sample year: 1997, country: EU[73], *male persons, Ø age: 44 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 58/58*, sample comp.: people from Sweden, sample origin: Sweden, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (maximum: 0.88 µg/l), Ø conc.: 0.21 µg/l, sample year: 1997, country: EU[73], *female persons, Ø age: 43 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 7/7*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: LOD/

LOQ–0.9 µg/l (maximum: 2.15 µg/l?), Ø conc.: 1.365 µg/l?, sample year: 1999, country: EU[73], *male and female persons eating ethnic diet, age: 18–55 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 32/32*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (maximum: 3.11 µg/l?), Ø conc.: 1.009 µg/l?, sample year: 1999, country: EU[73], *male and female persons eating normal diet, age: 18–55 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 11/11*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (maximum: 2.46 µg/l?), Ø conc.: 1.209 µg/l?, sample year: 1999, country: EU[73], * male and female persons eating vegetarian diet, age: 18–55 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma/serum, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 148/249*, sample comp.: people from Croatia, sample origin: Split, Rijeka, Varždin, Osijek, Zagreb (cities), Croatia, contamination: natural, conc. range: 0.2–1.0 ng/ml (135 sa.), >1.0–15.9 ng/ml (13 sa.), sample year: June 1997, country: Croatia[99], *male and female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 45/198*, sample comp.: people from Croatia, sample origin: Rijeka, city at the Adriatic coast, Croatia, contamination: natural, conc. range: 0.2–1.0 ng/ml, sample year: June, September, December 1997/March 1998, country: Croatia[100], *male and female persons (included are results of literature[99])
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 95/191*, sample comp.: people from Croatia, sample origin: Split, city at the Adriatic coast, Croatia, contamination: natural, conc. range: 0.2–1.0 ng/ml (86 sa.), >1.0 ng/ml (9 sa.), sample year: June, September, December 1997/March 1998, country: Croatia[100], *male and female persons (included are results of literature[99])
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 159/196*, sample comp.: people from Croatia, sample origin: Osijek, inland city, Croatia, contamination: natural, conc. range: 0.2–1.0 ng/ml (131 sa.), >1.0 ng/ml (28 sa.), sample year: June, September, December 1997/March 1998, country: Croatia[100], *male and female persons (included are results of literature[99])
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 81/200*, sample comp.: people from Croatia, sample origin: VaraŽdin, inland city, Croatia, contamination: natural, conc. range: 0.2–1.0 ng/ml (75 sa.), >1.0 ng/ml (6 sa.), sample year: June, September, December 1997/March 1998, country: Croatia[100], *male and female persons (included are results of literature[99])
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 88/198*, sample comp.: people from Croatia, sample origin: Zagreb, inland

city (capital), Croatia, contamination: natural, conc. range: 0.2–1.0 ng/ml (86 sa.), >1.0 ng/ml (2 sa.), sample year: June, September, December 1997/March 1998, country: Croatia[100], *male and female persons (included are results of literature[99])
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/8*, sample comp.: people from Germany/Switzerland?, sample origin: Germany/Switzerland?, contamination: natural, conc. range: 0.20–0.88 ng/ml**, sample year: unknown, country: Germany/Switzerland[101], *4 male and 4 female persons, age: 26–57 years, **determined over a period of 8 weeks
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 185/309*, sample comp.: people from Morocco, sample origin: Blood Donors Service, Rabat (capital), Morocco, contamination: natural, conc. range: 0.08–6.59** ng/ml, Ø conc.: 0.29 ng/ml, sample year: 2000, country: Morocco/France[102], *213 male** (131 af.) and 96 female (54 af.) healthy persons, age: 18–60 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 84/139*, sample comp.: people from Morocco, sample origin: Blood Donors Service, Rabat (capital), Morocco, contamination: natural, Ø conc.: 0.42 ng/ml, sample year: April–May 2000, country: Morocco/France[102], *male and female healthy persons, age: 18–30 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 51/91*, sample comp.: people from Morocco, sample origin: Blood Donors Service, Rabat (capital), Morocco, contamination: natural, Ø conc.: 0.24 ng/ml, sample year: April–May 2000, country: Morocco/France[102], *male and female healthy persons, age: 30–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 40/59*, sample comp.: people from Morocco, sample origin: Blood Donors Service, Rabat (capital), Morocco, contamination: natural, Ø conc.: 0.23 ng/ml, sample year: April–May 2000, country: Morocco/France[102], *male and female healthy persons, age: 40–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/20*, sample comp.: people from Morocco, sample origin: Blood Donors Service, Rabat (capital), Morocco, contamination: natural, Ø conc.: 0.34 ng/ml, sample year: April–May 2000, country: Morocco/France[102], *male and female healthy persons, age: 50–60 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 131*/213*, sample comp.: people from Morocco, sample origin: Blood Donors Service, Rabat (capital), Morocco, contamination: natural, conc. range: 0.08–0.1 ng/ml (13 sa.), 0.1–0.2 ng/ml (48 sa.), 0.2–0.3 ng/ml (27 sa.), 0.3–0.4 ng/ml (26 sa.), 0.4–0.5 ng/ml (11 sa.), 0.6–1 ng/ml (2 sa.), 1–6 ng/ml (3 sa.), 6.59 ng/ml (1 sa.), sample year: April–May 2000, country: Morocco/France[102], *213 male healthy persons, age: 18–60 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 54*/96*, sample comp.: people from Morocco, sample origin: Blood Donors Service, Rabat (capital), Morocco, contamination: natural, conc. range: 0.08–0.1 ng/ml (2 sa.), 0.1–0.2 ng/ml (17 sa.), 0.2–0.3 ng/ml (17 sa.), 0.3–0.4 ng/ml (8 sa.), 0.4–0.5 ng/ml (7 sa.), 0.5–0.6 ng/ml (2 sa.), 0.67 ng/ml (1 sa.), sample year: April–May 2000, country: Morocco/France[102], *96 female healthy persons, age: 18–60 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 40/75*, sample comp.: people from Spain, sample origin: Haemodialysis Departments of the Hospital de Navarra, Hospital Virgen del Camino and the Blood Bank, Navarra (community), northern Spain, contamination: natural, conc. range: ≤4.0 ng/ml, sample year: April, June, October, November 1996/January, February, March 1997/January 1998, country: Spain/France[103], *44 male and 31 female healthy donors, age: 27–80 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 56/72*, sample comp.: people from Spain, sample origin: Haemodialysis Departments of the Hospital de Navarra, Hospital Virgen del Camino and the Blood Bank, Navarra (community), northern Spain, contamination: natural, conc. range: ≤11.70 ng/ml, sample year: April, June, October, November 1996/January, February, March 1997/January 1998, country: Spain/France[103], *40 male and 32 female nephropathy patients, age: 27–80 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 29/50*, sample comp.: people from Croatia, sample origin: Croatian Institute for Transfusion Medicine, Zagreb (capital), Croatia, contamination: natural, conc. range: >0.2–≤1.3 ng/ml, sample year: June 1997, country: Croatia[104], *healthy inhabitants of Zagreb

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 22/50*, sample comp.: people from Croatia, sample origin: Croatian Institute for Transfusion Medicine, Zagreb (capital), Croatia, contamination: natural, conc. range: >0.2–<1.0 ng/ml, sample year: September 1997, country: Croatia[104], *healthy inhabitants of Zagreb

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/50*, sample comp.: people from Croatia, sample origin: Croatian Institute for Transfusion Medicine, Zagreb (capital), Croatia, contamination: natural, conc. range: >0.2–<1.0 ng/ml, sample year: December 1997, country: Croatia[104], *healthy inhabitants of Zagreb

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 31/48*, sample comp.: people from Croatia, sample origin: Croatian Institute for Transfusion Medicine, Zagreb (capital), Croatia, contamination: natural, conc. range: >0.2–≤1.2 ng/ml, sample year: March 1998, country: Croatia[104], *healthy inhabitants of Zagreb

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 18/18*, sample comp.: people from Japan, sample origin: students or staff members of the University, Tokyo (capital), Japan, contamination: natural, conc. range: 16–278 pg/ml, Ø conc.: 95 pg/ml, sample year: 1992, country: Japan[105], *18 male healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/6*, sample comp.: people from Japan, sample origin: students or staff members of the University, Tokyo (capital), Japan, contamination: natural, conc. range: 18–127 pg/ml, Ø conc.: 86 pg/ml, sample year: 1992, country: Japan[105], *6 female healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/25*, sample comp.: people from Japan, sample origin: students or staff members of the University, Tokyo (capital), Japan, contamination: natural, conc. range: 4–263 pg/ml, Ø conc.: 83 pg/ml, sample year: 1994, country: Japan[105], *25 male healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/9*, sample comp.: people from Japan, sample origin: students or staff members of the University, Tokyo (capital), Japan, contamination: natural, conc. range: 7–30 pg/ml, Ø conc.: 18 pg/ml, sample year: 1994, country: Japan[105], *9 female healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 44/46*, sample comp.: people from Japan, sample origin: students or staff members of the University, Tokyo (capital), Japan, contamination: natural, conc. range: 21–120 pg/ml, Ø conc.: 61 pg/ml, sample year: 1995, country: Japan[105], *46 male healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/23*, sample comp.: people from Japan, sample origin: students or staff members of the University, Tokyo (capital), Japan, contamination: natural, conc. range: 22–130 pg/ml, Ø conc.: 63 pg/ml, sample year: 1995, country: Japan[105], *23 female healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 41/41*, sample comp.: people from Japan, sample origin: students or staff members of the University, Tokyo (capital), Japan, contamination: natural, conc. range: 19–115 pg/ml, Ø conc.: 59 pg/ml, sample year: 1996, country: Japan[105], *41 male healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15/16*, sample comp.: people of Japan, sample origin: students or staff members of the University, Tokyo (capital), Japan, contamination: natural, conc. range: 23–151 pg/ml, Ø conc.: 75 pg/ml, sample year: 1996, country: Japan[105], *16 female healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 50/50*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: 0.4–3.11 ng/ml**, sample year: unknown, country: UK[106], *32 persons consumed normal diet, 11 vegetarians, 7 consumed ethnic diet but no significant differences associated with the ethnic diet of the subjects, **determined over a period of 28 days

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[106]

For detailed information please see the article.

incidence: 29/99*, sample comp.: people from Sweden, sample origin: Visby General Hospital, Visby (city), Sweden, contamination: natural, conc. range: 0.3–0.8 ng/ml (24 sa.), >0.8–≤6.7 ng/ml (5 sa.), sample year: October 1989, country: Sweden[107], *overall 193 male and 104 female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/99*, sample comp.: people from Sweden, sample origin: Uppsala University Hospital, Uppsala (city), Sweden, contamination: natural, conc. range: 0.3–0.8 ng/ml (3 sa.), sample year: October 1989, country: Sweden[107], *overall 193 male and 104 female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/99*, sample comp.: people from Sweden, sample origin: Östersund General Hospital, Östersund (city), Sweden, contamination: natural, conc. range: 0.3–0.8 ng/ml (6 sa.), sample year: October 1989, country: Sweden[107], *overall 193 male and 104 female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 144/144, sample comp.: people from Canada, sample origin: Canadian Red Cross (16 city locations, see the article), Canada, contamination: natural, conc. range: 0.29–2.37 ng/ml (only 3 sa. >2 ng/ml), Ø conc.: 0.88 ng/ml, sample year: February–June 1994, country: Canada[108], *72 male and 72 female clinically healthy persons, age: 19–68 years (for only 134 donors information available)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 51/164, sample comp.: people from Lebanon, sample origin: Blood Bank of the Red Cross, Lebanon, contamination: natural, conc. range: 0.1–0.32 ng/ml, Ø conc.: 0.16 ng/ml, sample year: 2001–2002, country: Lebanon/France[109], *male healthy blood donors, age: 16–≥60 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 31/86, sample comp.: people from Lebanon, sample origin: Blood Bank of the Red Cross, Lebanon, contamination: natural, conc. range: 0.1–0.87** ng/ml, Ø conc.: 0.18 ng/ml, sample year: 2001–2002, country: Lebanon/France[109], *female healthy blood donors, age: 16–≥60 years, **58-year old women from the south of Lebanon
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 91/142*, sample comp.: people from Argentina, sample origin: Regional Hemotherapy Center of Mar del Plata (city at the coast of the Atlantic Ocean), Argentina, contamination: natural, conc. range: LOD–<LOQ (1 sa.), LOQ–0.2 ng/ml (39 sa.), >0.2–1.0 ng/ml (39 sa.), >1.0–10.0 ng/ml (12 sa.), sample year: February 2004, country: Argentina/Sweden[110], *142 male persons, Ø age: 37 years, Ø weight: 80 kg
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 36/57*, sample comp.: people from Argentina, sample origin: Regional Hemotherapy Center of Mar del Plata (city at the coast of the Atlantic Ocean), Argentina, contamination: natural, conc. range: LOQ–0.2 ng/ml (17 sa.), >0.2–1.0 ng/ml (13 sa.), >1.0–10.0 ng/ml (5 sa.), 47.6 ng/ml (1 sa.), sample year: February 2004, country: Argentina/Sweden[110], *57 female persons, Ø age: 40 years, Ø weight: 70 kg
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 122/193*, sample comp.: people from Argentina, sample origin: Vicente Lopez y Planes Hospital of General Rodríguez (city near Buenos Aires), Argentina, contamination: natural, conc. range: LOQ–0.2 ng/ml (16 sa.), >0.2–1.0 ng/ml (61 sa.), >1.0–10.0 ng/ml (41 sa.), >10.0–74.8 ng/ml (4 sa.), sample year: April–July 2005, country: Argentina/Sweden[110], *193 male persons, Ø age: 35 years, Ø weight: 80 kg
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/42*, sample comp.: people from Argentina, sample origin: Vicente Lopez y Planes Hospital of General Rodríguez (city near Buenos Aires), Argentina, contamination: natural, conc. range: LOQ–0.2 ng/ml (9 sa.), >0.2–1.0 ng/ml (10 sa.), >1.0–10.0 ng/ml (6 sa.), sample year: April–July 2005, country: Argentina/Sweden[110], *42 female persons, Ø age: 36 years, Ø weight: 68 kg
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 168/168*, sample comp.: people from Spain, sample origin: healthy as well as people suffering from renal impairment, Spain, contamination: natural, conc. range:

0.120–5.580 ng/ml, Ø conc.: 1.192 ng/ml, sample year: January/July 1997, country: Spain[111], *88 male and 80 female persons, age: 18–63 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 130/132, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.12–8.03 ng/ml, sample year: March–May 2008, country: Spain[112], *male persons, age: 18–≥45 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 145/147, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.11–8.68 ng/ml, sample year: March–May 2008, country: Spain[112], *female persons, age: 18–≥45 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 324/327*, sample comp.: people from Italy, sample origin: Molise (region), southern Italy, contamination: natural, conc. range: 25–100 ng/l (38 sa.), 101–200 ng/l (162 sa.), 201–300 ng/l (55 sa.), 301–400 ng/l (39 sa.), 401–500 ng/l (13 sa.), >500–2,918 ng/l (17 sa.), sample year: unknown, country: Italy/Germany[202], *150 male and 177 female persons, age: 38–48 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 88?/97*, sample comp.: people from Pakistan, sample origin: Department of Urology, Karachi (city), Pakistan, contamination: natural, conc. range: 0.03–3.41 ng/ml, sample year: unknown, country: Pakistan[221], *bladder cancer patients
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 30/31*, sample comp.: people from Pakistan, sample origin: Department of Urology, Karachi (city), Pakistan, contamination: natural, conc. range: 0.04–1.24 ng/ml, sample year: unknown, country: Pakistan[221], *healthy persons (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 325/325*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.06–10.92 ng/g, Ø conc.: 0.80 ng/g, sample year: October/November 2008, January/February and July/August 2009, country: Spain[232], *160 male and 165 female persons, age: 18–68 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 160/160*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.06–7.13 ng/g, Ø conc.: 0.79 ng/g, sample year: October/November 2008, January/February and July/August 2009, country: Spain[232], *male persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 165/165*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.06–10.92 ng/g, Ø conc.: 0.81 ng/g, sample year: October/November 2008, January/February and July/August 2009, country: Spain[232], *female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 87/87*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.06–2.53 ng/g, Ø conc.: 0.63 ng/g, sample year: October/November 2008, January/February and July/August 2009, country: Spain[232], *male and female persons, age: 18–29 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 116/116*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.06–6.47 ng/g, Ø conc.: 0.82 ng/g, sample year: October/November 2008, January/February and July/August 2009, country: Spain[232], *male and female persons, age: 30–44 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 122/122*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.07–10.92 ng/g, Ø conc.: 0.90 ng/g, sample year: October/November 2008, January/February and July/August 2009, country: Spain[232], *male and female persons, age: >45 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 243/243*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova (blood sa. from plain region), Lleida (city), Spain, contamination: natural, conc. range: 0.06–10.92 ng/g, Ø conc.: 0.79 ng/g, sample year: October/November 2008, January/February and July/August 2009, country: Spain[232], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 82/82*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova (blood sa. from mountain region), Lleida (city), Spain, contamination: natural, conc. range: 0.21–6.47 ng/g, Ø conc.: 0.83 ng/g, sample year: October/November 2008, January/February and July/August 2009, country: Spain[232], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 116/116*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.06–4.24 ng/g, Ø conc.: 0.73 ng/g, sample year: October/November 2008 (autumn), country: Spain[232], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 98/98*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.07–10.92 ng/g, Ø conc.: 0.87 ng/g, sample year: January/February 2009 (winter), country: Spain[232], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 111/111*, sample comp.: people from Spain, sample origin: Blood Bank of the Hospital Arnau de Vilanova, Lleida (city), Spain, contamination: natural, conc. range: 0.06–6.47 ng/g, Ø conc.: 0.80 ng/g, sample year: July/August 2009 (summer), country: Spain[232], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 61/61*, sample comp.: people from Germany, sample origin: grain handling companies, Germany, contamination: natural, conc. range: 0.07–0.75 ng/ml, Ø conc.: 0.28 ng/ml, sample year: July 2005–May 2006, country: Germany[235], *male persons working in granaries, age: 18–67 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 53/53*, sample comp.: people from Germany, sample origin: grain handling companies, Germany, contamination: natural, conc. range: 0.08–0.57 ng/ml, Ø conc.: 0.28 ng/ml, sample year: July 2005–May 2006, country: Germany[235], *male persons working in granaries (workers of German origin)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/8*, sample comp.: people from Germany, sample origin: grain handling companies, Germany, contamination: natural, conc. range: 0.07–0.75 ng/ml, Ø conc.: 0.31 ng/ml, sample year: July 2005–May 2006, country: Germany[235], *male persons working in granaries (non-German workers)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 42/42*, sample comp.: people from Spain, sample origin: "Centro de Transfusiones de la Comunidad Valenciana (CTCV), Valencia (city), Spain, contamination: natural, conc. range: 0.15–5.71 µg/l, Ø conc.: 1.13 µg/l, sample year: July–November 2008, country: Spain[259], *male persons, age: 18–35 years, BMI: 25.13
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 53/53*, sample comp.: people from Spain, sample origin: "Centro de Transfusiones de la Comunidad Valenciana (CTCV), Valencia (city), Spain, contamination: natural, conc. range: 0.22–5.10 µg/l, Ø conc.: 1.35 µg/l, sample year: July–November 2008, country: Spain[259], *male persons, age: 36–45 years, BMI: 26.43
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/25*, sample comp.: people from Spain, sample origin: "Centro de Transfusiones de la Comunidad Valenciana (CTCV), Valencia (city), Spain, contamination: natural, conc. range: 0.21–2.00 µg/l, Ø conc.: 0.76 µg/l, sample year: July–November 2008, country: Spain[259], *male persons, age: >46 years, BMI: 27.5
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 24/24*, sample comp.: people from Spain, sample origin: "Centro de Transfusiones de la Comunidad Valenciana (CTCV), Valencia (city), Spain, contamination: natural, conc. range: 0.26–2.45 µg/l, Ø conc.: 0.81 µg/l, sample year: July–November 2008, country: Spain[259], *female persons, age: 18–35 years, BMI: 25.43
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/13*, sample comp.: people from Spain, sample origin: "Centro de Transfusiones de la Comunidad Valenciana (CTCV), Valencia (city), Spain, contamination: natural, conc. range: 0.37–5.62 µg/l, Ø conc.: 1.38 µg/l, sample year: July–November 2008, country: Spain[259], *female persons, age: 36–45 years, BMI: 24.32
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/11*, sample comp.: people from Spain, sample origin: "Centro de Transfusiones de la Comunidad Valenciana (CTCV), Valencia (city), Spain, contamination: natural, conc. range: 0.37–2.89 µg/l, Ø conc.: 0.92 µg/l, sample year: July–November 2008, country:

Spain[259], *female persons, age: >46 years, BMI: 25.93
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 6/6*, sample comp.: people from Germany, sample origin: Dortmund (city), Germany, contamination: natural, conc. range: 0.20–0.29 ng/ml, Ø conc.: 0.26 ng/ml, sample year: October 2008, country: Germany[261], *male persons, age: 20–57 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, OTα, literature[261]; Human urine, OTA and OTα, literature[261]

incidence: 7/7*, sample comp.: people from Germany, sample origin: Dortmund (city), Germany, contamination: natural, conc. range: 0.19–0.27 ng/ml, Ø conc.: 0.23 ng/ml, sample year: October 2008, country: Germany[261], *female persons, age: 20–57 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, OTα, literature[261]; Human urine, OTA and OTα, literature[261]

incidence: 60/83*, sample comp.: people from Spain, sample origin: Granada, southern region of Spain, contamination: natural, conc. range: 0.11–6.96 ng/ml, sample year: 1996/1997, 2 sa. from 1992 and 1994, country: Spain[271], *female persons, age: 30–70 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Ochratoxin α

incidence: 6/6*, sample comp.: people from Germany, sample origin: Dortmund (city), Germany, contamination: natural, conc. range: 0.65–1.64 ng/ml**, Ø conc.: 1.03 ng/ml**, sample year: October 2008, country: Germany[261], *male persons, age: 20–57 years, **OTα (total)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, OTA, literature[261]; Human urine, OTA and OTα, literature[261]

incidence: 7/7*, sample comp.: people from Germany, sample origin: Dortmund (city), Germany, contamination: natural, conc. range: 0.07–1.29 ng/ml**, Ø conc.: 0.88 ng/ml**, sample year: October 2008, country: Germany[261], *female persons, age: 20–57 years, **OTα (total)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, OTA, literature[261]; Human urine, OTA and OTα, literature[261]

Fusarium Toxins

Zearalenone

incidence: 6/8*, sample comp.: people from Poland, sample origin: Department of Operative Gynecology and Perinatology Provincial Specialistic Hospital, Olsztyn (city), Poland, contamination: natural, conc. range: ≤26 ng/ml, sample year: October 2001–September 2002, country: Poland[43], *female patients with neoplastic lesion/s in the reproductive system: *carcinoma corpus uteri*
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, α-ZOL, literature[43], *tumor adnexis*

incidence: 1/10*, sample comp.: people from Poland, sample origin: Department of Operative Gynecology and Perinatology Provincial Specialistic Hospital, Olsztyn (city), Poland, contamination: natural, conc.: 137 ng/ml, sample year: October 2001–September 2002, country: Poland[43], *female patients with neoplastic lesion/s in the reproductive system: *myoma corpus uteri*
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, α-ZOL, literature[43], *tumor adnexis*

incidence: 1/7*, sample comp.: people from Poland, sample origin: Department

of Operative Gynecology and Perinatology Provincial Specialistic Hospital, Olsztyn (city), Poland, contamination: natural, conc.: 87 ng/ml, sample year: October 2001–September 2002, country: Poland[43], *female patients with neoplastic lesion/s in the reproductive system: *cystis dermoidalis ovari*

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, α-ZOL, literature[43], *tumor adnexis*

incidence: 30/85*, sample comp.: people from Poland, sample origin: Ward of Oncological Surgery, Department of Medical Care of Home and Administration Office in Warmia and Mazury Oncology Centre in Olsztyn (city), Poland, contamination: natural, conc. range: 0.001–72.52 ng/ml, sample year: January–December 2004, country: Poland[252], *female patients with malignant neoplasms in the mammary glands

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 44/115*, sample comp.: people from Poland, sample origin: Ward of Oncological Surgery, Department of Medical Care of Home and Administration Office in Warmia and Mazury Oncology Centre in Olsztyn (city), Poland, contamination: natural, conc. range: 0.0023–182.88 ng/ml, sample year: January–December 2004, country: Poland[252], *female patients with benign neoplasms in the mammary glands

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

α-Zearalenol

incidence: 2/15*, sample comp.: people from Poland, sample origin: Department of Operative Gynecology and Perinatology Provincial Specialistic Hospital, Olsztyn (city), Poland, contamination: natural, conc. range: 5 ng/ml, sample year: October 2001–September 2002, country: Poland[43], *female patients with neoplastic lesion/s in the reproductive system: ***tumor adnexis***

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, ZEN, literature[43]

see also **Human blood, Human plasma/serum,** and **Human serum**

Human plasma/serum may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 52/100*, sample comp.: people from Hungary, sample origin: Hospital of Szolnok County and Blood Supply Unit, Hungary, contamination: natural, conc. range: 0.2–<1 ng/ml (34 sa.), 1–5 ng/ml (16 sa.), 5–10 ng/ml (1 sa.), 12.9 ng/ml (1 sa.), sample year: May–August 1992?, country: Hungary[27], *50 sa. from hospital patients and 50 sa. from the Blood Supply Unit

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[27]

incidence: 18/22*, sample comp.: people from France, sample origin: Nephrology Departments of Bordeaux, Rouen, and Saint-Brieuc (cities), France, contamination: natural, conc. range: 0.3–1,001 ng/ml, sample year: unknown, country: France[28], *patients with CIN

incidence: 38/71*, sample comp.: people from France, sample origin: Nephrology Departments of Bordeaux, Rouen, and Saint-Brieuc (cities), France, contamination: natural, conc. range: 0.28–6.72 ng/ml, sample year: unknown, country: France[28], *patients with renal diseases other than CIN

For whole literature[28]:

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 200/200*, sample comp.: people from Sweden, sample origin: Sweden,

contamination: natural, conc. range: LOD/LOQ–0.88 µg/l, sample year: 1994, country: Sweden[73], *male and female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma, Human serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

see also **Human blood, Human plasma,** and **Human serum**

Human rectum may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 3/6* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 0.26–5.1 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 3.19 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *1 male and 5 female (3 af.) patient/s, **sa. from normal tissue (but cancer patients)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human colon, AFB_1, literature[46], normal tissue

incidence: 5/8* **, sample comp.: people from UK, sample origin: York District Hospital and The Whittington Hospital, London (capital), UK, contamination: natural, conc. range: 0.67–10.26 AFB_1-DNA adducts/10^6 nucleotides, Ø conc.: 4.35 AFB_1-DNA adducts/10^6 nucleotides, sample year: unknown, country: UK/Mexico[46], *2 male and 6 female (5 af.) patients, **sa. from tumorous tissue (cancer patients)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human colon, AFB_1, literature[46], tumorous tissue

For detailed information please see the article.

Human renal tissue may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 3/14*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.51–1.28 ng/g, sample year: unknown, country: Egypt/France[113], *male and female patients with urothelial tumours, age: 38–70 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, OTA, literature[113], ESRD conservative and dialytic, transplant, nephrotic syndrome, urothelial tumours, kidney donors

see also **Human kidney**

Human semen may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin G_1

incidence: 20/50, sample comp.: people from Nigeria, sample origin: Infertility Clinics of University of Benin Teaching Hospital, Benin City, Nigeria, contamination: natural, conc. range: 0.50–2.80 µg/ml, sample year: unknown, country: Nigeria[114], *infertile man whose spermatozoa showed more abnormalities than semen of fertile men, age: adult
- Co-contamination: 20 sa. co-contaminated with AFG_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/12, sample comp.: people from Nigeria, sample origin: Infertility Clinics of University of Benin Teaching

Hospital, Benin City, Nigeria, contamination: natural, conc. range: 0.30–0.50 µg/ml, sample year: unknown, country: Nigeria[114], *fertile men, age: adult
- Co-contamination: 4 sa. co-contaminated with AFG_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin M_1

incidence: 20/50, sample comp.: people from Nigeria, sample origin: Infertility Clinics of University of Benin Teaching Hospital, Benin City, Nigeria, contamination: natural, conc. range: 1.0–3.20 µg/ml, sample year: unknown, country: Nigeria[114], *infertile man whose spermatozoa showed more abnormalities than semen of fertile men, age: adult
- Co-contamination: 20 sa. co-contaminated with AFG_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/12, sample comp.: people from Nigeria, sample origin: Infertility Clinics of University of Benin Teaching Hospital, Benin City, Nigeria, contamination: natural, conc. range: 0.43–0.48 µg/ml, sample year: unknown, country: Nigeria[114], *fertile men, age: adult
- Co-contamination: 4 sa. co-contaminated with AFG_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin M_2

incidence: 20/50, sample comp.: people from Nigeria, sample origin: Infertility Clinics of University of Benin Teaching Hospital, Benin City, Nigeria, contamination: natural, conc. range: 0.90–3.60 µg/ml, sample year: unknown, country: Nigeria[114], *infertile man whose spermatozoa showed more abnormalities than semen of fertile men, age: adult
- Co-contamination: 20 sa. co-contaminated with AFG_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/12, sample comp.: people from Nigeria, sample origin: Infertility Clinics of University of Benin Teaching Hospital, Benin City, Nigeria, contamination: natural, conc. range: 0.45–0.62 µg/ml, sample year: unknown, country: Nigeria[114], *fertile men, age: adult
- Co-contamination: 4 sa. co-contaminated with AFG_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Human serum may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxicol

incidence: 15/625*, sample comp.: people from Nigeria, sample origin: Adeoyo Maternity Hospital and University College Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 22–2,383 ng/l, sample year: April 1989–November 1990, country: UK/Nigeria[3], *cord blood sa. from babies
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[3]

incidence: 0/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., cord blood sa. from neonates (at birth)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[5], jaundiced cord blood

incidence: 0/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample

year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., peripheral blood sa. from neonates
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[5], jaundiced peripheral blood

incidence: 0/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., cord blood sa. from neonates (at birth)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[5], non-jaundiced cord blood

incidence: 1/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc.: 1,131 pg/ml**, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., **peripheral blood sa. from neonates
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, and AFM_2, literature[5], non-jaundiced peripheral blood

incidence: 2/8*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.02–1.7 ng/ml, Ø conc.: 0.86 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *maternal blood sa.
- Co-contamination: 1 sa. co-contaminated with AFG_2, AFL and AFM_1, 1 sa. co-contaminated with AFG_2 and AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFM_1, AFM_2, and OTA, literature[6], maternal

incidence: 34/64*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.007–2.2 ng/ml, Ø conc.: 0.1 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *cord blood sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, AFM_2, and OTA, literature[6], cord

For detailed information please see the article.

incidence: 4/6*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.02–0.04 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (male infants)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFM_1, and AFM_2, literature[6], low birthweight, male

incidence: 4/5*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.02–2.2 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (female infants)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFM_1, AFM_2, and OTA, literature[6], low birthweight, female

incidence: 10/21*, sample comp.: people from Sierra Leone, sample origin:

Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.007–0.5 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, AFM_2, and OTA, literature[6], normal birthweight, male

incidence: 8/20*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.008–1.6 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, AFM_2, and OTA, literature[6], normal birthweight, female

incidence: 1*/12**, sample comp.: people of Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 220 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. showing marasmic/kwashiorkor, **children, ***serial aflatoxin estimation after 0 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFL, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 1/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 930 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, and AFG_2, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/9*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 0/13*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 0/44*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFS, literature[115] (control)

incidence: 1/57*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: pr, sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFS, literature[115] (marasmus)

incidence: 4/32*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: pr, sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFS, literature[115] (marasmic kwashiorkor)

incidence: 6/44*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: pr, sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFS, literature[115] (kwashiorkor)

incidence: 0/67*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: no contamination, sample year: unknown, country: Nigeria/UK[116], *60 infants and 7 of their mothers (non-jaundiced, control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[116], non-jaundiced

incidence: 14/340*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 26–750 ng/l**, sample year: unknown, country: Nigeria/UK[116], *270 infants and 70 of their mothers (jaundiced), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[116], jaundiced

incidence: 15/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 2–20 ng/100 ml, Ø conc.: 9.27 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFM_1, literature[117], kwashiorkor; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFM_1, literature[117], kwashiorkor

incidence: 3/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 2–14 ng/100 ml, Ø conc.: 6.33 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum,

AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, and AFP, literature[117], marasmus; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, and AFP, literature[117], marasmus

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/36*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.03–0.90 ng/ml, sample year: unknown, country: Sierra Leone[118], *"underfive" children: 14 control, 3 kwashiorkor, 9 underweight, 2 marasmic and 8 "unspecified" ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

Aflatoxin B_1

incidence: 16/625*, sample comp.: people from Nigeria, sample origin: Adeoyo Maternity Hospital and University College Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 168–69,973 ng/l, sample year: April 1989–November 1990, country: UK/Nigeria[3], *cord blood sa. from babies

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[3]

incidence: 6/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 214–238,177 pg/ml, Ø conc.: 82,481 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., cord blood sa. from neonates (at birth)

- Co-contamination: 1 sa co-contaminated with AFB_1 and AFG_1; 5 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[5], jaundiced cord blood

incidence: 3/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 130–3,130 pg/ml, Ø conc.: 2,070 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., peripheral blood sa. from neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFM_1, and AFM_2, literature[5], jaundiced peripheral blood

incidence: 3/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 474–2,216 pg/ml, Ø conc.: 1,342 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., cord blood sa. from neonates (at birth)

- Co-contamination: 1 sa co-contaminated with AFB_1 and AFG_2; 2 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFM_1, and AFM_2, literature[5], non-jaundiced cord blood

incidence: 2/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria,

contamination: natural, conc. range: 590–1,006 pg/ml, Ø conc.: 798 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., peripheral blood sa. from neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFL, AFM_1, and AFM_2, literature[5], non-jaundiced peripheral blood

incidence: 7/64*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 242–10,239 pg/ml, Ø conc.: 2,581 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, AFM_1, and AFM_2, literature[5], jaundiced neonates

incidence: 3/60*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 182–2,094 pg/ml, Ø conc.: 958 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced neonates

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFB_2; 2 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[5], non-jaundiced neonates

incidence: 2/8*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.2–0.3 ng/ml, Ø conc.: 0.25 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *maternal blood sa.

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFG_2 and AFM_1, 1 sa. co-contaminated with AFB_1 and AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], maternal

incidence: 11/64*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.4–9.0 ng/ml, Ø conc.: 1.0 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], cord

For detailed information please see the article.

incidence: 0/6*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], low birthweight, male

incidence: 0/5*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum,

AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], low birthweight, female

incidence: 4/21*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.5–2.4 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], normal birthweight, male

incidence: 3/20*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.8–9.0 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], normal birthweight, female

incidence: 6/74*, sample comp.: people from USA, sample origin: University of Mississippi Medical Center Blood Bank, USA, contamination: natural, conc. range: 2–12 ng/ml, sample year: unknown, country: USA[7], *6 patients with Reye's syndrome thereof 4 AFB_1-pos., 1 patient (non-neurological) AFB_1-pos. and 1 patient (neurological) AFB_1-pos.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, Human urine, AFB_1, literature[7]

For detailed information please see the article.

incidence: 2/5*, sample comp.: people from USA, sample origin: Pediatric Neurology Service (Hospital), Mississippi (state), USA, contamination: natural, conc. range: 11.93–31.3 ng/ml, Ø conc.: 21.615 ng/ml, sample year: January 1975–May 1978, country: USA[8], *children with Reye's syndrome

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, literature[8]

incidence: 4/27*, sample comp.: people from Taiwan, sample origin: uncomplicated pregnancies at Taipei Chang Gung Memorial Hospital, Taiwan, contamination: natural, conc. range: 1.4–2.7 µmol/mol DNA**, Ø conc.: 1.98 µmol/mol DNA**, sample year: August 1990, country: Taiwan[9], *cord blood sa. from female persons collected in summer, **AFB_1-DNA adducts

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human placenta, AFB_1, literature[9], summer

incidence: 1/29*, sample comp.: people from Taiwan, sample origin: uncomplicated pregnancies at Taipei Chang Gung Memorial Hospital, Taiwan, contamination: natural, conc.: 1.8 µmol/mol DNA**, sample year: January 1991, country: Taiwan[9], *cord blood sa. from female persons collected in winter, **AFB_1-DNA adducts

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human placenta, AFB_1, literature[9], winter

incidence: 27/201*, sample comp.: people from UAE, sample origin: Al Ain and Tawam Hospitals, Al Ain (city), UAE, contamination: natural, conc. range: 228–15,225 pg/ml, sample year: May, June 1995/September 1999, country: UAE[14], *umbilical cord blood sa. from female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFM_1 and AFM_2, literature[14]

incidence: 1/15*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 111 pg/ml, sample year: unknown, country: UK/Sudan[15], *maternal blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 2/40*, sample comp.: people from Ghana, sample origin: greater Accra region, Ghana, contamination: natural, Ø conc.: 12.5 ng/ml, sample year: late April 19?? (wet season), country: Ghana[76], *apparently healthy adults (29 male and 11 female persons), age: 30–73 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFM_1, AFQ_1, literature[76]; Human serum, AFG_1 and AFQ_1, literature[76]; Human urine, AFB_1 and AFG_1, literature[76]

incidence: 2*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc. range: 440–450 pg/ml***, sample year: unknown, country: UK[81], *at least 2 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 0 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFL, and AFM_1, 1 sa. co-contaminated with AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 725 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 6 h

- Co-contamination: Co-contamination: 1 sa. co-contaminated with AFB_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 150 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 12 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 3/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 353–588 pg/ml, Ø conc.: 447 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFB_2; 2 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver,

AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/9*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 1*/1*, sample comp.: person from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 666 pg/ml, sample year: unknown, country: Sudan/UK[82], *child with micronodular cirrhosis with portal hypertension (miscellaneous diseases)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 4/67*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 1,956–20,371 ng/l**, sample year: unknown, country: Nigeria/UK[116], *60 infants and 7 of their mothers (non-jaundiced, control), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFM_1, and AFM_2, literature[116], non-jaundiced

incidence: 21/340*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 256–58,239 ng/l**, sample year: unknown, country: Nigeria/UK[116], *270 infants and 70 of their mothers (jaundiced), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[116], jaundiced

incidence: 24/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 4–69 ng/100 ml, Ø conc.: 32.38 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117], kwashiorkor; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, literature[117], kwashiorkor

incidence: 13/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 10–18 ng/100 ml, Ø conc.: 13.62 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, AFM_1, AFP, literature[117], marasmus; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, and AFP, literature[117], marasmus

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/36*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.20–2.5 ng/ml, sample year: unknown, country: Sierra Leone[118], *"underfive" children: 14 control, 3 kwashiorkor, 9 underweight, 2 marasmic and 8 "unspecified" ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 84/84 (overall 357* but one subject not contaminated), sample comp.: people from Gambia, sample origin: peri-urban settlements near the coast, Gambia, contamination: natural, conc. range: 14.9–33.4 pg AFB_1-lysine eq/mg albumin (adjusted, 95 % CI), sample year: January–August 1992, country: UK/France/Gambia/USA[119]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 272/272 (overall 357* but one subject not contaminated), sample comp.: people from Gambia, sample origin: Keneba and Manduar (rural villages), Gambia, contamination: natural, conc. range: 28.5–42.8 pg AFB_1-lysine eq/mg albumin (adjusted, 95 % CI), sample year: January–August 1992, country: UK/France/Gambia/USA[119]

*188 male and 169 female inhabitants of peri-urban and rural areas, Ø age: 24 years, thereof 181 HBV ca. but no predominant contamination

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 112/116*, sample comp.: people from Gambia, sample origin: Farafenni (region), Gambia, contamination: natural, conc. range: 5–25 pg AFB_1-lysine eq/mg albumin (22 sa.), 26–50 pg AFB_1-lysine eq/mg albumin (34 sa.), 51–75 pg AFB_1-lysine eq/mg albumin (18 sa.), 76–100 pg AFB_1-lysine eq/mg albumin (9 sa.), 101–200 pg AFB_1-lysine eq/mg albumin (19 sa.), ≤350 pg AFB_1-lysine eq/mg albumin (6 sa.), sample year: May 1988, country: France/Gambia/China[120], *male and female children, age: 3–8 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 47/47*, sample comp.: people from Gambia, sample origin: Farafenni (region), Gambia, contamination: natural, conc. range: 5–25 pg AFB_1-lysine eq/mg albumin (26 sa.), 26–50 pg AFB_1-lysine eq/mg albumin (11 sa.), 51–75 pg AFB_1-lysine eq/mg albumin (6 sa.), 76–100 pg AFB_1-lysine eq/mg albumin (2 sa.), 101–200 pg AFB_1-lysine eq/mg albumin (1 sa.), ≤350 pg AFB_1-lysine eq/mg albumin (1 sa.), sample year: November 1988, country: France/Gambia/China[120], *male and female children, age: 3–8 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 29/29*, sample comp.: people from Senegal, sample origin: Pikinie (region of Cap Vert), Senegal, contamination: natural, conc. range: 5–25 pg AFB_1-lysine eq/mg albumin (20 sa.), 26–50 pg AFB_1-lysine eq/mg albumin (6 sa.), 51–75 pg AFB_1-lysine eq/mg albumin (2 sa.), 76–100 pg AFB_1-lysine eq/mg albumin (1 sa.), sample year: August–October 1988, country: France/Gambia/China[120], *male and female children, age: 2 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15/30*, sample comp.: people from Kenya, sample origin: Chorogia (area), Kenya, contamination: natural, conc. range: 5–25 pg AFB_1-lysine eq/mg albumin (8 sa.), 26–50 pg AFB_1-lysine eq/mg albumin (3 sa.), 76–100 pg AFB_1-lysine eq/mg albumin (1 sa.), 101–200 pg AFB_1-lysine eq/mg albumin (1 sa.), ≤350 pg AFB_1-lysine eq/mg albumin (2 sa.), sample year: December 1988-January 1989, country: France/Gambia/China[120], *male and female children, age: 1–9 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/26*, sample comp.: people from Uganda, sample origin: Uganda, contamination: natural, conc. range: 5–25 pg AFB_1-lysine eq/mg albumin (3 sa.), 26–50 pg AFB_1-lysine eq/mg albumin (1 sa.), sample year: 1975–1977, country: France/Gambia/China[120], *male and female children, age: 1–15 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/30*, sample comp.: people from France, sample origin: France, contamination: no contamination, sample year: June 1981–October 1982, country: France/Gambia/China[120], *male and female children, age: 6 months–15 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/14*, sample comp.: people from Poland, sample origin: Adamowka (village), Poland, contamination: no contamination, sample year: 1988, country: France/Gambia/China[120], *male and female children, age: 14–15 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/20*, sample comp.: people from Gambia, sample origin: Keneba, West Kiang region, Gambia, contamination: natural, conc. range: 5–25 pg AFB_1-lysine eq/mg albumin (13 sa.), 26–50 pg AFB_1-lysine eq/mg albumin (2 sa.), 51–75 pg AFB_1-lysine eq/mg albumin (1 sa.), 76–100 pg AFB_1-lysine eq/mg albumin (1 sa.), 101–200 pg AFB_1-lysine eq/mg albumin (3 sa.), sample year: October 1988, country: France/Gambia/China[120], *male and female adults

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 28/61*, sample comp.: people from Kenya, sample origin: Chogoria and Kaloleni (areas), Kenya, contamination: natural, conc. range: 5–25 pg AFB_1-lysine eq/mg albumin (18 sa.), 26–50 pg AFB_1-lysine eq/mg albumin (2 sa.), 51–75 pg AFB_1-lysine eq/mg albumin (1 sa.), 76–100 pg AFB_1-lysine eq/mg albumin (4 sa.), 101–200 pg AFB_1-lysine eq/mg albumin (2 sa.), >200 pg AFB_1-lysine eq/mg albumin (1 sa), sample year: April–July 1988, country: France/Gambia/China[120], *male and female adults

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/84*, sample comp.: people from Thailand, sample origin: Bangkok (capital), Ubon, and Korat (cities), Thailand, contamination: natural, conc. range: 5–25 pg AFB_1-lysine eq/mg albumin (10 sa.), 26–50 pg AFB_1-lysine eq/mg albumin (1 sa.), sample year: 1988/1989, country: France/Gambia/China[120], *male and female adults

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/14*, sample comp.: people from France, sample origin: Lyon (city), France, contamination: no contamination, sample year: 1988, country: France/Gambia/China[120], *male and female adults

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/16*, sample comp.: people from Poland, sample origin: Adamowka (village), Poland, contamination: no contamination,

sample year: 1988, country: France/Gambia/China[120], *male and female adults
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 66/70*, sample comp.: people from Guinea, sample origin: Kindia (region), lower Guinea, contamination: natural, conc. range: 4–50 AFB_1-lysine eq/mg albumin (51 sa.), >50–385 pg AFB_1-lysine eq/mg albumin (15 sa.), sample year: January/February 1993, country: Guinea/France[121], *male persons (included HBV and HBC ca.), age: 9–80 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 1/1*, sample comp.: person from USA, sample origin: USA, contamination: natural, conc.: 3.39 ng/ml, sample year: unknown, country: USA[122], *black female patient with primary hepatic carcinoma and her serum contained HB_SAg, age: 31 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 5/20*, sample comp.: people from Japan, sample origin: Kobe (city), Japan, contamination: natural, conc. range: 20–56 pg/ml, sample year: unknown, country: Japan[123], *healthy male persons, age: 20–54 years, sa. taken after fasting
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12/30*, sample comp.: people from Japan, sample origin: Kobe (city), Japan, contamination: natural, conc. range: 20–640 pg/ml, sample year: unknown, country: Japan[123], *healthy male persons, age: 20–27 years, sa. taken after lunch
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/50*, sample comp.: people from Japan, sample origin: Osaka (city), Japan, contamination: natural, conc. range: 20–1,169 pg/ml, sample year: unknown, country: Japan[123], *healthy male persons, age: 23–62 years, sa. taken after lunch
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1187/1188*, sample comp.: people from China, sample origin: Daxin Township, Qidong (city), Jiangsu (province), China, contamination: natural, conc. range: 0.14–4.39 pmol AFB_1/mg albumin, sample year: September–December 1993, June–September 1994, country: USA/China[124], *HBV-positive and HBV-negative persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 115/117, sample comp.: people from Gambia, sample origin: Kuntair or Kerr Cherno in the Upper Niumi District, Gambia, contamination: natural, conc. range: 2.2–250.4 pg AFB_1-lysine eq/mg albumin, sample year: May–July 1991/July 1992, country: France/Gambia/Italy/UK[125], *male (62) and female (55) children (included HBV ca.), age: 3–4 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 33/60*, sample comp.: people from China, sample origin: Chongming Island located in the Yangtze River, China, contamination: natural, conc. range: ≤890 pmol AFB_1/g albumin, Ø conc.: ≤221 pmol AFB_1/g albumin, sample year: 1985, country: USA/China[126], *residents
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/8*, sample comp.: people from Thailand, sample origin: National

Cancer Institute in Bangkok (capital), Thailand, contamination: natural, conc.: 7.4 pg AFB_1-lysine eq/mg albumin, sample year: 1987–1991, country: France/USA/Thailand[127], *6 male and 2 female (1 af.) patients with HCC, age: 17–73 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/5*, sample comp.: people from Mexico, sample origin: "Dr Jose E. Gonzales" University Hospital, Monterrey (city), Mexico, contamination: natural, conc. range: 0.54–4.1 pmol AF/mg albumin, Ø conc.: 2.6 pmol AF/mg albumin, sample year: 1985–1993, country: USA/Finland/Singapore/Mexico[128], *female patients with HCC (included HBV and HCV ca. which did not statistically associate with AFB_1-AA level), age: 45–79 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/11*, sample comp.: people from Mexico, sample origin: "Dr Jose E. Gonzales" University Hospital, Monterrey (city), Mexico, contamination: natural, conc. range: 1.4–4.65 pmol AF/mg albumin, Ø conc.: 3.0 pmol AF/mg albumin, sample year: 1985–1993, country: USA/Finland/Singapore/Mexico[128], *male patients with HCC (included HBV and HCV ca. which did not statistically associate with AFB_1-AA level), age: 42–73 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 59/78*, sample comp.: people from Nigeria, sample origin: University of Nigeria Teaching Hospital, Enugu (city), Nigeria, contamination: natural, conc. range: 20–3,100 pg/ml, Ø conc.: 665 pg/ml, sample year: September–November 1986, country: UK/Nigeria[129], *male healthy persons, age: 18–47 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/15*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.005–0.130 µg/ml, sample year: unknown, country: Nigeria[130], *9 male out- and 6 in-patients with different diseases (control);
- Co-contamination: not reported
- Further contamination (organs, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, and AFG_2, literature[130], control

incidence: ?/20*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.025–0.57 µg/ml, sample year: unknown, country: Nigeria[130], *healthy male farmers, age: 25–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, and AFG_2, literature[130], healthy

For detailed information please see the article.

incidence: 2/7*, sample comp.: people from India, sample origin: Panchmahals (district), Gujarat (federal state), India, contamination: natural, conc. range: tr, sample year: 1974/1975, country: India[131], *jaundiced persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[131]

incidence: 0/97*, sample comp.: people from Nigeria, sample origin: Igbo-Ora (town), Oyo State, Nigeria, contamination: no contamination, sample year: March 19??, country: Nigeria/UK[132], *rural population
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum,

AFG_1, AFG_2, AFM_1, and AFM_2, literature[132], rural

incidence: 2/78*, sample comp.: people from Nigeria, sample origin: Ibadan capital of Oyo State, Nigeria, contamination: natural, conc. range: 2,676–6,532 pg/ml, Ø conc.: 4,604 pg/ml, sample year: March 19??, country: Nigeria/UK[132], *urban population

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFG_1; 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_2, AFG_1, AFM_1, and AFM_2, literature[132], urban

incidence: 0/25*, sample comp.: people from Argentina, sample origin: Hospital Provincial del Centenario, Argentina, contamination: no contamination, sample year: unknown, country: Argentina[133], *healthy adult volunteers (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/20*, sample comp.: people from Argentina, sample origin: Hospital Provincial del Centenario, Argentina, contamination: natural, conc.: 0.47 ng/cm^3, sample year: unknown, country: Argentina[133], *13 male (1 af.**) and 7 female patients with hepatic diseases, age: 42–64 years, **male patient: 53 years, cirrhosis, HBsAg-negative, non-smoker, and alcohol drinker

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 40?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.48–1.41 pmol/mg albumin**, sample year: unknown, country: USA/China[134], *voluntary residents (control), age: 20–55 years (receiving placebos for 0 months, baseline), **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[134], placebos, 0 months

incidence: 40?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.36–1.63 pmol/mg albumin**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 500 mg for 0 months, baseline), **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[134], GTP 500, 0 months

incidence: 40?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.49–1.55 pmol/mg albumin**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 1,000 mg for 0 months, baseline), **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[134], GTP 1,000, 0 months

incidence: 40?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.32–1.70 pmol/mg albumin**, sample year: unknown, country: USA/China[134], *voluntary residents (control), age: 20–55 years (receiving placebos for 1 month), **AFB-AA

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[134], placebos, 1 month

incidence: 40?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.65–1.54 pmol/mg albumin**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 500 mg for 1 month), **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[134], GTP 500, 1 month

incidence: 40?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.35–1.40 pmol/mg albumin**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 1,000 mg for 1 month), **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[134], GTP 1,000, 1 month

incidence: 40?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.16–1.40 pmol/mg albumin**, sample year: unknown, country: USA/China[134], *voluntary residents (control), age: 20–55 years (receiving placebos for 3 months), **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[134], placebos, 3 months

incidence: 40?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region),China,contamination: natural, conc. range: 0.26–1.19 pmol/mg albumin**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 500 mg for 3 months), **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[134], GTP 500, 3 months

incidence: 40?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.50–1.40 pmol/mg albumin**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 1,000 mg for 3 months), **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[134], GTP 1,000, 3 months

For detailed information please see the article.

incidence: 264?/264*, sample comp.: people from Taiwan, sample origin: Hu-Hsi, Ma-Kung, and Pai-Hsa (townships) in Penghu Islets, Taiwan, contamination: natural, conc. range: 5.0–355.8 pmol/mg albumin** ***, sample year: 1990–1992, country: USA/Taiwan[135], *apparently healthy men (132 HBsAg carriers and 132 non-carriers), age: 30.3–64.8, **AFB-AA, ***taken sa. from a definite cohort and measured at baseline

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 264?/264*, sample comp.: people from Taiwan, sample origin: Hu-Hsi, Ma-Kung, and Pai-Hsa (townships) in Penghu Islets, Taiwan, contamination: natural, conc. range: 5.0–205.2 pmol/mg albumin** ***, sample year: 1990–1992, country: USA/Taiwan[135], *apparently healthy men (132 HBsAg carriers and 132 non-carriers), age: 30.3–64.8, **AFB-AA, ***taken again sa. from the same cohort and measured 1–3 years later

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 93/100*, sample comp.: people from Taiwan, sample origin: 20 townships (island-wide), Taiwan, contamination: natural, conc. range: 2–138 fmol/mg**, Ø conc.: 34.50 fmol/mg, sample year: January–May 1991, country: USA/Taiwan[136], *100 male junior high school students (50 HBsAg carriers and 50 non-carriers), age: 13–15 years, **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 97/100*, sample comp.: people from Taiwan, sample origin: 20 townships (island-wide), Taiwan, contamination: natural, conc. range: 2–174 fmol/mg**, Ø conc.: 42.59 fmol/mg, sample year: January–May 1991, country: USA/Taiwan[136], *100 female junior high school students (50 HBsAg carriers and 50 non-carriers), age: 13–15 years, **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 2/45*, sample comp.: people from Denmark, sample origin: two companies processing livestock feed in Esbjerg (city), Denmark, contamination: natural, conc. range: 50–54 pg/mg albumin** ***, Ø conc.: 52 pg/mg albumin** ***, sample year: unknown, country: Denmark[137], *male workers in animal-feed production, age: 25–62 years, **first blood sample (at least after 2 weeks of vacation, baseline), ***AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/45*, sample comp.: people from Denmark, sample origin: two companies processing livestock feed in Esbjerg (city), Denmark, contamination: natural, conc. range: 44–100 pg/mg albumin** ***, Ø conc.: 64.86 pg/mg albumin** ***, sample year: unknown, country: Denmark[137], *male workers in animal-feed production, age: 25–62 years, **second blood sample (after 4 weeks of work), ***AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 20?/20*, sample comp.: people from Egypt, sample origin: Gastroenterology Center, Mansoura University, Egypt, contamination: natural, Ø conc.: 7.33 ng/ml, sample year: January 2005–January 2006, country: Egypt[138], *17 male and 3 female healthy persons (control), Ø age: 53.17 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 80?/80*, sample comp.: people from Egypt, sample origin: Gastroenterology Center, Mansoura University, Egypt, contamination: natural, Ø conc.: 32.47 ng/ml, sample year: January 2005–January 2006, country: Egypt[138], *66 male and 14 female HCC patients, Ø age: 52.88 years

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 42/42*, sample comp.: people from China, sample origin: Fushui (county), Guangxi (province), China, contamination: natural, conc. range: ≈≤344 ng/g albumin, sample year: unknown, country: USA/China[139], *30 male and 12 female persons, age: 25–64 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[139]

incidence: 98/104, sample comp.: people from UK, sample origin: University of York (city), UK, contamination: natural, conc. range: 5–15 pg/mg** (18 sa.), 16–25 pg/mg** (27 sa.), 26–35 pg/mg** (25 sa.), 36–45 pg/mg** (17 sa.), 46–55 pg/mg** (5 sa.), 56–65 pg/mg** (5 sa.), 66–95 pg/mg** (1 sa.), sample year: unknown, country: UK[140], *47 male and 57 female persons, age: 18–65 years, **AFB_1-lysine (eq.) pg/mg albumin

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 17/17, sample comp.: people from China, sample origin: Guangxi (region), China, contamination: natural, conc. range: 0.009–0.329 pmol AFB-lysine adduct/mg albumin, Ø conc.: 0.198 pmol AFB-lysine adduct/mg albumin, sample year: 1984, country: USA[141]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/20, sample comp.: people from Gambia, sample origin: Gambia, contamination: natural, conc. range: 0.084–0.228 pmol AFB-lysine adduct/mg albumin, Ø conc.: 0.142 pmol AFB-lysine adduct/mg albumin, sample year: 1989, country: USA[141]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/20, sample comp.: people from China, sample origin: Qidong (region), China, contamination: natural, conc. range: 0.065–0.142 pmol AFB-lysine adduct/mg albumin, Ø conc.: 0.098 pmol AFB-lysine adduct/mg albumin, sample year: 1993, country: USA[141]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/20, sample comp.: people from China, sample origin: Qidong (region), China, contamination: natural, conc. range: 0.083–0.147 pmol AFB-lysine adduct/mg albumin, Ø conc.: 0.108 pmol AFB-lysine adduct/mg albumin, sample year: 1994, country: USA[141]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 56/56*, sample comp.: people from China, sample origin: Zhuqing (village), 45 km southwest of Fusui (county capital), China, contamination: natural, conc. range: 0.81–2.41 pmol/mg albumin*** ***, Ø conc.: 1.24 pmol/mg albumin** ***, sample year: April 1999, country: China/USA[151], *male and female persons, **AFAA, ***at the beginning of the study

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFM_1, AFP_1 and AFQ_1, literature[151], beginning

incidence: 27?/27*, sample comp.: people from China, sample origin: Zhuqing (village), 45 km southwest of Fusui (county capital), China, contamination: natural, conc. range: 0.92–1.67 pmol/mg albumin*** ***, Ø conc.: 1.21 pmol/mg albumin** ***, sample year: April 1999, country: China/USA[151], *male and female persons, **AFAA, ***at the end of the study

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine,

AFB_1, AFM_1, AFP_1 and AFQ_1, literature[151], end

incidence: ?/81*, sample comp.: people from Guinea, sample origin: Sangareah (village), lower Guinea, contamination: natural, conc. range: 16.0–22.0 pg AFB_1-lysine eq/mg albumin (95 % CI), sample year: January/February 1994 (dry season), country: Guinea/France/UK[156], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/85*, sample comp.: people from Guinea, sample origin: Kebaly (village), lower Guinea, contamination: natural, conc. range: 19.6–24.6 pg AFB_1-lysine eq/mg albumin (95 % CI), sample year: January/February 1994 (dry season), country: Guinea/France/UK[156], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/59*, sample comp.: people from Guinea, sample origin: Garambe (village), middle Guinea, contamination: natural, conc. range: 12.5–16.4 pg AFB_1-lysine eq/mg albumin (95 % CI), sample year: January/February 1994 (dry season), country: Guinea/France/UK[156], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/71*, sample comp.: people from Guinea, sample origin: Noussy (village), middle Guinea, contamination: natural, conc. range: 13.3–18.1 pg AFB_1-lysine eq/mg albumin (95 % CI), sample year: January/February 1994 (dry season), country: Guinea/France/UK[156], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/53*, sample comp.: people from Guinea, sample origin: Faranah (village), upper Guinea, contamination: natural, conc. range: 11.2–15.5 pg AFB_1-lysine eq/mg albumin (95 % CI), sample year: July/September 1994 (rainy season), country: Guinea/France/UK[156], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/20*, sample comp.: people from Guinea, sample origin: Gueckedou (village), forest region in Guinea, contamination: natural, conc. range: 8.2–13.5 pg AFB_1-lysine eq/mg albumin (95 % CI), sample year: July/September 1994 (rainy season), country: Guinea/France/UK[156], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/32*, sample comp.: people from Guinea, sample origin: N'Zerekore (village), forest region in Guinea, contamination: natural, conc. range: 8.2–10.8 pg AFB_1-lysine eq/mg albumin (95 % CI), sample year: July/September 1994 (rainy season), country: Guinea/France/UK[156], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/19*, sample comp.: people from Guinea, sample origin: Kissidou (village), forest region in Guinea, contamination: natural, conc. range: 8.5–14.0 pg AFB_1-lysine eq/mg albumin (95 % CI), sample year: July/September 1994 (rainy season), country: Guinea/France/UK[156], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 35/170*, sample comp.: people from USA, sample origin: San Antonio metropolitan area of Bexar (county), southern region of Texas, USA, contamination: natural, conc. range: 1.01–16.57 pg/mg albumin**, sample year:

October 2007–May 2008, country: USA[247], *male and female persons, age: ≥18 years, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[247]

For detailed information please see the article.

incidence: 7/10*, sample comp.: people from China, sample origin: Haimen (city), China, contamination: natural, conc. range: 5.9–13.4 pg/mg albumin**, Ø conc.: 7.8 pg/mg albumin**, sample year: 1986, country: Japan/China[250], *PLC-patients, **AFB-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/20*, sample comp.: people from China, sample origin: Haimen (city), China, contamination: natural, conc. range: 5.1–7.5 pg/mg albumin**, Ø conc.: 6.0 pg/mg albumin**, sample year: 1987, country: Japan/China[250], *PLC-patients, **AFB-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/20*, sample comp.: people from China, sample origin: Haimen (city), China, contamination: natural, conc. range: 5.1–10.4 pg/mg albumin**, Ø conc.: 7.3 pg/mg albumin**, sample year: 1992, country: Japan/China[250], *PLC-patients, **AFB-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/10*, sample comp.: people from China, sample origin: Haimen (city), China, contamination: natural, conc. range: 5.4–6.6 pg/mg albumin**, Ø conc.: 6.0 pg/mg albumin**, sample year: 1993, country: Japan/China[250], *PLC-patients, **AFB-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/10*, sample comp.: people from China, sample origin: Haimen (city), China, contamination: natural, conc. range: 5.1–5.6 pg/mg albumin**, Ø conc.: 5.4 pg/mg albumin**, sample year: 1994, country: Japan/China[250], *PLC-patients, **AFB-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/69*, sample comp.: people from China, sample origin: Haimen (city), China, contamination: natural, conc.: 5.1 pg/mg albumin**, sample year: 1994, country: Japan/China[250], *healthy persons (control), **AFB-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/68*, sample const.: people from China, sample origin: Haimen (city), China, contamination: natural, Ø conc.: 5.7 pg/mg albumin**, sample year: 1994, country: Japan/China[250], *PLC-patients, **AFB-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/44*, sample comp.: people from China, sample origin: Haimen (city), China, contamination: natural, Ø conc.: 8.8 pg/mg albumin**, sample year: 1995, country: Japan/China[250], *healthy persons (control), **AFB-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 32/56*, sample comp.: people from China, sample origin: Haimen (city), China, contamination: natural, Ø conc.: 9.2 pg/mg albumin**, sample year: 1995, country: Japan/China[250], *PLC-patients, **AFB-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 165/170*, sample comp.: people from Malaysia, sample origin: South-West and North-East of Penang Island, north, central and south of province Wellesley (areas of Penang), Malaysia, contamination: natural, conc. range: 0.20–23.16 pg/mg albumin** (2 sa. >20.0 pg/mg albumin**), sample year: June–December 2008,

country: Malaysia[255], *three main ethnics: Malay, Chinese, and Indian, age: 18–85 years, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/20*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.009–0.331 µg/ml, Ø conc.: 0.069 µg/ml, sample year: unknown, country: Nigeria[267], *18 male and 2 female PCR-patients, age: 21–55 years, 8 positive HBsAg ca.
- Co-contamination: 20 sa. co-contaminated with AFB_1, AFB_2, AFG_1, and AFG_2
- Further contamination (organs, tissues, fluids etc.): not reported

incidence: 17/46*, sample comp.: people from Egypt, sample origin: Mansoura University Children's Hospital, Egypt, contamination: natural, conc. range: 30.565–62.795 ppm, sample year: unknown, country: Egypt[280], *33 male and 13 female infants and children, age: 1 month–4.5 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/46*, sample comp.: people from Egypt, sample origin: Mansoura University Children's Hospital, Egypt, contamination: natural, conc. range: 35.59–84.93 ppm, sample year: unknown, country: Egypt[280], *breast feeding and weaning mothers of the infants and children (see above)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 755/755*, sample comp.: people from Ghana, sample origin: Komfo Anokye Teaching Hospital (KATH) and Manhyia Polyclinic, Kumasi (city), Ghana, contamination: natural, conc. range: 0.44–268.73 pg/mg**, Ø conc.: 10.9 pg/mg**, sample year: November/December 2006, country: USA/Ghana[281], *pregnant women, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 37/60*, sample comp.: people from Thailand, sample origin: Muang (district), Chiang Mai (province), Thailand, contamination: natural, conc. range: 5–25 AFB_1-lysine eq/mg albumin (30 sa.), >25–<49.8 AFB_1-lysine eq/mg albumin (7 sa.), Ø conc.: 12.1 AFB_1-lysine eq/mg albumin (for positive sa.?), sample year: unknown, country: Thailand/UK[291], *22 male and 38 female vegetarian persons, age: 10–71 years and 28–97 years, respectively
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 22/100*, sample comp.: people from Thailand, sample origin: Muang (district), Chiang Mai (province), Thailand, contamination: natural, conc. range: 5–25 AFB_1-lysine eq/mg albumin (18 sa.), >25–≤49.8 AFB_1-lysine eq/mg albumin (4 sa.), Ø conc.: 7.7 AFB_1-lysine eq/mg albumin (for positive sa.?), sample year: unknown, country: Thailand/UK[291], *57 male and 43 female non-vegetarian persons, age: 21–61 years and 20–64 years, respectively
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 27/79*, sample comp.: people from Thailand, sample origin: Muang (district), Chiang Mai (province), Thailand, contamination: natural, Ø conc.: 16.5 AFB_1-lysine eq/mg albumin, sample year: unknown, country: Thailand/UK[291], *male vegetarian and non-vegetarian persons, age: 10–71 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 32/81*, sample comp.: people from Thailand, sample origin: Muang (district), Chiang Mai (province), Thailand, contamination: natural, Ø conc.: 17.2 AFB_1-lysine eq/mg albumin, sample year: unknown, country: Thailand/UK[291], *female vegetarian and non-vegetarian persons, age: 20–97 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 55/60*, sample comp.: people from China, sample origin: Guangxi Medical University Cancer Hospital, China, contamination: natural, conc. range: 0.54–227.13 pg/mg albumin**, Ø conc.: 11.10 pg/mg albumin**, sample year: August 2004–August 2005, country: USA/China[297], *54 male and 6 female HCC patients, Ø age: 41 years, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 115/120*, sample comp.: people from China, sample origin: southern Guangxi area, China, contamination: natural, conc. range: 0.79–51.93 pg/mg albumin**, Ø conc.: 6.46 pg/mg albumin**, sample year: August 2004–August 2005?, country: USA/China[297], *108 male and 12 female persons, Ø age: 42 years, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 223/282*, sample comp.: people from Kenya, sample origin: Kenya AIDS Indicator Survey (KAIS), Kenya, contamination: natural, conc. range: ≤186 pg/mg albumin**, sample year: August–November 2007, country: USA/Kenya[298], *male persons, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 244/313*, sample comp.: people from Kenya, sample origin: Kenya AIDS Indicator Survey (KAIS), Kenya, contamination: natural, conc. range: ≤211 pg/mg albumin**, sample year: August–November 2007, country: USA/Kenya[298], *female persons, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 172/212*, sample comp.: people from Kenya, sample origin: Kenya AIDS Indicator Survey (KAIS), Kenya, contamination: natural, conc. range: ≤207 pg/mg albumin**, sample year: August–November 2007, country: USA/Kenya[298], *adolescents and adults, age: 15–24 years, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 45/61*, sample comp.: people from Kenya, sample origin: Kenya AIDS Indicator Survey (KAIS), Kenya, contamination: natural, conc. range: ≤105 pg/mg albumin**, sample year: August–November 2007, country: USA/Kenya[298], *adults, age: 25–29 years, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 90/120*, sample comp.: people from Kenya, sample origin: Kenya AIDS Indicator Survey (KAIS), Kenya, contamination: natural, conc. range: ≤211 pg/mg albumin**, sample year: August–November 2007, country: USA/Kenya[298], *adults, age: 30–39 years, **AFB_1-LA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 82/107*, sample comp.: people from Kenya, sample origin: Kenya AIDS Indicator Survey (KAIS), Kenya, contamination: natural, conc. range: ≤44.1 pg/mg albumin**, sample year: August–November 2007, country: USA/Kenya[298], *adults, age: 40–49 years, **AFB_1-LA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 51/67*, sample comp.: people from Kenya, sample origin: Kenya AIDS Indicator Survey (KAIS), Kenya, contamination: natural, conc. range: ≤53.2 pg/mg albumin**, sample year: August–November 2007, country: USA/Kenya[298], *adults, age: 50–59 years, **AFB_1-LA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/28*, sample comp.: people from Kenya, sample origin: Kenya AIDS Indicator Survey (KAIS), Kenya, contamination: natural, conc. range: ≤49.2 pg/mg albumin**, sample year: August–November 2007, country: USA/Kenya[298], *adults, age: 60–64 years, **AFB_1-LA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 507?/507*, sample comp.: people from Ghana, sample origin: Ejura-Sekyedumase District (ESD), Ghana, contamination: natural, conc. range: 0.1–4.44 pmol/mg albumin**, Ø conc.: 0.94 pmol/mg albumin**, sample year: unknown, country: USA[360], *adult persons differing in vitamins A and E conc., age: 18–85 years, **AFB-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 13/20*, sample comp.: people from Portugal, sample origin: 7 poultry farms in the district of Lisbon (capital), Portugal, contamination: natural, conc. range: ≤4.23 ng/ml, sample year: January–May 2011, country: Portugal[452], *male persons, Ø age: 43 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/14*, sample comp.: people from Portugal, sample origin: Lisbon? (capital), Portugal, contamination: no contamination, sample year: January–May 2011, country: Portugal[452], *male persons, Ø age: 35 years (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/11*, sample comp.: people from Portugal, sample origin: 7 poultry farms in the district of Lisbon (capital), Portugal, contamination: natural, conc. range: ≤3.83 ng/ml, sample year: January–May 2011, country: Portugal[452], *female persons, Ø age: 42.7 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/16*, sample comp.: people from Portugal, sample origin: Lisbon? (capital), Portugal, contamination: no contamination, sample year: January–May 2011, country: Portugal[452], *female persons, Ø age: 36.3 years (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 55/55*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.96–2.93 pmol/mg albumin** ***, Ø conc.: 1.49 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting placebos, **AFB_1-AA, ***measured at baseline

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], placebo (baseline)

incidence: 57/57*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District

(ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.99–2.50 pmol/mg albumin** ***, Ø conc.: 1.56 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 1.5 g NovaSil, **AFM_1-AA, ***measured at baseline

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], 1.5 g NovaSil (baseline)

incidence: 59/59*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.96–2.58 pmol/mg albumin** ***, Ø conc.: 1.51 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 3.0 g NovaSil, **AFB_1-AA, ***measured at baseline

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], 3.0 g NovaSil (baseline)

incidence: 56/56*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.81–2.53 pmol/mg albumin** ***, Ø conc.: 1.25 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting placebos, **AFM_1-AA, ***measured after 1 month

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], placebo (1 month)

incidence: 56/56*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase district (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.87–1.99 pmol/mg albumin** ***, Ø conc.: 1.21 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 1.5 g NovaSil, **AFB_1-AA, ***measured after 1 month

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], 1.5 g NovaSil (1 month)

incidence: 57/57*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.62–1.91 pmol/mg albumin** ***, Ø conc.: 1.17 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 3.0 g NovaSil, **AFB_1-AA, ***measured after 1 month

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], 3.0 g NovaSil (1 month)

incidence: 54/54*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.84–1.83 pmol/mg albumin** ***, Ø conc.: 1.20 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting placebos, **AFB_1-AA, ***measured after 3 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], placebo (3 months)

incidence: 52/52*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.55–1.21 pmol/mg albumin** ***, Ø conc.: 0.89 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 1.5 g NovaSil,

**AFB_1-AA, ***measured after 3 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], 1.5 g NovaSil (3 months)

incidence: 53/53*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.49–1.25 pmol/mg albumin** ***, Ø conc.: 0.90 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 3.0 g NovaSil, **AFM_1-AA, ***measured after 3 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[457], 3.0 g NovaSil (3 months)

incidence: 54/54*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.82–1.74 pmol/mg albumin** ***, Ø conc.: 1.14 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting placebos, **AFB_1-AA, ***measured after 4 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], placebo (4 months)

incidence: 51/51*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.76–1.55 pmol/mg albumin** ***, Ø conc.: 1.10 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 1.5 g NovaSil, **AFB_1-AA, ***measured after 4 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], 1.5 g NovaSil (4 months)

incidence: 52/52*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.87–1.56 pmol/mg albumin** ***, Ø conc.: 1.12 pmol/mg albumin** ***, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 3.0 g NovaSil, **AFB_1-AA, ***measured after 4 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[457], 3.0 g NovaSil (4 months)

For detailed information please see the article.

Aflatoxin B_2

incidence: 4/625*, sample comp.: people from Nigeria, sample origin: Adeoyo Maternity Hospital and University College Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 15–144 ng/l, sample year: April 1989–November 1990, country: UK/Nigeria[3], *cord blood sa. from babies
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[3]

incidence: 1/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc.: 70 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., cord blood sa. from neonates (at birth)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[5], jaundiced cord blood

incidence: 0/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., peripheral blood sa. from neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[5], jaundiced peripheral blood

incidence: 0/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., cord blood sa. from neonates (at birth)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[5], non-jaundiced cord blood

incidence: 0/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., peripheral blood sa. from neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFL, and AFM_2, literature[5], non-jaundiced peripheral blood

incidence: 1/64*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: contamination: natural, conc.: 20 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[5], jaundiced neonates

incidence: 1/60*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: contamination: natural, conc.: 40 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced neonates

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[5], non-jaundiced neonates

incidence: 0/8*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone/UK[6], *maternal blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], maternal

incidence: 7/64*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.02–1.2 ng/ml, Ø conc.: 0.3 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], cord

For detailed information please see the article.

incidence: 0/6*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[6], *low birthweight, male

incidence: 0/5*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], *low birthweight, female

incidence: 3/21*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.07–0.1 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], *normal birthweight, male

incidence: 1/20*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc.: 0.7 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], *normal birthweight, female

incidence: 1°/12* **, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 3 pg/ml, sample year: unknown, country: UK/Sudan[15], *infant sa., **includes healthy, marasmus/kwashiorkor°, kwashiorkor and hepatitis ca.

- Co-contamination: 1 sa co-contaminated with AFB_2 and AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 2*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc. range: 3–501 pg/ml***, sample year: unknown, country: UK[81], *at least 2 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 0 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFL, and AFM_1; 1 sa. co-contaminated with AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 2/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 9–12 pg/ml, Ø conc.: 10.5 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFB_2; 1 sa. contaminated solely with AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFG_1, and AFG_2, AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/9*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 0/13*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 0/67*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: no contamination, sample year: unknown, country: Nigeria/UK[116], *60 infants and 7 of their mothers (non-jaundiced, control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[116], non-jaundiced

incidence: 4/340*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 17–5? ng/l**, sample year: unknown, country: Nigeria/UK[116], *270 infants and 70 of their mothers (jaundiced), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[116], jaundiced

incidence: 7/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 4–16 ng/100 ml, Ø conc.: 12.00 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117], kwashiorkor; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFM_1, literature[117], kwashiorkor

incidence: 1/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc.: 5 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female

infants with PEM (marasmus), age: 6–13 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_{2a}, AFG_1, AFG_{2a}, AFL, AFM_1, and AFP, literature[117], marasmus; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, and AFP, literature[117], marasmus

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/36*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.04–4.0 ng/ml, sample year: unknown, country: Sierra Leone[118], *"underfive" children: 14 control, 3 kwashiorkor, 9 underweight, 2 marasmic and 8 "unspecified" ca.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFL, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: ?/15*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.008–0.240 µg/ml, sample year: unknown, country: Nigeria[130], *9 male out- and 6 in-patients with different diseases (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, and AFG_2, literature[130], control

incidence: ?/20*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.010–0.390 µg/ml, sample year: unknown, country: Nigeria[130], *healthy male farmers, age: 25–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, and AFG_2, literature[130], healthy

For detailed information please see the article.

incidence: 0/97*, sample comp.: people from Nigeria, sample origin: Igbo-Ora (town), Oyo State, Nigeria, contamination: no contamination, sample year: March 19??, country: Nigeria/UK[132], *rural population
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFM_1, and AFM_2, literature[132], rural

incidence: 1/78*, sample comp.: people from Nigeria, sample origin: Ibadan capital of Oyo State, Nigeria, contamination: natural, conc.: 36 pg/ml, sample year: March 19??, country: Nigeria/UK[132], *urban population
- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[132], urban

incidence: 20/20*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.030–0.278 µg/ml, Ø conc.: 0.095 µg/ml, sample year: unknown, country: Nigeria[267], *18 male and 2 female PCR patients, age: 21–55 years, 8 positive HBsAg ca.

- Co-contamination: 20 sa. co-contaminated with AFB_1, AFB_2, AFG_1, and AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin B_{2a}

incidence: 12/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 4–35 ng/100 ml, Ø conc.: 15.58 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFM_1, literature[117] (kwashiorkor)

incidence: 4/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 3–9 ng/100 ml, Ø conc.: 6.00 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_{2a}, AFL, AFM_1, and AFP, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, and AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin G_1

incidence: 6/625*, sample comp.: people from Nigeria, sample origin: Adeoyo Maternity Hospital and University College Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 97–16,543 ng/l, sample year: April 1989–November 1990, country: UK/Nigeria[3], *cord blood sa. from babies
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_2, AFL, AFM_1, and AFM_2, literature[3]

incidence: 1/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc.: 2,053 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., cord blood sa. from neonates (at birth)
- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_2, AFM_1, and AFM_2, literature[5], jaundiced cord blood

incidence: 3/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 850–11,728 pg/ml, Ø conc.: 7,185 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., peripheral blood sa. from neonates
- Co-contamination: 1 sa. co-contaminated with AFG_1, AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[5], jaundiced peripheral blood

incidence: 2/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 1,348–1,985 pg/ml, Ø conc.: 1,666 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., cord blood sa. from neonates (at birth)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFM_1, and AFM_2, literature[5], non-jaundiced cord blood

incidence: 4/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 1,149–3,151 pg/ml, Ø conc.: 1,981 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., peripheral blood sa. from neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFL, and AFM_2, literature[5], non-jaundiced peripheral blood

incidence: 2/64*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 293–1,074 pg/ml, Ø conc.: 683 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced neonates

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFb_1, AFB_2, AFM_1, and AFM_2, literature[5], jaundiced neonates

incidence: 2/60*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 1,877–6,389 pg/ml, Ø conc.: 4,133 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_2, AFM_1, and AFM_2, literature[5], non-jaundiced neonates

incidence: 1/8*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc.: 8.8 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *maternal blood sa.

- Co-contamination: 1 sa. co-contaminated with AFG_1, AFG_2 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], maternal

incidence: 12/64*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.004–8.8 ng/ml, Ø conc.: 1.6 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], cord

For detailed information please see the article.

incidence: 1/6*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc.: 2.2 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_2, AFL, AFM_1, and AFM_2, literature[6], low birthweight, male

incidence: 3/5*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 2.8–5.9 ng/ml, sample

year: unknown, country: Sierra Leone/UK[6], *low birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], low birthweight, female

incidence: 1/21*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc.: 0.004 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], normal birthweight, male

incidence: 2/20*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.2–3.2 ng/ml, Ø conc.: 1.7 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[6], normal birthweight, female

incidence: 1/14*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 787 pg/ml, sample year: unknown, country: UK/Sudan[15], *female persons: sa. taken during induction of anaesthesia

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFB_2, AFG_2, AFM_1, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 1*/15**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc.: 13,230 pg/ml, sample year: unknown, country: Kenya/UK[16], *male adult with stomach cancer, **9 male and 6 female patients (age: 0.6–52 years?) with hepatocellular carcinoma, cirrhosis, hepatitis, stomach cancer, cerebral malaria, death in pregnancy, marasmic kwashiorkor and peritonitis

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[16]; Human serum, AFM_1 and AFM_2, literature[16]; Human urine, AFM_1 and AFM_2, literature[16]

incidence: 38/40, sample comp.: people from Ghana, sample origin: greater Accra region, Ghana, contamination: natural, Ø conc.: 9.2 ng/ml, sample year: late April 19?? (wet season), country: Ghana[76], *apparently healthy adults (29 male and 11 female persons), age: 30–73 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFM_1, and AFQ_1, literature[76], Human serum, AFB_1 and AFQ_1, literature[76], Human urine, AFB_1 and AFG_1, literature[76]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 2,721 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 0 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 1/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 975 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/9*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 0/13*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 3/67*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 1,112–4,370 ng/l**, sample year: unknown, country: Nigeria/UK[116], *60 infants and 7 of their mothers (non-jaundiced, control), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_2, AFM_1, and AFM_2, literature[116], non-jaundiced

incidence: 12/340*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 460–165,067 ng/l**, sample year: unknown, country: Nigeria/UK[116], *270 infants and 70 of their mothers (jaundiced), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_2, AFL, AFM_1, and AFM_2, literature[116], jaundiced

incidence: 19/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 2–38 ng/100 ml, Ø conc.: 21.50 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFM_1, literature[117] (kwashiorkor)

incidence: 8/30*, sample comp.: people from Egypt, sample origin: Alexandria

University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 1–12 ng/100 ml, Ø conc.: 7.75 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_{2a}, AFL, AFM_1, and AFP, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, and AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/36*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.50–1.6 ng/ml, sample year: unknown, country: Sierra Leone[118], *"underfive" children: 14 control, 3 kwashiorkor, 9 underweight, 2 marasmic and 8 "unspecified" ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: ?/15*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.005–0.180 µg/ml, sample year: unknown, country: Nigeria[130], *9 male out- and 6 in-patients with different diseases (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, and AFG_2, literature[130], control

incidence: ?/20*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.024–0.59 µg/ml, sample year: unknown, country: Nigeria[130], *healthy male farmers, age: 25–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, and AFG_2, literature[130], healthy

For detailed information please see the article.

incidence: 2/97*, sample comp.: people from Nigeria, sample origin: Igbo-Ora (town), Oyo (state), Nigeria, contamination: natural, conc. range: 2,683–6,436 pg/ml, Ø conc.: 4,459.5 pg/ml, sample year: March 19??, country: Nigeria/UK[132], *rural population

- Co-contamination: 2 sa. co-contaminated with AFG_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_2, AFM_1, and AFM_2, literature[132], rural

incidence: 1/78*, sample comp.: people from Nigeria, sample origin: Ibadan capital of Oyo (state), Nigeria, contamination: natural, conc.: 8,828 pg/ml, sample year: March 19??, country: Nigeria/UK[132], *urban population

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFM_1, and AFM_2, literature[132], urban

incidence: 1/150, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc.: 0.40 ng/ml, sample year: unknown, country: Italy[142], *117 male (1 af.) and 33 female healthy persons (control), age: 40–75 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bronchial lavage fluid, AFB_1, literature[142]; Human serum, AFS, literature[142]

incidence: 20/20*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.013–0.334 µg/ml, Ø conc.: 0.083 µg/ml, sample year: unknown, country: Nigeria[267], *18 male and 2 female PCR patients, age: 21–55 years, 8 positive HBsAg ca.
- Co-contamination: 20 sa. co-contaminated with AFB_1, AFB_2, AFG_1, and AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin G_2

incidence: 13/625*, sample comp.: people from Nigeria, sample origin: Adeoyo Maternity Hospital and University College Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 15–275 ng/l, sample year: April 1989–November 1990, country: UK/Nigeria[3], *cord blood sa. from babies
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFL, AFM_1, and AFM_2, literature[3]

incidence: 2/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 13 pg/ml, Ø conc.: 13 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., cord blood sa. from neonates (at birth)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFM_1, and AFM_2, literature[5], jaundiced cord blood

incidence: 0/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., peripheral blood sa. from neonates
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[5], jaundiced peripheral blood

incidence: 1/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc.: 438 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., cord blood sa. from neonates (at birth)
- Co-contamination: 1 sa co-contaminated with AFB_1 and AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[5], non-jaundiced cord blood

incidence: 0/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., peripheral blood sa. from neonates
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFL, and AFM_2, literature[5], non-jaundiced peripheral blood

incidence: 0/64*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced neonates
- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFM_1, and AFM_2, literature[5], jaundiced neonates

incidence: 2/60*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 14–173 pg/ml, Ø conc.: 93.5 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced neonates

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFG_2; 1 sa. co-contaminated with AFG_2 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFM_1, and AFM_2, literature[5], non-jaundiced neonates

incidence: 5/8*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.004–0.1 ng/ml, Ø conc.: 0.0408 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *maternal blood sa.

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFG_2, and AFM_1, 1 sa. co-contaminated with AFG_1, AFG_2, and AFM_2, 1 sa. co-contaminated with AFG_2, AFL, and AFM_1, 1 sa. co-contaminated with AFB_1 and AFG_2, 1 sa. co-contaminated with AFG_2 and AFL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFL, AFM_1, AFM_2, and OTA, literature[6], maternal

incidence: 26/64*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.002–3.0 ng/ml, Ø conc.: 0.07 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, and OTA, literature[6], cord

For detailed information please see the article.

incidence: 4/6*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.02–3.0 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFL, AFM_1, and AFM_2, literature[6], low birthweight, male

incidence: 2/5*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.03–0.4 ng/ml, Ø conc.: 0.215 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFL, AFM_1, AFM_2, and OTA, literature[6], low birthweight, female

incidence: 6/21*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.006–0.3 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2,

and OTA, literature[6], normal birthweight, male

incidence: 8/20*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.004–0.4 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, and OTA, literature[6], normal birthweight, female

incidence: 1/15*, sample comp.: people from The Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 2 pg/ml, sample year: unknown, country: UK/Sudan[15], *maternal blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFB_2, AFG_1, AFM_1, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 1/14*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 8 pg/ml, sample year: unknown, country: UK/Sudan[15], *female persons: sa. taken during induction of anaesthesia

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 2°/12* **, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 3–5 pg/ml, Ø conc.: 4.0 pg/ml, sample year: unknown, country: UK/Sudan[15], *infant sa., **includes healthy°, marasmus/kwashiorkor°, kwashiorkor and hepatitis ca.

- Co-contamination: 1 sa co-contaminated with AFB_2 and AFG_2; 1 sa. contaminated solely with AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 2 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 0 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article

incidence: 1/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 4 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, and AFL, literature[82]; Human urine, AFB_2,

AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/9*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported (marasmus, marasmic kwashiorkor)

incidence: 0/13*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 1/67*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc.: 70 ng/l**, sample year: unknown, country: Nigeria/UK[116], *60 infants and 7 of their mothers (non-jaundiced, control), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFM_1, and AFM_2, literature[116], non-jaundiced

incidence: 16/340*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 21–990 ng/l**, sample year: unknown, country: Nigeria/UK[116], *270 infants and 70 of their mothers (jaundiced), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFL, AFM_1, and AFM_2, literature[116], jaundiced

incidence: 6/36*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.01–1.2 ng/ml, sample year: unknown, country: Sierra Leone[118], *"underfive" children: 14 control, 3 kwashiorkor, 9 underweight, 2 marasmic and 8 "unspecified" ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: ?/15*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.002–0.080 µg/ml, sample year: unknown, country: Nigeria[130], *9 male out- and 6 in-patients with different diseases (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, and AFG_1, literature[130], control

incidence: ?/20*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.012–0.192 µg/ml, sample year: unknown, country: Nigeria[130], *healthy male farmers, age: 25–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, and AFG_1, literature[130], healthy

For detailed information please see the article.

incidence: 1/97*, sample comp.: people from Nigeria, sample origin: Igbo-Ora (town), Oyo (state), Nigeria, contamination: natural, conc.: 20 pg/ml, sample year: March 19??, country: Nigeria/UK[132], *rural population

- Co-contamination: 1 sa. co-contaminated with AFG_1, AFG_2, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFM_1, and AFM_2, literature[132], rural

incidence: 0/78*, sample comp.: people from Nigeria, sample origin: Ibadan capital of Oyo (state), Nigeria, contamination: no contamination, sample year: March 19??, country: Nigeria/UK[132], *urban population

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFM_1, and AFM_2, literature[132], urban

incidence: 20/20*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital, Zaria (city), Nigeria, contamination: natural, conc. range: 0.005–0.146 µg/ml, Ø conc.: 0.040 µg/ml, sample year: unknown, country: Nigeria[267], *18 male and 2 female PCR patients, age: 21–55 years, 8 positive HBsAg ca.

- Co-contamination: 20 sa. co-contaminated with AFB_1, AFB_2, AFG_1, and AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin G_{2a}

incidence: 9/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 2–17 ng/100 ml, Ø conc.: 8.22 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFM_1, literature[117] (kwashiorkor)

incidence: 3/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 2–28 ng/100 ml, Ø conc.: 11.33 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFL, AFM_1, and AFP, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, and AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin M_1

incidence: 25/625*, sample comp.: people from Nigeria, sample origin: Adeoyo Maternity Hospital and University College Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 32–11,354 ng/l, sample year: April 1989–November 1990, country: UK/Nigeria[3], *cord blood sa. from babies

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum,

AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[3]

incidence: 2/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 57–713 pg/ml, Ø conc.: 385 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., cord blood sa. from neonates (at birth)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_2, literature[5], jaundiced cord blood

incidence: 4/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 24–8,464 pg/ml, Ø conc.: 3,301 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., peripheral blood sa. from neonates

- Co-contamination: 2 sa. co-contaminated with AFM_1 and AFM_2; 1 sa. co-contaminated with AFG_1, AFM_1 and AFM_2; 1 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, and AFM_2, literature[5], jaundiced peripheral blood

incidence: 1/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc.: 40 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., cord blood sa. from neonates (at birth)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, and AFM_2, literature[5], non-jaundiced cord blood

incidence: 0/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: no contamination, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., peripheral blood sa. from neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFL, and AFM_2, literature[5], non-jaundiced peripheral blood

incidence: 4/64*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 36–877 pg/ml, Ø conc.: 290.3 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced neonates

- Co-contamination: 1 sa co-contaminated with AFG_1 and AFM_1; 1 sa co-contaminated with AFM_1 and AFM_2; 2 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, and AFM_2, literature[5], jaundiced neonates

incidence: 1/60*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc.: 417 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_2, literature[5], non-jaundiced neonates

incidence: 3/8*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination:

natural, conc. range: 0.09–0.8 ng/ml, Ø conc.: 0.397 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *maternal blood sa.

- Co-contamination: 1 sa co-contaminated with AFB_1, AFG_2 and AFM_1; 1 sa. co-contaminated with AFG_2, AFL and AFM_1; 1 sa. co-contaminated with AFM_1 and OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_2, and OTA, literature[6], maternal

For detailed information please see the article.

incidence: 36/64*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.007–5.1 ng/ml, Ø conc.: 0.4 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_2, and OTA, literature[6], cord

For detailed information please see the article.

incidence: 3/6*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.4–0.8 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, and AFM_2, literature[6], low birthweight, male

incidence: 3/5*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.2–5.1 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, AFM_2, and OTA, literature[6], low birthweight, female

incidence: 10/21*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.03–1.7 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_2, and OTA, literature[6], normal birthweight, male

incidence: 10/20*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.01–2.9 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_2, and OTA, literature[6], normal birthweight, female

incidence: 107/201*, sample comp.: people from UAE, sample origin: Al Ain and Tawam Hospitals, Al Ain (city), UAE, contamination: natural, conc. range: 110–4,060 pg/ml, sample year: May, June 1995/September 1999, country: UAE[14], *umbilical cord blood sa. from female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1 and AFM_2, literature[14]

incidence: 1/15*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 34 pg/ml, sample year: unknown, country: UK/Sudan[15], *maternal blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 1/14*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 5 pg/ml, sample year: unknown, country: UK/Sudan[15], *female patients: sa. taken during induction of anaesthesia

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 1°/12* **, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 12 pg/ml, sample year: unknown, country: UK/Sudan[15], *infant sa., **includes healthy°, marasmus/kwashiorkor, kwashiorkor and hepatitis ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_2, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 6*/15**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc. range: 30–757 pg/ml, Ø conc.: 481.5 pg/ml, sample year: unknown, country: Kenya/UK[16], *1 baby, 2 children and 3 adults with cirrhosis, hepatitis, stomach cancer, and marasmic Kwashiorkor, **9 male and 6 female patients (age: 0.6–52 years?) with HCC, cirrhosis, hepatitis, stomach cancer, cerebral malaria, death in pregnancy, marasmic kwashiorkor, and peritonitis

- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFM_1; 1 sa. co-contaminated with AFM_1 and AFM_2; 4 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[16]; Human serum, AFG_1 and AFM_2, literature[16]; Human urine, AFM_1 and AFM_2, literature[16]

incidence: 111/166*, sample comp.: people from UAE, sample origin: Government Hospital Al Ain and Government Hospital Tawam, Al Ain (city), UAE, contamination: natural, conc. range: 0.05–10.44 ng/ml, sample year: 1995–1998, country: UAE[18], *cord blood sa. (166 pairs of cord/maternal blood sa., see below)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 113/166*, sample comp.: people from UAE, sample origin: Government Hospital Al Ain and Government Hospital Tawam, Al Ain (city), UAE, contamination: natural, conc. range: 0.03–8.49 ng/ml, sample year: 1995–1998, country: UAE[18], *maternal blood sa. (166 pairs of cord/maternal blood sa., see above)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/1*, sample comp.: people from UAE, sample origin: Government Hospital Al Ain and Government Hospital Tawam, Al Ain (city), UAE, contamination: natural, conc.: 3.99 ng/ml, sample year: 1995–1998, country: UAE[18], *cord blood from a premature baby boy (gestational age: 26 weeks)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/1*, sample comp.: people from UAE, contamination: natural, conc.: 1.82 ng/ml, sample year: 1995–1998, country: UAE[18], *mother (age: 32 years, gravida: 4) of the premature baby boy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc. range: 85–3,182 pg/ml***, sample year: unknown, country: UK[81], *at least 2 pos. ca. with marasmus and marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 0 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFL, and AFM_1, 1 sa. co-contaminated with AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 3,373 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 6 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 2,068 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 12 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 1,152 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 24 h

- Co-contamination: 1 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[81]; Human urine, AFB_1, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 3/67*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc.

range: 80–11,547 ng/l**, sample year: unknown, country: Nigeria/UK[116], *60 infants and 7 of their mothers (non-jaundiced, control), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, and AFM_2, literature[116], non-jaundiced

incidence: 8/340*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 48–32,381 ng/l**, sample year: unknown, country: Nigeria/UK[116], *270 infants and 70 of their mothers (jaundiced), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_2, literature[116], jaundiced

incidence: 4/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 2–12 ng/100 ml, Ø conc.: 8.25 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFL, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFM_1, literature[117] (kwashiorkor)

incidence: 2/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 10–15 ng/100 ml, Ø conc.: 12.50 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFP, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, and AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/36*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.05–1.7 ng/ml, sample year: unknown, country: Sierra Leone[118], *"underfive" children: 14 control, 3 kwashiorkor, 9 underweight, 2 marasmic and 8 "unspecified" ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_2, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 4/97*, sample comp.: people from Nigeria, sample origin: Igbo-Ora (town), Oyo (state), Nigeria, contamination: natural, conc. range: 20–4,984 pg/ml, Ø conc.: 1,324 pg/ml, sample year: March 19??, country: Nigeria/UK[132], *rural population

- Co-contamination: 1 sa. co-contaminated with AFG_1, AFG_2, and AFM_1; 1 sa. co-contaminated with AFG_1 and AFM_1; 2 sa. contaminated solely with AFM_1

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, and AFM_2, literature[132], rural

incidence: 1/78*, sample comp.: people from Nigeria, sample origin: Ibadan capital of Oyo (state), Nigeria, contamination: natural, conc.: 1,272 pg/ml, sample year: March 19??, country: Nigeria/UK[132], *urban population

- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, and AFM_2, literature[132], urban

incidence: 12/15*, sample comp.: people from Nepal, sample origin: Bir Hospital, Katmandu (capital), Nepal, contamination: natural, Ø conc.: 8.7 pg/ml, sample year: September 1991, country: Japan/Nepal[143], *10 male (7 af.) and 5 female (5 af.) persons (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12/23*, sample comp.: people from Nepal, sample origin: Bir Hospital, Katmandu (capital), Nepal, contamination: natural, conc. range: ≤15.4 pg/ml**, Ø conc.: 8.9 pg/ml, sample year: September 1991, country: Japan/Nepal[143], *8 male (4 af.) and 15 female (8 af.) patients with various liver diseases, **female patient with a hemangioma of liver

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/12*, sample comp.: people from Egypt, sample origin: Hepatology Outpatient Clinic of the Internal Medicine Department at the National Research Center and outpatient clinic of Professor Dr. Yaseen Abd El-Ghaffar Charity Center for Liver Diseases and Research, Egypt, contamination: natural, Ø conc.: 0.66 ng/ml, sample year: December 2004–August 2005, country: Egypt[144], *6 male and 6 female healthy persons (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[144], control

incidence: 27/46*, sample comp.: people from Egypt, sample origin: Hepatology Outpatient Clinic of the Internal Medicine Department at the National Research Center and outpatient clinic of Professor Dr. Yaseen Abd El-Ghaffar Charity Center for Liver Diseases and Research, Egypt, contamination: natural, Ø conc.: 5.61 ng/ml, sample year: December 2004–August 2005, country: Egypt[144], *30 male and 16 female HCC patients, Ø age: 56 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[144], HCC

incidence: 11/12*, sample comp.: people from Egypt, sample origin: Hepatology Outpatient Clinic of the Internal Medicine Department at the National Research Center and outpatient clinic of Professor Dr. Yaseen Abd El-Ghaffar Charity Center for Liver Diseases and Research, Egypt, contamination: natural, Ø conc.: 19.23 ng/ml, sample year: December 2004–August 2005, country: Egypt[144], *7 male and 5 female cirrhotic patients, Ø age: 48 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[144], cirrhosis

For detailed information please see the article.

Aflatoxin M_2

incidence: 21/625*, sample comp.: people from Nigeria, sample origin: Adeoyo Maternity Hospital and University College Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 14–3,644 ng/l, sample year: April 1989–November 1990, country: UK/Nigeria[3], *cord blood sa. from babies

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1 literature[3]

incidence: 3/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 374–974 pg/ml, Ø conc.: 687 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., cord blood sa. from neonates (at birth)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1, literature[5], jaundiced cord blood

incidence: 3/37*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 233–3,557 pg/ml, Ø conc.: 1,666 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced ca., peripheral blood sa. from neonates

- Co-contamination: 2 sa. co-contaminated with AFM_1 and AFM_2; 1 sa. co-contaminated with AFG_1, AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, and AFM_1, literature[5], jaundiced peripheral blood

incidence: 3/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 32–649 pg/ml, Ø conc.: 261 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., cord blood sa. from neonates (at birth)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, and AFM_1, literature[5], non-jaundiced cord blood

incidence: 5/40*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 51–664 pg/ml, Ø conc.: 313 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced ca., peripheral blood sa. from neonates

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, and AFL, literature[5], non-jaundiced peripheral blood

incidence: 6/64*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 213–4,134 pg/ml, Ø conc.: 1,246 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *jaundiced neonates

- Co-contamination: 1 sa co-contaminated with AFM_1 and AFM_2; 5 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, and AFM_1, literature[5], jaundiced neonates

incidence: 6/60*, sample comp.: people from Nigeria, sample origin: Ahmadu Bello University Teaching Hospital (ABUTH), Zaria (city), northern Nigeria, contamination: natural, conc. range: 89–7,962 pg/ml, Ø conc.: 1,515 pg/ml, sample year: November 1987–October 1988, country: Nigeria/UK[5], *non-jaundiced neonates

- Co-contamination: 1 sa co-contaminated with AFG_2 and AFM_2; 5 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1 literature[5], non-jaundiced neonates

incidence: 1/8*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government

Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc.: 2.5 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *maternal blood sa.

- Co-contamination: 1 sa. co-contaminated with AFG_1, AFG_2 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and OTA, literature[6], maternal

incidence: 19/64*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.02–5.4 ng/ml, Ø conc.: 0.7 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *cord blood sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and OTA, literature[6], cord

For detailed information please see the article.

incidence: 5/6*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.1–5.4 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, and AFM_1, literature[6], low birthweight, male

incidence: 3/5*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.3–0.7 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, AFM_1, and OTA, literature[6], low birthweight, female

incidence: 1/21*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc.: 0.07 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and OTA, literature[6], normal birthweight, male

incidence: 4/20*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.08–0.3 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and OTA, literature[6], normal birthweight, female

incidence: 31/201*, sample comp.: people from UAE, sample origin: Al Ain and Tawam Hospitals, Al Ain (city), UAE, contamination: natural, conc. range: 210–3,700 pg/ml, sample year: May, June 1995/September 1999, country: UAE[14], *umbilical cord blood sa. from females

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1 and AFM_1, literature[14]

incidence: 1/15*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 5 pg/ml, sample year: unknown, country: UK/Sudan[15], *maternal sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFM_1, literature[15]; Human urine, AFL and AFM_1, literature[15]

incidence: 1*/15**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc.: 99.0 pg/ml, sample year: unknown, country: Kenya/UK[16], *25 year old man with cirrhosis, **9 male and 6 female patients (age: 0.6–52 years?) with HCC, cirrhosis, hepatitis, stomach cancer, cerebral malaria, death in pregnancy, marasmic kwashiorkor, and peritonitis

- Co-contamination: 1 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[16]; Human serum, AFG_1 and AFM_1, literature[16]; Human urine, AFM_1 and AFM_2, literature[16]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 11 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmus, **children, ***serial aflatoxin estimation after 6 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids etc.): Human urine, AFB_1, literature[81], 6 h

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 11 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 12 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[81], 12 h

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria and South Africa, sample origin: unknown, contamination: natural, conc.: 11 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 24 h

- Co-contamination: 1 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[81], 24 h

For detailed information please see the article.

incidence: 3/67*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 3,262–4,350 ng/l**, sample year: unknown, country: Nigeria/UK[116], *60 infants and 7 of their mothers (non-jaundiced, control), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, and AFM_1, literature[116], non-jaundiced

incidence: 11/340*, sample comp.: people from Nigeria, sample origin: University College Hospital, Oni Memorial Children's Hospital, Oluyoro Catholic Hospital, and Adeoyo Maternity Hospital, Ibadan (city), Nigeria, contamination: natural, conc. range: 407–9,280 ng/l**, sample year: unknown, country: Nigeria/UK[116], *270 infants and 70 of their mothers (jaundiced), **only in infants?

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[116], jaundiced

incidence: 12/36*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.04–4.0 ng/ml, sample year: unknown, country: Sierra Leone[118], *"underfive" children: 14 control, 3 kwashiorkor, 9 underweight, 2 marasmic and 8 "unspecified" ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, OTA, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 1/97*, sample comp.: people from Nigeria, sample origin: Igbo-Ora (town), Oyo State, Nigeria, contamination: natural, conc.: 24 pg/ml, sample year: March 19??, country: Nigeria/UK[132], *rural population

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, and AFM_1, literature[132], rural

incidence: 1/78*, sample const.: people from Nigeria, sample origin: Ibadan capital of Oyo (state), Nigeria, contamination: natural, conc.: 24,076 pg/ml, sample year: March 19??, country: Nigeria/UK[132], *urban population

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, and AFM_1, literature[132], urban

Aflatoxin P

incidence: 0/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, literature[117] (kwashiorkor)

incidence: 1/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc.: 7.00 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, and AFP literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin Q_1

incidence: 3/40, sample comp.: people from Ghana, sample origin: greater Accra region, Ghana, contamination: natural, Ø conc.: 7.5 ng/ml, sample year: late April 19?? (wet season), country: Ghana[76], *apparently healthy adults (29 male and 11 female persons), age: 30–73 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFM_1, and AFQ_1, literature[76], Human serum, Human urine, AFB_1 and AFG_1, literature[76]

Aflatoxin

incidence: 3/10*, sample comp.: people from Kenya, sample origin: Kyeni Consolata Mission Hospital, Embu (district), Kenya, contamination: natural, conc. range: 50–1,680 pg/ml, Ø conc.: 759 pg/ml, sample year: October 1984–January 1985, country: Kenya/UK[19], *children (control), Ø age: 43 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AF, literature[19], control

incidence: 4/11*, sample comp.: people from Kenya, sample origin: Kyeni Consolata Mission Hospital, Embu (district), Kenya, contamination: natural, conc. range: 99–9,571 pg/ml, Ø conc.: 3,412 pg/ml, sample year: October 1984–January 1985, country: Kenya/UK[19], *children with marasmus, Ø age: 60 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AF, literature[19], marasmus

incidence: 2/4*, sample comp.: people from Kenya, sample origin: Kyeni Consolata Mission Hospital, Embu (district), Kenya, contamination: natural, conc. range: 41–917 pg/ml, Ø conc.: 386 pg/ml, sample year: October 1984–January 1985, country: Kenya/UK[19], *children with marasmic kwashiorkor, Ø age: 48 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AF, literature[19], marasmic kwashiorkor

incidence: 9/14*, sample comp.: people from Kenya, sample origin: Kyeni Consolata Mission Hospital, Embu (district), Kenya, contamination: natural, conc. range: 16–66,588 pg/ml, Ø conc.: 6,666 pg/ml, sample year: October 1984–January 1985, country: Kenya/UK[19], *children with kwashiorkor, Ø age: 54 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AF, literature[19], kwashiorkor

incidence: 2/35*, sample comp.: people from Thailand, sample origin: Songkhla and Hand Yai (cities), southern Thailand, contamination: natural, conc. range: pr, sample year: unknown, country: UK/USA[21], *maternal blood sa. (35 pairs of maternal/cord blood sa. see below)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/35*, sample comp.: people from Thailand, sample origin: Songkhla and Hand Yai (cities), southern Thailand, contamination: natural, conc. range: ≤4.2 ng/ml, sample year: unknown, country: UK/USA[21], *cord blood sa. from neonates (35 pairs of maternal/cord blood sa. see above)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 28/28*, sample comp.: people from Nepal, sample origin: Scheer Memorial Hospital, Banepa (city), Nepal, contamination: natural, conc. range: 0.06–10 ng/ml, sample year: end of monsoon period in October, country: UK/USA[21], *16 male and 12 female hospitalized or healthy (working in the hospital) persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 444/444*, sample comp.: people from Gambia, sample origin: Kuntair (village) or Kerr Cherno (community), upper Niumi District, west of Gambia, contamination: natural, conc. range: 2.2–459 pg AF-lysine eq/mg albumin, sample year: 1990/1991, country: UK/Gambia[145], *229 male and 215 female children

(40 children HBsAg carrier), age: 3–4 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 323/391*, sample const.: people from Gambia, sample origin: 2 sets of villages: 6 Kataba hamlets and 16 Fula hamlets, north bank of the river Gambia, Gambia, contamination: natural, conc. range: 5–719.6 pg AF-lysine eq/mg albumin, sample year: end of dry season 1988, country: Gambia/France/UK[146], *rural male and female children, age: 3–8 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 434/466 (472 in total)*, sample comp.: people from Gambia, sample origin: 28 villages in the west Kiang region, Gambia, contamination: natural, conc. range: 5–456 pg/mg**, sample year: May 1998–February 1999, country: UK/Gambia[147], *251 male and 221 female children, age: 6–9 years, **AF-AA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/108*, sample comp.: people from USA, sample origin: pediatric referral centers in Georgia, Tennessee, and Alabama (states), USA, contamination: natural, conc. range: 2.43–4.68 ng/ml, Ø conc.: 3.012 ng/ml, sample year: January–March 1978, country: USA[148], *91 control subjects and 17 Reye's-syndrome ca. but no predominant contamination
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[148]

For detailed information please see the article.

incidence: 27?/27*, sample comp.: people from UK, sample origin: North London Blood Transfusion Centre at Letchworth (city) and Welwyn Garden City in Hertfordshire (county), UK, contamination: natural, conc. range: ≤64 pmol/l (20 pg/ml), sample year: unknown, country: UK[149], *22 male and 5 female persons, age: 22–60 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/227*, sample comp.: people from Czechoslovakia, sample origin: 2 Bohemian Hospitals, Czechoslovakia, contamination: natural, conc. range: ≤74 ng/l, Ø conc.: 59.8 ng/l, sample year: unknown, country: Czechoslovakia[150], *patients
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[150]

incidence: 102?/102*, sample comp.: people from Kenya, sample origin: acute aflatoxicosis outbreak, Kenya, contamination: natural, conc. range: 0.002–17.7 ng AF-lysine/mg albumin**, sample year: 2004, country: USA/UK[152], *19 patients with acute hepatic failures (Kenya aflatoxicosis outbreak), 61 control subjects, and 22 subjects without case status, **analyzed by IDMS
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/102*, sample comp.: people from Kenya, sample origin: acute aflatoxicosis outbreak, Kenya, contamination: natural, conc. range: 0–13.6 ng AF-lysine/mg albumin**, sample year: 2004, country: USA/UK[152], *19 patients with acute hepatic failures (Kenya aflatoxicosis outbreak), 61 control subjects, and 22 subjects without case status, **analyzed by HPLC-f
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 102?/102*, sample comp.: people from Kenya, sample origin: acute aflatoxicosis outbreak, Kenya, contamination: natural, conc. range: 0.018–67.0 ng AF-lysine/mg albumin**, sample year: 2004, country: USA/UK[152], *19 patients with acute hepatic failures (Kenya aflatoxicosis outbreak), 61 control subjects, and 22 subjects without case status, **analyzed by ELISA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2–6*/28, sample comp.: people from USA, sample origin: Tennessee Blood Services Bank, USA, contamination: natural, conc. range: 10.1–34.3 pg/mg** (2 sa.), sample year: unknown, country: USA/UK[152], *4 subjects with levels near or at the LOD, **analyzed by ELISA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 38/114*, sample comp.: people from Philippines, sample origin: Research Institute for Tropical Medicine, Alabang (city), south of Manila (capital), Philippines, contamination: natural, conc. range: 20–5,600 pg/ml, Ø conc.: 462 pg/ml, sample year: December 1986–January 1987, country: UK/Philippines[153], *children with ALRI, age: 0.08–12 years, weight for height: 6.6–23.1 kg/m

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AF, literature[153]

incidence: 196°,199°°, 200°°°/200*, sample comp.: people from Benin, sample origin: Bagbe, Sedje, Djida, and Dovi-Cogbe (villages) located in the coastal savannah, Benin, contamination: natural, conc. range: 9.2–148.1 pg/mg** (95 % CI), sample year: February°, June°°, and October°°° 2001, country: UK/Benin[154], *102 male and 98 female children, age: 16–37 months, **AF-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 24/24*, sample comp.: people from Egypt, sample origin: Cairo metropolitan area or governorates within the Nile Delta, Egypt, contamination: natural, conc. range: 3.5–25.8 pg/mg**, Ø conc.: 9.0 pg/mg** (geometric mean), sample year: 1999–2004, country: UK/USA/Egypt[155], *20 male and 4 female persons without cancer (control), age: 37–73 years, **AF-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/22*, sample comp.: people from Egypt sample origin: Cairo metropolitan area or governorates within the Nile Delta, Egypt, contamination: natural, conc. range: ≤32.8 pg/mg**, Ø conc.: 2.6 pg/mg** (geometric mean), sample year: 1999–2004, country: UK/USA/Egypt[155], *18 male and 4 female persons with HCC, age: 36–74 years, **AF-AA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/7, sample comp.: people from Kenya, sample origin: Chogoria (town) and Kaioleni (settlement), Kenya, contamination: natural, conc. range: 175–670 pg AF/mg albumin*, Ø conc.: 390.25 pg AF/mg albumin*, sample year: unknown, country: France[157], *measured by direct ELISA (same sa. (4/7) as below)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/7, sample const.: people from Kenya, sample origin: Chogoria (town) and Kaioleni (settlement), Kenya, contamination: natural, conc. range: 5.70–17.5 pg AF-lysine/mg albumin*, Ø conc.: 9.98 pg AF-lysine/mg albumin*, sample year: unknown, country: France[157], *measured by HPLC-f (same sa. (4/7) as above)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/19, sample comp.: people from Gambia, sample origin: MRC clinic, Keneba village, West Kiang region, Gambia, contamination: natural, conc. range: ≈6.50–≈190 pg AF-lysine/mg albumin*, sample year: unknown, country: France[157], *measured by hydrolysis-ELISA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/38, sample const.: people from Thailand, sample origin: Bangkok, Nakhon Ratchasima, and Ubon Ratchathani (provinces), Thailand, contamination: natural, conc. range: ≈4.70–≈49 pg AF-lysine/mg albumin*, sample year: unknown, country: France[157], *measured by hydrolysis-ELISA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/14*, sample comp.: people from France, sample origin: France, contamination: no contamination**, sample year: unknown, country: France[157], *volunteers or hospital patients, **measured by hydrolysis-ELISA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/100*, sample comp.: people from Thailand, sample origin: Ubon (area), Thailand, contamination: natural, conc. range: pr., sample year: unknown, country: Thailand/France[196], *male and female healthy persons, age: 30–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[196], Ubon

incidence: 1/50*, sample comp.: people from Thailand, sample origin: Korat (area), Thailand, contamination: natural, conc. range: pr., sample year: unknown, country: Thailand/France[196], *male and female healthy persons, age: 30–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[196], Korat

incidence: 3/50*, sample const.: people from Thailand, sample origin: Chiang Mai (area), Thailand, contamination: natural, conc. range: pr., sample year: unknown, country: Thailand/France[196], *male and female healthy persons, age: 30–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[196], Chiang Mai

incidence: 14/101*, sample comp.: people from Thailand, sample origin: Bangkok capital (area), Thailand, contamination: natural, conc. range: pr., sample year: unknown, country: Thailand/France[196], *male and female healthy persons, age: 30–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[196], Bangkok

incidence: 1/50*, sample comp.: people from Thailand, sample origin: Songkhla (area), Thailand, contamination: natural, conc. range: pr, sample year: unknown, country: Thailand/France[196], *male and female healthy persons, age: 30–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[196], Songkhla

incidence: 34/98*, sample comp.: people from Egypt, sample origin: Ganzour and Maleeg (villages), Menoufiya governorate, Nile Delta, northern Egypt, contamination: natural, conc. range: 3.0–35.1 pg AF-lysine/mg albumin, sample year: May–September 2006, country: Finland/UK/USA/Egypt/China[273], *female persons, age: 18–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, and DOM-1, literature[273]

For detailed information please see the article.

Aflatoxins

incidence: 7/44*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 77 pg/ml (geometric mean), sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFL, literature[115]; Human urine, AFS, literature[115] (control)

incidence: 11/57*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 211 pg/ml (geometric mean), sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children with marasmus

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFL, literature[115]; Human urine, AFS, literature[115] (marasmus)

incidence: 7/32*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 412 pg/ml (geometric mean), sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFL, literature[115]; Human urine, AFS, literature[115] (marasmic kwashiorkor)

incidence: 16/44*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 706 pg/ml (geometric mean), sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFL, literature[115]; Human urine, AFS, literature[115] (kwashiorkor)

incidence: 7/100*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc. range: 0.40–1.20 ng/ml**, sample year: unknown, country: Italy[142], *78 male and 22 female patients with lung cancer, age: 40–75 years, **AFB_1 in 5 ca. and AFB_2 in 2 ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bronchial lavage fluid, AFB_1, literature[142]; Human serum, AFG_1, literature[142]

incidence: 2/35*, sample comp.: people from Thailand, sample origin: Songkhla (city), Thailand, contamination: natural, conc. range: ≤1.22 nmol/ml, Ø conc.: 0.62 nmol/ml, sample year: 1987 (dry season), country: UK[158], *maternal sera (mothers from the below newborn (17/35)), $AFS = AFB_1$ (probably major component), AFG_1 and AFQ_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/35*, sample comp.: people from Thailand, sample origin: Songkhla (city), Thailand, contamination: natural, conc. range: 0.064–13.6 nmol/ml, Ø conc.: 3.1 nmol/ml, sample year: 1987 (dry season), country: UK[158], *cord sera from newborn (newborn from the above mothers (2/35)), $AFS = AFB_1$ (probably major component), AFG_1 and AFQ_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 22/103*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital (CEH) and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.

range: 1–9 pg/ml** (4 sa.), 10–99 pg/ml** (6 sa.), 100–999 pg/ml** (10 sa.), ≥1,000 pg/ml** (2 sa.), sample year: April 1981–April 1983, country: UK/Sudan[159], *children (control), age: 6–40 months, **AFS = AFB_1, AFL, and AFM_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS, literature[159], control

incidence: 52/138*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital (CEH) and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 1–9 pg/ml** (7 sa.), 10–99 pg/ml** (16 sa.), 100–999 pg/ml** (16 sa.), ≥1,000 pg/ml** (13 sa.), sample year: April 1981–April 1983, country: UK/Sudan[159], *children with kwashiorkor, age: 4–41 months, **AFS = AFB_1, AFL, and AFM_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS, literature[159], kwashiorkor

incidence: 28/98*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital (CEH) and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 1–9 pg/ml** (7 sa.), 10–99 pg/ml** (10 sa.), 100–999 pg/ml** (5 sa.), ≥1,000 pg/ml** (6 sa.), sample year: April 1981–April 1983, country: UK/Sudan[159], *children with marasmic kwashiorkor, age: 7–48 months, **AFS = AFB_1, AFL, and AFM_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS, literature[159], marasmic kwashiorkor

incidence: 31/118*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital (CEH) and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 1–9 pg/ml** (6 sa.), 10–99 pg/ml** (7 sa.), 100–999 pg/ml** (14 sa.), ≥1,000 pg/ml** (4 sa.), sample year: April 1981–April 1983, country: UK/Sudan[159], *children with marasmus, age: 7–48 months, **AFS = AFB_1, AFL, and AFM_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS, literature[159], marasmus

Gliotoxin

incidence: 2/11*, sample comp.: people from USA, sample origin: University of Texas, M. D. Anderson Cancer Center (MDACC), USA, contamination: natural, conc. range: 65–154 ng/ml, Ø conc.: 109.5 ng/ml, sample year: unknown, country: USA[160], *non-IA-patients with underlying malignancy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/5*, sample comp.: people from USA, sample origin: University of Texas, M. D. Anderson Cancer Center (MDACC), USA, contamination: natural, conc. range: 166–785 ng/ml, Ø conc.: 381.5 ng/ml, sample year: unknown, country: USA[160], *IA-patients with underlying malignancy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 60/61*, sample comp.: people from Germany, sample origin: hospitals, company outpatient clinics and other public health institutions, Germany, contamination: natural, conc. range: <0.06–1.63 ng/ml, sample year: 1995–1998, country: Germany[1], *non-pregnant women (healthy volunteers)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human amniotic fluid, OTA, literature[1]

incidence: 25/26*, sample comp.: people from Germany, sample origin: hospitals, company outpatient clinics and other public health institutions, Germany,

contamination: natural, conc. range: <0.06–0.88 ng/ml, sample year: 1995–1998, country: Germany[1], *pregnant women 1st trimenon (healthy volunteers)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human amniotic fluid, OTA, literature[1]

incidence: 7/9*, sample comp.: people from Germany, sample origin: hospitals, company outpatient clinics and other public health institutions, Germany, contamination: natural, conc. range: 0.06–0.42 ng/ml, sample year: 1995–1998, country: Germany[1], *mothers at birth (healthy volunteers)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human amniotic fluid, OTA, literature[1]

incidence: 77/79*, sample comp.: people from Germany, sample origin: hospitals, company outpatient clinics and other public health institutions, contamination: natural, conc. range: 0.06–0.90 ng/ml, sample year: 1995–1998, country: Germany[1], *umbilical cord blood sa. (healthy volunteers)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human amniotic fluid, OTA, literature[1]

incidence: 26/27*, sample comp.: people from Germany, sample origin: hospitals, company outpatient clinics and other public health institutions, Germany, contamination: natural, conc. range: <0.06–0.42 ng/ml, sample year: 1995–1998, country: Germany[1], *puerperae 5th/6th day (healthy volunteers)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human amniotic fluid, OTA, literature[1]

incidence: 909/927*, sample comp.: people from Germany, sample origin: hospitals, company outpatient clinics and other public health institutions, Germany, contamination: natural, conc. range: 0.061–0.10 ng/ml (41 sa.), 0.11–0.30 ng/ml (607 sa.), 0.31–0.50 ng/ml (205 sa.), 0.51–0.70 ng/ml (31 sa.), 0.71–0.90 ng/ml (9 sa.), 0.91–≤2.03 ng/ml (16 sa.), sample year: 1995–1998, country: Germany[1], *healthy volunteers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human amniotic fluid, OTA, literature[1]

incidence: 1/8*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc.: 0.2 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *maternal blood sa.
- Co-contamination: 1 sa. co-contaminated with AFM_1 and OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[6], maternal

incidence: 16/64*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.2–3.5 ng/ml, Ø conc.: 0.9 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *cord blood sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[6], cord

incidence: 0/5*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: no contamination, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[6], low birthweight, male

incidence: 2/5*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.4–0.5 ng/ml, Ø conc.: 0.45 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *low birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[6], low birthweight, female

incidence: 3/21*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.4–0.6 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (male infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[6], normal birthweight, male

incidence: 7/20*, sample comp.: people from Sierra Leone, sample origin: Maternity ward in the Government Hospital and others, Njala University Campus and surrounding villages, Bo (city), Sierra Leone, contamination: natural, conc. range: 0.5–2.6 ng/ml, sample year: unknown, country: Sierra Leone/UK[6], *normal birthweight (female infants)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, and AFM_2, literature[6], normal birthweight, female

For detailed information please see the article.

incidence: 14/20*, sample comp.: people from Tunisia, sample origin: centre of Tunisia (Monastir and the surrounding departments), Tunisia, contamination: natural, conc. range: ≤7.5 ng/ml*, sample year: unknown, country: Tunisia/France[25], *healthy male and female persons (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 52/60, sample comp.: people from Tunisia, sample origin: centre of Tunisia (Monastir and the surrounding departments), Tunisia, contamination: natural, conc. range: ≤140.5 ng/ml*, sample year: unknown, country: Tunisia/France[25], *nephropathy patients (male and female persons)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/20*, sample comp.: people from Tunisia, sample origin: centre of Tunisia (Monastir and the surrounding departments), Tunisia, contamination: natural, conc. range: ≤3.2 ng/ml*, sample year: unknown, country: Tunisia/France[25], *healthy male and female persons (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 36/40, sample comp.: people from Tunisia, sample origin: centre of Tunisia (Monastir and the surrounding departments), Tunisia, contamination: natural, conc. range: ≤171.25 ng/ml*, sample year: unknown, country: Tunisia/France[25], *nephropathy patients (male and female persons)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 78/144, sample comp.: people from Denmark, sample origin: Danish Blood Bank, Denmark, contamination: natural,

conc. range: ≤13.2 µg/l, sample year: 1986–1988, country: Denmark[33]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 22/63*, sample comp.: people from Ivory Coast, sample origin: Abidjan Blood Bank (regular blood donors), Ivory Coast, contamination: natural, conc. range: 0.00992–5.81 µg/l, Ø conc.: 0.83 µg/l, sample year: September 2001/March 2004, country: France/Ivory Coast/Tunisia[35], *apparently healthy volunteers (males and females), age of affected persons: 19–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/39*, sample comp.: people from Ivory Coast, sample origin: Ivory Coast, contamination: natural, conc. range: 0.167–2.42 µg/l, Ø conc.: 1.05 µg/l, sample year: 2004, country: France/Ivory Coast/Tunisia[35], *nephropathy patients with a renal disease of unknown aetiology undergoing dialysis in 2004 (27 males (3 af., Ø conc.: 0.85 µg/l) and 12 females (5 af., Ø conc.: 1.16 µg/l)), age of affected persons: 25–52 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 104/104*, sample comp.: people from Norway, sample origin: Hedmark (county), Norway, contamination: natural, conc. range: 36–5,534 ng/l, Ø conc.: 423 ng/l, sample year: May–August 2000, country: Norway[36], *non-farm workers (controls)°
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 106/106*, sample comp.: people from Norway, sample origin: Hedmark (county), Norway, contamination: natural, conc. range: 21–2,838 ng/l, Ø conc.: 371 ng/l, sample year: May–August 2000, country: Norway[36], *farm workers°
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 141/141*, sample comp.: people from Norway, sample origin: Hedmark (county), Norway, contamination: natural, conc. range: 21–5,534 ng/l, Ø conc.: 398 ng/l, sample year: May–August 2000, country: Norway[36], *male persons°
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 69/69*, sample comp.: people from Norway, sample origin: Hedmark (county), Norway, contamination: natural, conc. range: 32–1,923 ng/l, Ø conc.: 395 ng/l, sample year: May–August 2000, country: Norway[36], *female persons°
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 147/147*, sample comp.: people from Norway, sample origin: Hedmark (county), Norway, contamination: natural, conc. range: 39–5,534 ng/l, Ø conc.: 491 ng/l, sample year: May–August 2000, country: Norway[36], *non smokers°
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

°=one investigation that comprises 210 people

incidence: 30/30*, sample comp.: people from Poland, sample origin: Mother and Child Institute, Warsaw (capital), Poland, contamination: natural, conc. range: 0.14–3.41 ng/ml, Ø conc.: 1.14 ng/ml, sample year: October 1998–April 1999, country: Poland[37], *maternal blood serum sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[37]

incidence: 28/30*, sample comp.: people from Poland, sample origin: Mother and Child Institute, Warsaw (capital), Poland, contamination: natural, conc. range: 0.56–5.42 ng/ml, Ø conc.: 1.96 ng/ml, sample

year: October 1998–April 1999, country: Poland[37], *foetal blood serum sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[37]

incidence: 9/31*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (5 sa.), >2 ng/g (4 sa.), sample year: 1984, country: Bulgaria/France[42], *patients with urinary tract tumours and/or Balkan endemic nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/33*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (3 sa.), >2 ng/g (3 sa.), sample year: 1984, country: Bulgaria/France[42], *healthy relatives of patients with urinary tract tumours and/or Balkan endemic nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/26*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (2 sa.), >2 ng/g (1 sa.), sample year: 1984, country: Bulgaria/France[42], *healthy persons living in affected villages in the endemic area
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/26*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (2 sa.), >2 ng/g (1 sa.), sample year: 1984, country: Bulgaria/France[42], *healthy persons living in unaffected villages in the endemic area
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/13*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc.: 1–2 ng/g, sample year: 1984, country: Bulgaria/France[42], *healthy people living in a non-endemic area of Bulgaria
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/30*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (4 sa.), >2 ng/g (3 sa.), sample year: 1986, country: Bulgaria/France[42], *patients with urinary tract tumours and/or Balkan endemic nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/30*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (3 sa.), >2 ng/g (1 sa.), sample year: 1986, country: Bulgaria/France[42], *healthy relatives of patients with urinary tract tumours and/or Balkan endemic nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/37*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (3 sa.), >2 ng/g (1 sa.), sample year: 1986, country: Bulgaria/France[42], *healthy persons living in affected villages in the endemic area
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/34*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (3 sa.), >2 ng/g (1 sa.), sample year: 1986, country: Bulgaria/France[42], *healthy persons living in unaffected villages in the endemic area
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/52*, sample comp.: people from Bulgaria, sample origin: Bulgaria,

contamination: natural, conc. range: 1–2 ng/g (3 sa.), >2 ng/g (1 sa.), sample year: 1986, country: Bulgaria/France[42], *healthy persons living in a non-endemic area of Bulgaria

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/24*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (4 sa.), >2 ng/g (3 sa.), sample year: 1989, country: Bulgaria/France[42], *patients with urinary tract tumours and/or Balkan endemic nephropathy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/28*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (2 sa.), >2 ng/g (3 sa.), sample year: 1989, country: Bulgaria/France[42], *healthy relatives of patients with urinary tract tumours and/or Balkan endemic nephropathy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/28*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (3 sa.), >2 ng/g (1 sa.), sample year: 1989, country: Bulgaria/France[42], *healthy persons living in affected villages in the endemic area

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/30*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (2 sa.), >2 ng/g (1 sa.), sample year: 1989, country: Bulgaria/France[42], *healthy persons living in unaffected villages in the endemic area

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/30*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (2 sa.), sample year: 1989, country: Bulgaria/France[42], *healthy persons living in a non-endemic area of Bulgaria

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/20*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (3 sa.), >2 ng/g (2 sa.), sample year: 1990, country: Bulgaria/France[42], *patients with urinary tract tumours and/or Balkan endemic nephropathy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/20*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (1 sa.), >2 ng/g (2 sa.), sample year: 1990, country: Bulgaria/France[42], *healthy relatives of patients with urinary tract tumours and/or Balkan endemic nephropathy

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/25*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (2 sa.), >2 ng/g (1 sa.), sample year: 1990, country: Bulgaria/France[42], *healthy persons living in affected villages in the endemic area

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/29*, sample comp.: people from Bulgaria, sample origin: Bulgaria, contamination: natural, conc. range: 1–2 ng/g (2 sa.), >2 ng/g (1 sa.), sample year: 1990, country: Bulgaria/France[42], *healthy persons living in unaffected villages in the endemic area

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/30*, sample comp.: people from Bulgaria, contamination: natural, conc. range: 1–2 ng/g (1 sa.), >2 ng/g (1 sa.), sample year: 1990, country: Bulgaria/France[42], *healthy persons living in a non-endemic area of Bulgaria
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 87/100, sample comp.: people from Italy, sample origin: different areas in Italy, contamination: natural, conc. range: 0.02 ng/ml (6 sa.), 0.1 ng/ml (38 sa.), 0.5 ng/ml (31 sa.), >1.0 ng/ml (12 sa.), sample year: unknown, country: Italy[65]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[65]

incidence: 84/165, sample comp.: people from Germany, sample origin: state agency of health care, Southbavaria, Oberschleißheim (municipality), Munich (city), Germany, contamination: natural, conc. range: 0.1–14.4 µg/kg, Ø conc.: 0.79 µg/kg, sample year: 1977, country: Germany[67]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human kidney, Pig kidney, Pig serum, OTA, literature[67]

incidence: 89/141, sample comp.: people from Germany, sample origin: Blood Donor Service Munich (city), Germany, contamination: natural, conc. range: 0.1–1.8 µg/kg, Ø conc.: 0.42 µg/kg, sample year: 1985, country: Germany[67]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human kidney, Pig kidney, Pig serum, OTA, literature[67]

incidence: 133/133*, sample comp.: people from Switzerland, sample origin: regional sections of the Blood Donor Service of the Swiss Red Cross, Switzerland, contamination: natural, conc. range: 0.06–2.14 ng/g, Ø conc.: 0.29 ng/g, sample year: November 1992–June 1993, country: Switzerland[70], *men residing north of the Alps
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[70]

incidence: 119/119*, sample comp.: people from Switzerland, sample origin: regional sections of the Blood Donor Service of the Swiss Red Cross, Switzerland, contamination: natural, conc. range: 0.10–1.84 ng/g, Ø conc.: 0.26 ng/g, sample year: November 1992–June 1993, country: Switzerland[70], *women residing north of the Alps
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[70]

incidence: 72/72*, sample comp.: people from Switzerland, sample origin: regional sections of the Blood Donor Service of the Swiss Red Cross, Switzerland, contamination: natural, conc. range: 0.17–6.02 ng/g, Ø conc.: 0.87 ng/g, sample year: November 1992–June 1993, country: Switzerland[70], *men residing south of the Alps
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[70]

incidence: 44/44*, sample comp.: people from Switzerland, sample origin: regional sections of the Blood Donor Service of the Swiss Red Cross, Switzerland, contamination: natural, conc. range: 0.11–0.75 ng/g, Ø conc.: 0.30 ng/g, sample year: November 1992–June 1993, country: Switzerland[70], *women residing south of the Alps
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[70]

incidence: 36/50, sample comp.: people from Egypt, sample origin: outpatient Clinic of Zagazig and Mansoura University Hospital, Egypt, contamination: natural,

Ø conc.: 4.28 ng/ml**, sample year: unknown, country: Egypt[71], *healthy mothers, **all sa. (75 % of contaminated mothers were from urban areas)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[71]

incidence: 36/36*, sample comp.: people from Egypt, sample origin: outpatient Clinic of Zagazig and Mansoura University Hospital, Egypt, contamination: natural, Ø conc.: 1.26 ng/ml, sample year: unknown, country: Egypt[71], *healthy breast-fed infants

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[71]

For detailed information please see the article.

incidence: 1,596/1,732*, sample comp.: people from Germany, sample origin: Germany, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (1,578 sa.), 1.00–1.90 µg/l (17 sa.), 2.03 µg/l (1 sa.), Ø conc.: 0.24 µg/l, sample year: 1995–1998, country: EU[73], *total population

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma, Human plasma/serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 231/273*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (190 sa.), 1.00–1.90 µg/l (27 sa.), 2.0–3.6 µg/l (14 sa.), Ø conc.: 0.93 µg/l, sample year: unknown, country: EU[73], *total population

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma, Human plasma/serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 6/6*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (1 sa.), 2.00–3.28 µg/l (5 sa.), Ø conc.: 2.36 µg/l, sample year: 1999/2000, country: EU[73], *workers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma, Human plasma/serum, Human urine, OTA, literature[73], ethnic, normal, vegetarian

incidence: 4/11*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.99–3.75 ng/ml, Ø conc.: 2.77 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female patients with ESRD under conservative medical treatment, age: 9–55 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human urine, OTA, literature[113], ESRD, conservative

incidence: 4/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.34–2.17 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female patients with ESRD under dialytic therapy, age: 10–58 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human urine, OTA, literature[113], ESRD, dialytic

incidence: 2/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.81–6.31 ng/ml, Ø conc.: 3.56 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female renal transplant recipients, age: 18–43 years

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human urine, OTA, literature[113], transplant

incidence: 8/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.32–10.15 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female patients with nephrotic syndrome, age: 5–50 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human urine, OTA, literature[113], nephrotic syndrome

incidence: 3/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.80–5.57 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female patients with urothelial tumours, age: 38–70 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human urine, OTA, literature[113], urothelial tumours

incidence: 2/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.30–0.91 ng/ml, Ø conc.: 0.61 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female potential kidney donors, age: 22–50 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human urine, OTA, literature[113], kidney donors

incidence: 0/25*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: no contamination, sample year: unknown, country: Egypt/France[113], *male and female healthy people, age: 21–49 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human urine, OTA, literature[113], healthy

incidence: 10/36*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 1.50–18.2 ng/ml, sample year: unknown, country: Sierra Leone[118], *"underfive" children: 14 control, 3 kwashiorkor, 9 underweight, 2 marasmic and 8 "unspecified" ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTB, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 35/143, sample comp.: people from Czechoslovakia, sample origin: 2 Bohemian Hospitals, Czechoslovakia, contamination: natural, conc. range: 100–500 ng/l (19 sa.), 500–1,000 ng/l (15 sa.), 1,260 ng/l (1 sa.) , country: Czechoslovakia[150], *patients

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[150]

incidence: 14/577*, sample comp.: people from Croatia, sample origin: two control villages from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc. range: 2 ng/ml, Ø conc.: 2 ng/ml, sample year: March/April 1985, country: Croatia[161], *male and female persons (control), age: >3 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 21/457*, sample comp.: people from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc. range: 2–15 ng/ml, sample year: March/April 1985, country: Croatia[161], country: Croatia[161], *male and female persons, age: >3 years, from the hyperendemic village Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/601*, sample comp.: people from Croatia, sample origin: two control villages from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: no contamination, sample year: March/April 1986, country: Croatia[161], *male and female persons (control), age: >3 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12/513*, sample comp.: people from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc. range: 5–35 ng/ml, sample year: March/April 1986, country: Croatia[161], country: Croatia[161], *male and female persons, age: >3 years, from the hyperendemic village Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/354*, sample comp.: people from Croatia, sample origin: two control villages from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: no contamination, sample year: March/April 1987, country: Croatia[161], *male and female persons (control), age: >3 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/534*, sample comp.: people from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc.: 2–5 ng/ml, sample year: March/April 1987, country: Croatia[161], country: Croatia[161], *male and female persons, age: >3 years, from the hyperendemic village Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/228*, sample comp.: people from Croatia, sample origin: two control villages from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc.: 10 ng/ml, sample year: March/April 1988, country: Croatia[161], *male and female persons (control), age: >3 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/521*, sample comp.: people from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc. range: 5–50 ng/ml, sample year: March/April 1988, country: Croatia[161], country: Croatia[161], *male and female persons, age: >3 years, from the hyperendemic village Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/209*, sample comp.: people from Croatia, sample origin: two control villages from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: no contamination, sample year: March/April 1989, country: Croatia[161], *male and female persons (control), age: >3 years

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/513*, sample comp.: people from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc.: 5–20 ng/ml, sample year: March/April 1989, country: Croatia[161], country: Croatia[161], *male and female persons, age: >3 years, from the hyperendemic village Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/167*, sample comp.: people from Croatia, sample origin: two control villages from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: no contamination, sample year: March/April 1990, country: Croatia[161], *male and female persons (control), age: >3 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/578*, sample comp.: people from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc.: 5–10 ng/ml, sample year: March/April 1990, country: Croatia[161], country: Croatia[161], *male and female persons, age: >3 years, from the hyperendemic village Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/280*, sample comp.: people from Croatia, sample origin: two control villages from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc. range: 5 ng/ml, Ø conc.: 5 ng/ml, sample year: March/April 1991, country: Croatia[161], *male and female persons (control), age: >3 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/360*, sample comp.: people from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc. range: 2–5 ng/ml, sample year: March/April 1991, country: Croatia[161], country: Croatia[161], *male and female persons, age: >3 years, from the hyperendemic village Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/150*, sample comp.: people from Croatia, sample origin: two control villages from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: no contamination, sample year: March/April 1993, country: Croatia[161], *male and female persons (control), age: >3 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/457*, sample comp.: people from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc.: 2–5 ng/ml, sample year: March/April 1993, country: Croatia[161], country: Croatia[161], *male and female persons, age: >3 years, from the hyperendemic village Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/0*, sample comp.: people from Croatia, sample origin: two control villages from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: ?, sample year: March/April 1994, country: Croatia[161], *sa. not col.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/410*, sample comp.: people from Croatia, sample origin: Kaniža

(village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia, contamination: natural, conc.: 5–15 ng/ml, sample year: March/April 1994, country: Croatia[161], country: Croatia[161], *male and female persons, age: >3 years, from the hyperendemic village Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/10*, sample comp.: households from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia?, contamination: natural, conc. range: 5–50 ng/ml**, sample year: unknown, country: Croatia[161], *households with positive OA food samples (8/10), **first blood sampling

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/9*, sample comp.: households from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia?, contamination: natural, conc. range: 5–48.3 ng/ml**, sample year: unknown, country: Croatia[161], *households (one not col.) with positive OA food samples (8/10), **second blood sampling (lag of 3–6 days)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/4*, sample comp.: households from Croatia, sample origin: Kaniža (village) from the endemic area of Slavonski Brod, lowland of Sava tributary of the river Danube, Croatia?, contamination: natural, conc. range: 10–35 ng/ml**, Ø conc.: 23.3 ng/ml**, sample year: unknown, country: Croatia[161], *households (six sa. not col.) with positive OA food samples (8/10), **third blood sampling (lag of 3–6 days)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/65*, sample comp.: people from Italy, sample origin: Public Hospital of Molfetta, Bari (province), southern Italy, contamination: natural, conc. range: 0.12–2.0 ng/ml, Ø conc.: 0.53 ng/ml, sample year: November 1992, country: Italy/Sweden[162], *healthy persons (control, no kidney disorders)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/40*, sample comp.: people from Italy, sample origin: S. Rita Nephrology and Dialysis Center, Bari (province), southern Italy, contamination: natural, conc. range: 0.05–1.4 ng/ml, sample year: November 1992, country: Italy/Sweden[162], *patients with kidney disorders: transplanted patients (13 ca.), chronic glomerulonephritis (8 ca.), renal calculus or cyst (6 ca.), and chronic renal failure (13 ca.)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/28*, sample comp.: people from Italy, sample origin: S. Rita Nephrology and Dialysis Center, Bari (province), southern Italy, contamination: natural, conc. range: 0.18–14 ng/ml, Ø conc.: 1.4 ng/ml, sample year: November 1992, country: Italy/Sweden[162], *patients on dialysis

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 62/62*, sample comp.: people from Tunisia, sample origin: Hospitals of Sousse and Monastir (cities), Sahel (agricultural region), southeastern Tunisia, contamination: natural, conc. range: 0.12–8.06 µg/l, Ø conc.: 0.53 µg/l, sample year: 1996/1998, country: France/Tunisia[163], *32

male and 30 female persons (control, no particular renal or nephropathic trouble), age: 21–80 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 23/26*, sample comp.: people from Tunisia, sample origin: Hospitals of Sousse and Monastir (cities), Sahel (agricultural region), southeastern Tunisia, contamination: natural, conc. range: 0.11–5.80 µg/l, sample year: 1996/1998, country: France/Tunisia[163], *12 male (10 af.) and 14 female (13 af.) persons with nephropathic damages, age: 20–71 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15/21*, sample comp.: people from Tunisia, sample origin: Hospitals of Sousse and Monastir (cities), Sahel (agricultural region), southeastern Tunisia, contamination: natural, conc. range: 0.14–0.74 µg/l, sample year: 1996/1998, country: France/Tunisia[163], *19 male (17 af.) and 2 female (2 af.) persons with bladder tumours, age: 32–84 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 5/66*, sample comp.: people from Yugoslavia, sample origin: Klakar ("control-village"), Slavonski Brod (city), Croatia, Yugoslavia, contamination: natural, conc. range: 1–2 ng/ml (4 sa.), 3–5 ng/ml (1 sa.), sample year: 1979, country: Yugoslavia/Sweden/USA/Croatia[164], *persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 27/163*, sample comp.: people from Yugoslavia, sample origin: Kaniza ("BEN-village"), Slavonski Brod (city), Croatia, Yugoslavia, contamination: natural, conc. range: 1–2 ng/ml (17 sa.), 3–5 ng/ml (2 sa.), 6–10 ng/ml (2 sa.), 11–100 ng/ml (5 sa.), 1,800 ng/ml (1 sa.), sample year: 1979, country: Yugoslavia/Sweden/USA/Croatia[164], *persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/179*, sample comp.: people from Yugoslavia, sample origin: Bebrina ("BEN-village"), Slavonski Brod (city), Croatia, Yugoslavia, contamination: natural, conc. range: 1–2 ng/ml (15 sa.), 3–5 ng/ml (8 sa.), 6–10 ng/ml (2 sa.), sample year: 1979, country: Yugoslavia/Sweden/USA/Croatia[164], *persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 290/355*, sample comp.: people from Hungary, sample origin: Szent János Hospital, Hungary, contamination: natural, conc. range: 0.2–1.0 ng/ml (266 sa.), >1.0–≤10 ng/ml (24 sa.), sample year: March–July 1995, country: Hungary[165], *internal medicine patients
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 134/137*, sample comp.: people from Italy, sample origin: Florence (district), Italy, contamination: natural, conc. range: 0.12–0.20 ng/ml (4 sa.), 0.20–0.39 ng/ml (42 sa.), 0.40–0.59 ng/ml (38 sa.), 0.60–0.79 ng/ml (25 sa.), 0.80–1.0 ng/ml (11 sa.), >1.0–2.84 ng/ml (13 sa.), sample year: July/October 1994, country: Italy[166], *51 male and 86 female healthy persons, age: 35–65 years, Ø weight: 69.2 kg (additionally one person with 57.2 ng/ml OTA in his/her serum)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/40*, sample comp.: people from Turkey, sample origin: Isparta (city), Turkey, sample origin: Turkey, contamination: natural, conc. range: 0.19–1.43 ng/ml, sample year: unknown, country: Turkey[167], *17 male and 23 female

persons with no urinary disorders (control), Ø age: 41 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/35*, sample comp.: people from Turkey, sample origin: Isparta (city), Turkey, sample origin: Turkey, contamination: natural, conc. range: 0.6–5.4 ng/ml, sample year: unknown, country: Turkey[167], *23 male and 12 female persons treated by haemodialysis, Ø age: 43.7 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/28*, sample comp.: people from Turkey, sample origin: Isparta (city), Turkey, sample origin: Turkey, contamination: natural, conc. range: 0.6–5.5 ng/ml, sample year: unknown, country: Turkey[167], *15 male and 13 female persons treated by peritoneal dialysis, Ø age: 47.9 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/15*, sample comp.: people from Turkey, sample origin: Isparta (city), Turkey, sample origin: Turkey, contamination: natural, conc. range: 0.3–1.58 ng/ml, sample year: unknown, country: Turkey[167], *15 male persons with bladder cancer, Ø age: 56.8 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/15*, sample comp.: people from Turkey, sample origin: Isparta (city), Turkey, sample origin: Turkey, contamination: natural, conc. range: 0.4–2.5 ng/ml, sample year: unknown, country: Turkey[167], *10 male and 5 female persons with renal stones, Ø age: 42.5 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 80/644*, sample comp.: people from Czech Republic, sample origin: Uherské (district), south Moravia (historical region), Czech Republic, contamination: natural, conc. range: >1–12 µg/l, sample year: March–May 1990, country: Czech Republic[168], *305 male (39 af.) and 339 female (41 af.) persons, age: >18 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 1,138/1,222, sample comp.: people from Czech Republic, sample origin: Benesov, Plzen, Usti nad Labem, and Zdar nad Sazavou (districts), Czech Republic, contamination: natural, conc. range: 0.1–0.2 µg/l (798 sa.), >0.2–1 µg/l (332 sa.), >1–2 µg/l (7 sa.), 13.7 µg/l (1 sa.), sample year: 1994/1995, country: Czech Republic/France[169], *adults, Ø age: 32 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 734/809, sample comp.: people from Czech Republic, sample origin: Benesov, Plzen, Usti nad Labem, and Zdar nad Sazavou (districts), Czech Republic, contamination: natural, conc. range: 0.1–13.7 µg/l, sample year: 1994, country: Czech Republic/France[169], *adults, Ø age: 32 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 404/413, sample comp.: people from Czech Republic, sample origin: Benesov, Plzen, Usti nad Labem, and Zdar nad Sazavou (districts), Czech Republic, contamination: natural, conc. range: 0.1–1.9 µg/l, sample year: 1995, country: Czech Republic/France[169], *adults, Ø age: 32 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 213/277*, sample comp.: people from Hungary, sample origin: Blood Center of Medical University, Hungary, contamination: natural, conc. range:

0.1–0.499 ng/ml (160 sa.), 0.5–1.40 ng/ml (53 sa.), sample year: unknown, country: Hungary[170], *healthy blood donors (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 68/91*, sample comp.: people from Hungary, sample origin: Blood Center of Medical University, Hungary, contamination: natural, conc. range: 0.1–0.499 ng/ml (53 sa.), 0.5–2.26 ng/ml (15 sa.), sample year: unknown, country: Hungary[170], *registered patients with nephrological disease
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 18/30*, sample comp.: people from Hungary, sample origin: Blood Center of Medical University, Hungary, contamination: natural, conc. range: 0.1–0.499 ng/ml (16 sa.), 0.5–0.51 ng/ml (2 sa.), sample year: unknown, country: Hungary[170], *registered patients with hepatological disease
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/20*, sample comp.: people from Hungary, sample origin: Blood Center of Medical University, Hungary, contamination: natural, conc. range: 0.1–0.499 ng/ml (10 sa.), 0.52 ng/ml (1 sa.), sample year: unknown, country: Hungary[170], *registered patients with tumorous disease
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/9*, sample comp.: people from Hungary, sample origin: Blood Center of Medical University,Hungary,contamination: natural, conc. range: 0.1–0.499 ng/ml (4 sa.), >0.5 ng/ml (2 sa.), sample year: unknown, country: Hungary[170], *registered patients with different diseases (pancreatitis, ulcus ventriculi, arthritis)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/54*, sample comp.: people from Germany, sample origin: Kiel (city), Germany, contamination: natural, conc. range: 0.06–0.94 ng/ml, sample year: unknown, country: Germany[171], *blood donors, age: 14–87 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 46/50*, sample comp.: people from Germany, sample origin: Berlin (city), Germany, contamination: natural, conc. range: 0.06–0.49 ng/ml, sample year: unknown, country: Germany[171], *blood donors, age: 14–87 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 96/96*, sample comp.: people from Germany, sample origin: Detmold (city), Germany, contamination: natural, conc. range: 0.07–0.55 ng/ml, sample year: unknown, country: Germany[171], *blood donors, age: 14–87 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 208/211*, sample comp.: people from Germany, sample origin: Jena (city), Germany, contamination: natural, conc. range: 0.06–1.63 ng/ml, sample year: unknown, country: Germany[171], *blood donors, age: 14–87 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 74/74*, sample comp.: people from Germany, sample origin: Kulmbach (town), Germany, contamination: natural, conc. range: 0.07–0.91 ng/ml, sample year: unknown, country: Germany[171], *blood donors, age: 14–87 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 80/80*, sample comp.: people from Germany, sample origin: Trier (city),

Germany, contamination: natural, conc. range: 0.07–0.57 ng/ml, sample year: unknown, country: Germany[171], *blood donors, age: 14–87 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 118/119*, sample comp.: people from Germany, sample origin: Karlsruhe (city), Germany, contamination: natural, conc. range: 0.06–2.03 ng/ml, sample year: unknown, country: Germany[171], *blood donors, age: 14–87 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 18/18*, sample comp.: people from Germany, sample origin: Munich (city), Germany, contamination: natural, conc. range: 0.09–0.40 ng/ml, sample year: unknown, country: Germany[171], *blood donors, age: 14–87 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 83/83*, sample comp.: people from Germany, sample origin: different regions in Germany, contamination: natural, conc. range: 0.09–0.56 ng/ml, sample year: unknown, country: Germany[171], *blood donors, age: 14–87 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/219, sample comp.: people from Yugoslavia, sample origin: village with no clinical cases of nephropathy, Yugoslavia, contamination: natural, conc. range: 1–9 ng/g, Ø conc.: 3.75 ng/g, sample year: March/April 1980, country: Sweden/Yugoslavia[172]

- Co-contamination: 4 sa. co-contaminated with OTA, OTα, and OTα ME, 3 sa. co-contaminated with OTA and OTα, 1 sa. co-contaminated with OTA, OTA ME, OTα, and OTα ME
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA ME, OTα, OTα ME, literature[172]

incidence: 7/420, sample comp.: people from Yugoslavia, sample origin: hyperendemic "BEN-village", Yugoslavia, contamination: natural, conc. range: 1–57 ng/g, Ø conc.: 11.6 ng/g, sample year: March/April 1980, country: Sweden/Yugoslavia[172]

- Co-contamination: 2 sa. co-contaminated with OTA, OTA ME, OTα, and OTα ME, 1 sa. co-contaminated with OTA, OTA ME, and OTα, 1 sa. co-contaminated with OTA, OTα, and OTα ME, 1 sa. co-contaminated with OTA and OTα, 1 sa. co-contaminated with OTA and OTα ME, 1 sa. contaminated solely with OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA ME, OTα, OTα ME, literature[172]

incidence: 50/50*, sample comp.: people from Portugal, sample origin: Coimbra, city in the central region of Portugal, contamination: natural, conc. range: 0.12–1.52 µg/l, sample year: November/December 2002, September 2003, country: Portugal[173], *27 male and 23 female nephropathic patients of Coimbra, Ø age: 66 years, Ø weight: 66 kg

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 45/45*, sample comp.: people from Portugal, sample origin: Aveiro, city in the central region of Portugal, contamination: natural, conc. range: 0.15–1.03 µg/l, sample year: November/December 2002, September 2003, country: Portugal[173], *26 male and 19 female nephropathic patients of Aveiro, Ø age: 56 years, Ø weight: 65 kg

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 23/23*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc. range: 0.03–0.95 ng/ml, Ø conc.: 0.33 ng/ml, sample year: unknown, country: Italy[174], *male persons, age: 26–49 years (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/6*, sample comp.: people from Italy, sample origin: 3 factories: handling coffee, cocoa beans, and spices, Tuscany (region), central Italy, contamination: natural, conc. range: 0.94–3.28 ng/ml**, Ø conc.: 2.29 ng/ml, sample year: unknown, country: Italy[174], *male persons breathing OTA contaminated air, age: 26–49 years, **1 coffee industry worker: 2.41 ng/ml, 1 spice industry worker: 2.15 ng/ml, 4 cocoa industry workers: 0.94–3.28 ng/ml

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 29/29*, sample comp.: people from Portugal, sample origin: Laboratory of Clinical Analysis of Faculty of Pharmacy, University of Coimbra (city), Portugal, contamination: natural, conc. range: 0.19–0.96 µg/l, Ø conc.: 0.42 µg/l, sample year: May–July 2002, country: Portugal[175], *13 male (Ø conc.: 0.46 µg/l) and 16 female (Ø conc.: 0.38 µg/l) persons, age: 21–57 years, Ø weight: 69 kg

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 31/31*, sample comp.: people from Portugal, sample origin: Health Center, Verride (farming village), Portugal, contamination: natural, conc. range: 0.25–2.49 µg/l, Ø conc.: 0.78 µg/l, sample year: October–December 2001, country: Portugal[175], *14 male (Ø conc.: 1.01 µg/l) and 17 female (Ø conc.: 0.60 µg/l) persons, age: 26–92 years, Ø weight: 73 kg

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 44/44*, sample comp.: people from Portugal, sample origin: Ereira (farming village), Portugal, contamination: natural, conc. range: 0.14–1.91 µg/l, Ø conc.: 0.44 µg/l, sample year: December 2001/January 2002, country: Portugal[175], *10 male (Ø conc.: 0.55 µg/l) and 34 female (Ø conc.: 0.40 µg/l) persons, age: 19–88 years, Ø weight: 69 kg

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 240/594, sample comp.: people from Czech Republic, sample origin: Brno (town), Czech Republic, contamination: natural, conc. range: 0.05–37 µg/l, sample year: October 1991–October 1992 with the exception of April and July 1992, country: Czech Republic[176], *496 male and 98 female persons, age: 18–58 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 5/5*, sample comp.: people from Bulgaria, sample origin: Gorno Peshtene (village), Vratza District (high risk area of BEN), north-west Bulgaria, contamination: natural, conc. range: 0.44–1.46 µg/l**, Ø conc.: 0.67 µg/l (in total), country: Bulgaria/France[177], *healthy persons (each person gave a blood sa. on days 0, 7, 14, 21, and 28), age: 20–30 years, **resulting from 35 single values

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[177]

incidence: 11/11*, sample comp.: people from Bulgaria, sample origin: Beli Izvor (village), Vratza District (high risk area of BEN), north-west Bulgaria, contamination: natural, conc. range: 0.26–8.36 µg/l**, Ø conc.: 2.01 µg/l (in total), country: Bulgaria/France[177], *healthy persons (each person gave a blood sa. on days 0, 7, 14, 21, and 28), age: 20–30 years, ** resulting from 55 single values

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[177]

For detailed information please see the article.

incidence: 129/130*, sample comp.: people from Italy and elsewhere, sample origin: Department of Obstetrics and Gynaecology of the "G. da Saliceto" Hospital, Piacenza (city), Italy, contamination: natural, conc. range: 84 ng/l (1 sa.), >100–200 ng/l (28 sa.), >200–300 ng/l (23 sa.), >300–400 ng/l (19 sa.), >400–500 ng/l (19 sa.), >500–1,000 ng/l (28 sa.), >1,000–4,835 ng/l (11 sa.), Ø conc.: 499.8 ng/l, sample year: January–June 2007, country: Italy[223], *cord blood sa. of Italian and non-Italian women at delivery

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, OTA, literature[223]

incidence: 14/14*, sample comp.: people from Bulgaria, sample origin: Gorno Peshtene and Beli Izvor (villages), Vratza (district), Bulgaria, contamination: natural, conc. range: 260–8,360 ng/l, Ø conc.: 1,731.4 ng/l, sample year: unknown, country: France/Bulgaria[229], *healthy volunteers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[229]

incidence: 57/59*, sample comp.: people from Turkey, sample origin: Antalya (town), Mediterranean Sea, Turkey, contamination: natural, conc. range: 0.0279–1.398 ng/ml, sample year: July 2007, country: Turkey[240], *healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 44/61*, sample comp.: people from Turkey, sample origin: Antalya (town), Mediterranean Sea, Turkey, contamination: natural, conc. range: 0.0346–0.707 ng/ml, sample year: January 2008, country: Turkey[240], *healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 59/60*, sample comp.: people from Turkey, sample origin: Ordu (town), Black Sea, Turkey, contamination: natural, conc. range: 0.0431–1.496 ng/ml, sample year: July 2007, country: Turkey[240], *healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 48/59*, sample comp.: people from Turkey, sample origin: Ordu (town), Black Sea, Turkey, contamination: natural, conc. range: 0.0306–0.887 ng/ml, sample year: January 2008, country: Turkey[240], *healthy persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 19/21*, sample comp.: people from Canada, sample origin: Ontario Tumour Bank, Canada, contamination: natural, conc. range: 0.00925–0.17000 ng/ml, Ø conc.: 0.07616 ng/ml, sample year: unknown, country: Canada[242], *persons with RCC, age: 37–82 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/5*, sample comp.: people from Canada, sample origin: Ontario Tumour Bank, Canada, contamination: natural, conc. range: 0.00829–0.06505 ng/ml, Ø conc.: 0.03186 ng/ml, sample year: unknown, country: Canada[242], *persons with chromophobe RCC, age: 37–82 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/2*, sample comp.: people from Canada, sample origin: Ontario Tumour Bank, Canada, contamination: natural, conc. range: 0.00468–0.05680 ng/ml, Ø conc.: 0.03074 ng/ml, sample year: unknown, country: Canada[242], *persons with papillary RCC, age: 37–82 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/8*, sample comp.: people from Canada, sample origin: Ontario Tumour Bank, Canada, contamination: natural, conc. range: 0.00853–0.24542 ng/ml, Ø conc.: 0.08538 ng/ml, sample year: unknown, country: Canada[242], *persons with UC, age: 37–82 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/1*, sample comp.: people from Canada, sample origin: Ontario Tumour Bank, Canada, contamination: natural, conc.: 0.01794 ng/ml, sample year: unknown, country: Canada[242], *persons with oncocytoma, age: 37–82 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/6*, sample comp.: people from Poland, sample origin: Urology Department of the Biziel's Hospital, Poland, contamination: natural, conc. range: 0.32–0.40 ng/ml, Ø conc.: 0.37 ng/ml, sample year: unknown, country: Poland[243], *healthy persons (control), age: 44–68 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 18/18*, sample comp.: people from Poland, sample origin: Urology Department of the Biziel's Hospital, Poland, contamination: natural, conc. range: 0.19–3.77 ng/ml, Ø conc.: 0.95 ng/ml, sample year: unknown, country: Poland[243], *male and female persons with kidney tumour, age: 50–68 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney, OTA, literature[243], tumour

incidence: 1/1*, sample comp.: person from Poland, sample origin: Urology Department of the Biziel's Hospital, Poland, contamination: natural, conc.: 1.89 ng/ml, sample year: unknown, country: Poland[243], *person with kidney cirrhosis, age: 55 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human kidney, OTA, literature[243], cirrhosis

incidence: 150/205*, sample comp.: people from Tunisia, sample origin: Gafsa, Jendouba, Monastir, Sfax, and Tunis (regions), Tunisia, contamination: natural, conc. range: ≤7.5 ng/ml, sample year: 1991–2001, country: Tunisia/France[244], *male and female healthy persons, age: 40–80 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 372/383*, sample comp.: people from Tunisia, sample origin: Gafsa, Jendouba, Monastir, Sfax, and Tunis (regions), Tunisia, contamination: natural, conc. range: 1.74–140.5 ng/ml, sample year: 1991–2001, country: Tunisia/France[244], *persons with CIN, age: 40–80 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 491/571*, sample comp.: people from Tunisia, sample origin: Gafsa, Jendouba, Monastir, Sfax, and Tunis (regions), Tunisia, contamination: natural, conc. range: ≤29 ng/ml, sample year: 1991–2001, country: Tunisia/France[244], *persons with chronic kidney disease, age: 40–80 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 29/105*, sample comp.: people from Tunisia, sample origin: Tunisia, contamination: natural, conc. range: 0.12–3.4 ng/ml, Ø conc.: 0.49 ng/ml, sample year: unknown, country: Tunisia[246], *53 male and 52 female healthy persons (control), Ø age: 50.9 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/22*, sample comp.: people from Tunisia, sample origin: north, centre, and south, Sahel (regions), Tunisia, contamination: natural, conc. range: 0.12–2.2 ng/ml, Ø conc.: 0.92 ng/ml, sample year: unknown, country: Tunisia[246], *12 male and 10 female persons with CIN, Ø age: 54.53 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 24/30*, sample comp.: people from Tunisia, sample origin: north, centre, and south, Sahel (regions), Tunisia, contamination: natural, conc. range: 0.12–3.8 ng/ml, Ø conc.: 1.25 ng/ml, sample year: unknown, country: Tunisia[246], *14 male and 16 female persons with CINI, Ø age: 59.3 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/26*, sample comp.: people from Tunisia, sample origin: north, centre, and south, Sahel (regions), Tunisia, contamination: natural, conc. range: 0.12–3.0 ng/ml, Ø conc.: 0.75 ng/ml, sample year: unknown, country: Tunisia[246], *14 male and 12 female persons with CVN, Ø age: 63.0 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/26*, sample comp.: people from Tunisia, sample origin: north, centre, and south, Sahel (regions), Tunisia, contamination: natural, conc. range: 0.12–0.5 ng/ml, Ø conc.: 0.21 ng/ml, sample year: unknown, country: Tunisia[246], *13 male and 13 female persons with CGN, Ø age: 57.7 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 23/27*, sample comp.: people from Tunisia, sample origin: north, centre, and south, Sahel (regions), Tunisia, contamination: natural, conc. range: 0.12–6.1 ng/ml, Ø conc.: 0.64 ng/ml, sample year: unknown, country: Tunisia[246], *15 male and 12 female persons with transplantation, Ø age: 38.0 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2,077/2,206, sample comp.: people from Czech Republic, sample origin: Benesov, Plzen, Usti nad Labem, and Zdar nad Sazavou (areas), Czech Republic, contamination: natural, conc. range: 0.1–13.7 µg/l, sample year: 1994–2002, country: Czech Republic/France[257]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[257]

incidence: 41/41*, sample comp.: people from Germany, sample origin: scientific and technical staff of the Munich Institute for Hygiene and Technology of Food of Animal Origin (exception: visiting scientist from Canada), Munich (city), Germany, contamination: natural, conc. range: 120–1,160 pg/ml, Ø conc.: 394 pg/ml, sample year: July/October/December 1990, December 1991, December 1995, January 1997, country: Germany[258], *male persons, age: 25–50 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 59/61*, sample comp.: people from Germany, sample origin: scientific and technical staff of the Munich Institute for Hygiene and Technology of Food of Animal Origin (exception: visiting scientist from Canada), Munich (city), Germany, contamination: natural, conc. range: 72–1,290 pg/ml, Ø conc.: 350 pg/ml, sample year: July/October/December 1990, December 1991, December 1995, January 1997, country: Germany[258], *female persons, age: 25–50 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/8*, sample comp.: people from Germany, sample origin: scientific

and technical staff of the Munich Institute for Hygiene and Technology of Food of Animal Origin (exception: visiting scientist from Canada), Munich (city), Germany, contamination: natural, conc. range: <50–1,162 pg/ml, sample year: July 1990, country: Germany[258], *4 male and 5 female persons (1 sa. not available), age: 25–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/8*, sample comp.: people from Germany, sample origin: scientific and technical staff of the Munich Institute for Hygiene and Technology of Food of Animal Origin (exception: visiting scientist from Canada), Munich (city), Germany, contamination: natural, conc. range: 151–698 pg/ml, Ø conc.: 410.3 pg/ml, sample year: October 1990, country: Germany[258], *4 male and 5 female persons (1 sa. not available), age: 25–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/9*, sample comp.: people from Germany, sample origin: scientific and technical staff of the Munich Institute for Hygiene and Technology of Food of Animal Origin (exception: visiting scientist from Canada), Munich (city), Germany, contamination: natural, conc. range: 120–509 pg/ml, Ø conc.: 307.2 pg/ml, sample year: December 1990, country: Germany[258], *4 male and 5 female persons, age: 25–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/7*, sample comp.: people from Germany, sample origin: scientific and technical staff of the Munich Institute for Hygiene and Technology of Food of Animal Origin (exception: visiting scientist from Canada), Munich (city), Germany, contamination: natural, conc. range: 72–342 pg/ml, Ø conc.: 207.9 pg/ml, sample year: December 1991, country: Germany[258], *4 male and 5 female persons (2 sa. not available), age: 25–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/9*, sample comp.: people from Germany, sample origin: scientific and technical staff of the Munich Institute for Hygiene and Technology of Food of Animal Origin (exception: visiting scientist from Canada), Munich (city), Germany, contamination: natural, conc. range: 191–491 pg/ml, Ø conc.: 313.4 pg/ml, sample year: December 1995, country: Germany[258], *4 male and 5 female persons, age: 25–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/9*, sample comp.: people from Germany, sample origin: scientific and technical staff of the Munich Institute for Hygiene and Technology of Food of Animal Origin (exception: visiting scientist from Canada), Munich (city), Germany, contamination: natural, conc. range: 256–756 pg/ml, Ø conc.: 418.1 pg/ml, sample year: January 1997, country: Germany[258], *4 male and 5 female persons, age: 25–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 63/83*, sample comp.: people from Tunisia, sample origin: hospitals in the eastern and south-eastern regions of Tunisia, contamination: natural, conc. range: 1.8–65 ng/ml, Ø conc.: 18 ng/ml, sample year: 2007–2009, country: Tunisia[299], *CINI patients, age: 18–88 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 48/77*, sample comp.: people from Tunisia, sample origin: hospitals in the eastern and south-eastern regions of Tunisia, contamination: natural, conc. range: 1.0–21.6 ng/ml, Ø conc.: 5.5 ng/ml, sample year: 2007–2009, country:

Tunisia[299], *CIN patients with known aetiology, age: 18–88 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 30/61*, sample comp.: people from Tunisia, sample origin: hospitals in the eastern and south-eastern regions of Tunisia, contamination: natural, conc. range: 1.1–16.3 ng/ml, Ø conc.: 5.8 ng/ml, sample year: 2007–2009, country: Tunisia[299], *CGN patients, age: 18–88 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 18/49*, sample comp.: people from Tunisia, sample origin: hospitals in the eastern and south-eastern regions of Tunisia, contamination: natural, conc. range: 1.5–16 ng/ml, Ø conc.: 5.5 ng/ml, sample year: 2007–2009, country: Tunisia[299], *CVN patients, age: 18–88 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 68/138*, sample comp.: people from Tunisia, sample origin: hospitals in the eastern and south-eastern regions of Tunisia, contamination: natural, conc. range: 1.7–8.5 ng/ml, Ø conc.: 3.3 ng/ml, sample year: 2007–2009, country: Tunisia[299], *91 male and 47 female healthy persons, age: 17–75 years (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 38/38*, sample comp.: people from Romania, sample origin: Iasi (city), Romania, contamination: natural, conc. range: <0.1 ng/ml (7 sa.), 0.1–0.49 ng/ml (27 sa.), 0.5–0.99 ng/ml (3 sa.), 1 ng/ml (1 sa.), Ø conc.: 0.22 ng/ml, sample year: unknown, country: Romania[300], *9 male and 29 female healthy white Caucasians, age: Ø 39.88 and 38.63 years, respectively, BMI: 23.36 and 22.98, respectively
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Ochratoxin A Methyl Ester

incidence: 1/219, sample comp.: people from Yugoslavia, sample origin: village with no clinical cases of nephropathy, Yugoslavia, contamination: natural, conc.: 13 ng/g, sample year: March/April 1980, country: Sweden/Yugoslavia[172]
- Co-contamination: 1 sa. co-contaminated with OTA, OTA ME, OTα, and OTα ME
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, OTα, OTα ME, literature[172]

incidence: 3/420, sample comp.: people from Yugoslavia, sample origin: hyperendemic "BEN-village", Yugoslavia, contamination: natural, conc. range: 5–42 ng/g, Ø conc.: 17.7 ng/g, sample year: March/April 1980, country: Sweden/Yugoslavia[172]
- Co-contamination: 2 sa. co-contaminated with OTA, OTA ME, OTα, and OTα ME, 1 sa. co-contaminated with OTA, OTA ME, and OTα
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, OTα, OTα ME, literature[172]

Ochratoxin α

incidence: 12/219, sample comp.: people from Yugoslavia, sample origin: village with no clinical cases of nephropathy, Yugoslavia, contamination: natural, conc. range: 2–7 ng/g, Ø conc.: 4.58 ng/g, sample year: March/April 1980, country: Sweden/Yugoslavia[172]
- Co-contamination: 4 sa. co-contaminated with OTA, OTα, and OTα ME, 3 sa. co-contaminated with OTA and OTα, 1 sa. co-contaminated with OTA, OTA ME, OTα, and OTα ME, 1 sa. co-contaminated with OTα and OTα ME, 3 sa. contaminated solely with OTα
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, OTA ME, OTα ME, literature[172]

incidence: 8/420, sample comp.: people from Yugoslavia, sample origin: hyperendemic "BEN-village", Yugoslavia,

contamination: natural, conc. range: 2–44 ng/g, Ø conc.: 9.25 ng/g, sample year: March/April 1980, country: Sweden/Yugoslavia[172]

- Co-contamination: 2 sa. co-contaminated with OTA, OTA ME, OTα, and OTα ME, 1 sa. co-contaminated with OTA, OTA ME, and OTα, 1 sa. co-contaminated with OTA, OTα, and OTα ME, 1 sa. co-contaminated with OTA and OTα, 1 sa. co-contaminated with OTα and OTα ME, 2 sa. contaminated solely with OTα
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, OTA ME, OTα ME, literature[172]

Ochratoxin α Methyl Ester

incidence: 6/219, sample comp.: people from Yugoslavia, sample origin: village with no clinical cases of nephropathy, Yugoslavia, contamination: natural, conc. range: 5–11 ng/g, Ø conc.: 7.33 ng/g, sample year: March/April 1980, country: Sweden/Yugoslavia[172]

- Co-contamination: 4 sa. co-contaminated with OTA, OTα, and OTα ME, 1 sa. co-contaminated with OTA, OTA ME, OTα, and OTα ME, 1 sa. co-contaminated with OTα and OTα ME
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, OTA ME, OTα, literature[172]

incidence: 7/420, sample comp.: people from Yugoslavia, sa. origin: hyperendemic "BEN-village", Yugoslavia, contamination: natural, conc. range: 4–43 ng/g, Ø conc.: 11.1 ng/g, sample year: March/April 1980, country: Sweden/Yugoslavia[172]

- Co-contamination: 2 sa. co-contaminated with OTA, OTA ME, OTα, and OTα ME, 1 sa. co-contaminated with OTA, OTα, and OTα ME, 1 sa. co-contaminated with OTA and OTα ME, 1 sa. co-contaminated with OTα and OTα ME, 2 sa. contaminated solely with OTα ME
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, OTA ME, OTα, literature[172]

Ochratoxin B

incidence: 7/36*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.05–8.20 ng/ml, sample year: unknown, country: Sierra Leone[118], *"underfive" children: 14 control, 3 kwashiorkor, 9 underweight, 2 marasmic and 8 "unspecified" ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

Fusarium Toxins

Trichothecenes

incidence: 7?/26*, sample comp.: people from USA, sample origin: uncontaminated building, USA, contamination: natural, conc. range: ≤0.11 ng/ml, sample year: unknown, country: USA/Canada[178], *persons with no reported symptoms or known mold/mycotoxin exposure (control)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/18*, sample comp.: people from USA, sa. origin: indoor environment of a contaminated building, USA, contamination: natural, conc. range: ≤83.6 ng/ml, sample year: unknown, country: USA/Canada[178], *persons with documented *Stachybotrys* exposure

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9?/26*, sample comp.: people from USA, sample origin: indoor environment of a contaminated building, USA, contamination: natural, conc. range:

≤0.12 ng/ml, sample year: unknown, country: USA/Canada[178], *persons with reported exposure to non-identified molds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Zearalenone
incidence: 5/36*, sample comp.: people from Hungary, sample origin: Pediatric Endocrinology Unit of Albert Szent-Györgyi University Medical School, Szeged and "Erzsébet" Municipal Hospital Hódmezövásárhely, Csongrád (city), Békes (county), Hungary, contamination: natural, conc. range: 18.9–103.5 µg/l, Ø conc.: 66.08 µg/l, sample year: unknown, country: Hungary[179], *early thelarche patients
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

see also **Human blood, Human plasma,** and **Human plasma/serum**

Human spleen may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1
incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 3,448 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females
- Co-contamination: 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

Aflatoxin B_2
incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 631.0 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females
- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

Aflatoxin M_1
incidence: 3/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc. range: 20.0–4,746.0 pg/g, Ø conc.: 2,348.66 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females
- Co-contamination: 1 sa. co-contaminated with AFB_2 and AFM_1, 1 sa. co-contaminated with AFM_1 and AFM_2, 1 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung,

Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, AFM_1, literature[45]; Human brain, Human kidney, Human lung, Human spleen, AFM_2, literature[45]

Aflatoxin M_2

incidence: 1/17*, sample comp.: people from Malaysia, sample origin: Chinese Festival of the Nine-Emperor Gods, Malaysia, contamination: natural, conc.: 1,479.0 pg/g, sample year: 1988, country: Singapore/UK[45], *1 adult (49 years) and 16 children (2.5–11 years): 12 males and 5 females

- Co-contamination: 1 sa. contaminated solely with AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human heart, Human kidney, Human liver, Human lung, Human spleen, AFB_1, literature[45]; Human heart, Human liver, Human lung, Human spleen, AFB_2, literature[45]; Human liver, AFG_1, literature[45]; Human lung, AFL, literature[45]; Human brain, Human kidney, Human liver, Human lung, Human spleen, AFM_1, literature[45]; Human brain, Human kidney, Human lung, AFM_2, literature[45]

Human stomach may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 14/20*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**–127 µg/kg***, sample year: unknown, country: USA/Thailand[2], *children with EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity, ***contents of stomach

- Co-contamination: taking this into account: 3 sa. co-contaminated with AFB_1 and AFB_2; 11 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, AFB_1, literature[2]; Human stomach, AFB_2, literature[2]; Human brain, Human feces, Human intestine, Human kidney, Human liver, AFB_1 and AFB_2, literature[2] (with EFDV)

incidence: 4/8*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr** ***, sample year: unknown, country: USA/Thailand[2], *children dying from causes other than EFDV, **a blue fluorescent spot similar to that of AFB_1 but insufficient for confirmation of identity, ***contents of stomach

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human feces, Human intestine, Human liver, AFB_1, literature[2]; Human brain, Human kidney, AFB_1 and AFB_2 (no EFDV)

For detailed information please see the article.

Aflatoxin B_2

incidence: 3/20*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr**–19 µg/kg***, sample year: unknown, country: USA/Thailand[2], *children with EFDV, **a blue fluorescent spot similar to that of AFB_2 but insufficient for confirmation of identity, ***contents of stomach

- Co-contamination: taking this into account: 3 sa. co-contaminated with AFB_1 and AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human stomach, AFB_1, literature[2]; Human brain, Human feces, Human intestine, Human kidney, Human liver, AFB_1 and AFB_2, literature[2] (with EFDV)

incidence: 0/8*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: no contamination***, sample year: unknown,

country: USA/Thailand[2], *children dying from causes other than EFDV, **contents of stomach

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human bile, Human feces, Human intestine, Human liver, Human stomach, AFB_1, literature[2]; Human brain, Human kidney, AFB_1, AFB_2 (no EFDV)

For detailed information please see the article.

Human stool see **Human feces**

Human urine may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxicol

incidence: 1°/12* **, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 36 pg/ml, sample year: unknown, country: UK/Sudan[15], *infants, **includes healthy°, marasmus/kwashiorkor, kwashiorkor and hepatitis ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[15]; Human urine, AFM_1, literature[15]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 2,627 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 0 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, AFL, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 385 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 6 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFL, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 14/30*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.02–14.0 ng/ml, sample year: unknown, country: Sierra Leone[118], *male malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 15/24*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.02–1.4 ng/ml, sample year: unknown, country: Sierra Leone[118], *female malnourished children

For whole literature[118]:
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 0/99*, sample comp.: people from UK, sample origin: Merseyside (metropolitan county), UK, contamination: no contamination, sample year: unknown, country: UK[181], *male volunteers (control), age: 17–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, literature[181], control

incidence: 1/60*, sample comp.: people from Netherlands, sample origin: clinic in Amsterdam (capital), Netherlands, contamination: natural, conc.: 0.32 nmol/l, sample year: unknown, country: UK[181], * heroin abusers
- Co-contamination: not reported
- Further contamination (organs, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFM_1, and AFM_2, literature[181], Amsterdam

incidence: 0/61*, sample comp.: people from UK, sample origin: clinic in Merseyside (metropolitan county), UK, contamination: no contamination, sample year: unknown, country: UK[181], *heroin abusers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, and AFM_1, literature[181], Merseyside

incidence: 0/12*, sample comp.: people from UK, sample origin: clinic in London (capital), UK, contamination: no contamination, sample year: unknown, country: UK[181], *heroin abusers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 83/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.04–14.2 ng/ml, sample year: March (dry season) 1992–1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, dry season

incidence: 52/97*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.02–7.2 ng/ml, sample year: May (rainy season) 1992–1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, rainy season

incidence: 68/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.05–8.9 ng/ml, sample year: March (dry season) 1992–1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, dry season

incidence: 35/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc.

range: 0.1–9.0 ng/ml, sample year: May (rainy season) 1992–1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, rainy season

incidence: 15/161*, sample comp.: people from Nigeria, sample origin: University of Lagos Teaching Hospital, Nigeria, contamination: natural, Ø conc.: 0.38 ng/100 ml, sample year: unknown, country: USA/Nigeria[195], *79 male and 82 female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_{2a}, AFG_1, and AFM_1, literature[195]

Aflatoxin B_1

incidence: 8/51*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr, sample year: unknown, country: USA/Thailand[2], *children with EFDV

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

These are further sa., not identical with the other sa. from literature[2]. For detailed information please see the article.

incidence: 4/10*, sample comp.: people from USA, sample origin: USA, contamination: natural, conc. range: 2.7–8.9 ng/ml*, sample year: unknown, country: USA[7], *thereof 5 Reye's-syndrome patients thereof 4 AFB_1-pos.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, Human serum, AFB_1, literature[7]

incidence: 2/40, sample comp.: people from Ghana, sample origin: greater Accra region, Ghana, contamination: natural, Ø conc.: 7.5 ng/ml, sample year: late April 19?? (wet season), country: Ghana[76], *apparently healthy adults (29 male and 11 female persons), age: 30–73 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFM_1, and AFQ_1, literature[76], Human serum, AFB_1, AFG_1, and AFQ_1, literature[76], Human urine, AFG_1, literature[76]

incidence: 25/1,228*, sample comp.: people from Zimbabwe, sample origin: Matabeleland south and north, Mashonaland west, central, and east, Manicaland, Midlands, and Masvingo (provinces), Zimbabwe, contamination: natural, Ø conc.: 1 ng/ml, sample year: January 1984–March 1985, country: Zimbabwe[77], *outpatients, schoolchildren, farm labourers, and middle class white donors

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, AFG_1, AFG_2, and AFM_1, literature[77]

incidence: 2*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc. range: 385–1,538 pg/ml***, sample year: unknown, country: UK[81], *at least 2 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 6 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFL, and AFM_1, 1 sa. co-contaminated with AFB_1, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[81]; Human urine, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 377 pg/ml***, sample year:

unknown, country: UK[81], *at least 1 pos. ca. with marasmus, **children, ***serial aflatoxin estimation after 12 h
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 41 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 24 h
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_2, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 0/16*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 2/10*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 86–806 pg/ml, Ø conc.: 446 pg/ml, sample year: unknown, country: Sudan/UK[82], *9 children with marasmus (2 af.) and 1 child with marasmic kwashiorkor
- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_1, 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2 and AFM_1, literature[82] (marasmus, marasmic kwashiorkor)

incidence: 1/3*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 667 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; (miscellaneous diseases)

incidence: 24/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 1–15 ng/100 ml, Ø conc.: 8.29 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, literature[117] (kwashiorkor)

incidence: 13/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 5–9 ng/100 ml, Ø conc.: 6.92 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, AFM_1, and AFP, literature[117]; Human urine, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/30*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.7–53 ng/ml, sample year: unknown, country: Sierra Leone[118], *male malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 9/24*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.6–54.1 ng/ml, sample year: unknown, country: Sierra Leone[118], *female malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 1/7*, sample comp.: people from India, sample origin: Panchmahals (district), Gujarat (federal state), India, contamination: natural, conc.: pr, sample year: 1974/1975, country: India[131], *jaundiced persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[131]

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.43–41.15 pg/mg creatinine**, sample year: unknown, country: USA/China[134], *voluntary residents (control), age: 20–55 years (receiving placebos for 0 months, baseline), **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[134], placebos, 0 months; Human urine, AFM_1, literature[134], placebos, 0 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.38–50.77 pg/mg creatinine**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 500 mg for 0 months, baseline), **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[134], GTB 500, 0 months; Human urine, AFM_1, literature[134], GTB 500, 0 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and

Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.60–67.71 pg/mg creatinine**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 1,000 mg for 0 months, baseline), **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[134], GTB 1,000, 0 months; Human urine, AFM_1, literature[134], GTB 1,000, 0 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.09–57.92 pg/mg creatinine**, sample year: unknown, country: USA/China[134], *voluntary residents (control), age: 20–55 years (receiving placebos for 1 month), **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[134], placebos, 1 month; Human urine, AFM_1, literature[134], placebos, 1 month

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 1.57–362.47 pg/mg creatinine**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 500 mg for 1 month), **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[134], GTB 500, 1 month; Human urine, AFM_1, literature[134], GTB 500, 1 month

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.30–65.62 pg/mg creatinine**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 1,000 mg for 1 month), **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[134], GTB 1,000, 1 month; Human urine, AFM_1, literature[134], GTB 1,000, 1 month

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.43–50.58 pg/mg creatinine**, sample year: unknown, country: USA/China[134], *voluntary residents (control), age: 20–55 years (receiving placebos for 3 months), **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[134], placebos, 3 months; Human urine, AFM_1, literature[134], placebos, 3 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 11.32–501.48 pg/mg creatinine**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 500 mg for 3 months), **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[134], GTB 500, 3 months;

Human urine, AFM_1, literature[134], GTB 500, 3 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 18.20–560.30 pg/mg creatinine**, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 1,000 mg for 3 months), **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[134], GTP 1,000 mg for 3 months; Human urine, AFM_1, literature[134], GTP 1,000 mg for 3 months

For detailed information please see the article.

incidence: 15/108*, sample comp.: people from USA, sample origin: pediatric referral centers in Georgia, Tennessee, and Alabama (states), USA, contamination: natural, conc. range: 5–61 ppt, Ø conc.: 13.9 ppt, sample year: January–March 1978, country: USA[148], *91 control subjects and 17 Reye's-syndrome ca. but no predominant contamination

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[148]; Human urine, AFM_1, literature[148]

For detailed information please see the article.

incidence: 24/27*, sample comp.: people from China, sample origin: Zhuqing Village, 45 km southwest of Fusui (county capital), China, contamination: natural, conc. range: 6.60–494.9 ng/24-h**, Ø conc.: 103.6 ng/24-h**, sample year: April 1999, country: China/USA[151], *male and female persons, **AFB-NAC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[151]; Human urine, AFM_1, AFP_1, and AFQ_1, literature[151]

incidence: 11/27*, sample comp.: people from China, sample origin: Zhuqing (village), 45 km southwest of Fusui (county capital), China, contamination: natural, conc. range: 64.9–1,789.8 ng/24-h**, Ø conc.: 407.3 ng/24-h**, sample year: April 1999, country: China/USA[151], *male and female persons, **AFB-N^7-Gua

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[151]; Human urine, AFM_1, AFP_1, and AFQ_1, literature[151]

incidence: 2/5*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc. range: 1,044 ng on day 1**, 726 ng on day 2**, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated

- Co-contamination: 2 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids etc.): Human feces, AFB_1, AFL, AFM_1, and AFM_2, literature[180]; Human urine, AFG_1, AFG_2, AFM_1, and AFM_2, literature[180] (kwashiorkor)

incidence: 3/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc. range: 22, 41, and 1,316 ng on day 1**, 27 ng on day 3**, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids etc.): Human feces, AFB_1, AFM_1, and AFM_2, literature[180]; Human urine, AFB_2, AFM_1, and AFM_2, literature[180] (marasmic kwashiorkor)

For detailed information please see the article.

incidence: 0/99*, sample comp.: people from UK, sample origin: Merseyside (metropolitan county), UK, contamination: no contamination, sample year: unknown, country: UK[181], *male volunteers (control), age: 17–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, literature[181], control

incidence: 8/60*, sample comp.: people from Netherlands, sample origin: clinic in Amsterdam (capital), Netherlands, contamination: natural, conc. range: 2.02–25.80 nmol/l, sample year: unknown, country: UK[181], * heroin abusers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFL, AFB_2, AFM_1, and AFM_2, literature[181], Amsterdam

incidence: 1/61*, sample comp.: people from UK, sample origin: clinic in Merseyside (metropolitan county), UK, contamination: natural, conc.: 0.73 nmol/l, sample year: unknown, country: UK[181], *heroin abusers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2 and AFM_1, literature[181], Merseyside

incidence: 0/12*, sample comp.: people from UK, sample origin: clinic in London (capital), UK, contamination: no contamination, sample year: unknown, country: UK[181], *heroin abusers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 47/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.6–188 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, dry season

incidence: 32/97*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 1.2–115 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, rainy season

incidence: 53/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.04–319 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, dry season

incidence: 38/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.08–127 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, rainy season

incidence: 71/317*, sample comp.: people from China, sample origin: 4 small geographically defined areas of Shanghai (city), China, contamination: natural, conc.

range: ?, sample year: January 1986–September 1989, country: China/USA[183], *mostly men (267 control ca. (56 af.) and 50 HCC ca. (15 af.)), age: 45–64 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1 and AFP_1, literature[183]

incidence: 49/317*, sample comp.: people from China, sample origin: 4 small geographically defined areas of Shanghai (city), China, contamination: natural, conc. range: 0.30–1.81 ng/ml**, sample year: January 1986–September 1989, country: China/USA[183], *mostly men (267 control ca. (31 af.) and 50 HCC ca. (18 af.)), age: 45–64 years, **AFB_1-N^7-Gua adducts
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1 and AFP_1, literature[183]

For detailed information please see the article.

incidence: 34/85*, sample comp.: people from Taiwan, sample origin: Taiwan, contamination: natural, Ø conc.: 0.52 ng/ml**, sample year: August 1988–June 1992, country: Taiwan[184], *male persons, age: 33–66 years, thereof 42 asymptotic HbsAg carriers and 43 HBsAg non-carriers, **AFB_1-N^7-Gua adducts
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 6/81*, sample comp.: people from Kenya, sample origin: out-patient clinic at the Murang'a District Hospital and out-patient liver clinic at the Kenyatta Hospital, Kenya and USA, contamination: natural, conc. range: 0.3–3 pmol**/25 ml, sample year: unknown, country: USA/Kenya[185], *male and female persons, age: 5–75 years, (3 male (af.) and 3 female (af.) persons, age: 17–35 years), **AFB-GuaI adduct (tentative)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 29/29*, sample comp.: people from China, sample origin: Fushui (county), China, contamination: natural, conc. range: 0.01–0.03 ng/ml, sample year: September 1985, country: China/USA[186], *male and female persons
- Co-contamination: 29 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[186]

incidence: 41/72*, sample comp.: people from China, sample origin: Daxin Township at the mouth of the Yangtze River, Qidong (region), China, contamination: natural, conc. range: ≤156.6 pg/mg creatinine**, median level: 7.1 pg/mg creatinine**, sample year: started July 1995, country: China/USA[187], *adults in good general health receiving a placebo for 4 weeks, **AFB-NAC
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[187], placebo

incidence: 45/57*, sample comp.: people from China, sample origin: Daxin Township at the mouth of the Yangtze River, Qidong (region), China, contamination: natural, conc. range: ≤245.5 pg/mg creatinine**, median level: 18.6 pg/mg creatinine**, sample year: started July 1995, country: China/USA[187], *adults in good general health receiving 125 mg oltipraz daily for 4 weeks, **AFB-NAC
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[187], 125 mg oltipraz

incidence: 39/60*, sample comp.: people from China, sample origin: Daxin Township at the mouth of the Yangtze River, Qidong (region), China, contamination: natural, conc. range: ≤189.4 pg/mg creatinine**, median level: 8.3 pg/mg creatinine**, sample year:

started July 1995, country: China/USA[187], *adults in good general health receiving 500 mg oltipraz weekly for 4 weeks, **AFB-NAC
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[187], 500 mg oltipraz

incidence: 20/96*, sample comp.: people from USA, sample origin: Center for Disease Control, Atlanta (city), Georgia (state), USA, contamination: natural, conc. range: 5.3–52 pg/g, sample year: unknown, country: USA/Costa Rica/Japan[188], *some persons suffering from Reye's-syndrome
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/29, sample comp.: people from Philippines, sample origin: Philippines, contamination: natural, conc. range: ≤4.25 ng/ml AFB_1-eq., sample year: unknown, country: France[189]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 5/10*, sample comp.: people from India, sample origin: rural area, India, contamination: natural, conc. range: 9.30–13.43 ng/mg creatinine**, sample year: unknown, country: India[190], *5 male and 5 female (af.) persons (maize eating population, rural), age: 20–40 years, weight: 45–50 kg, (col. from 5 households), **AFB_1-N^7-Gua adducts
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/4*, sample comp.: people from India, sample origin: rural area, India, contamination: no contamination, sample year: unknown, country: India[190], *2 male and 2 female persons (rice eating population, rural), age: 20–40 years, weight: 45–50 kg, (col. from 2 households)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/8*, sample comp.: people from India, sample origin: urban area, India, contamination: no contamination, sample year: unknown, country: India[190], *4 male and 4 female persons (rice eating population, urban), age: 20–40 years, weight: 45–50 kg, (col. from 4 households)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 16/20, sample comp.: people from China, sample origin: Zhuqing (village), Fusui (county), China, contamination: natural, conc. range: 0.9–7.2 pg/20 ml*, Ø conc.: 2.9 pg/20 ml*, sample year: originally conducted April 1999, country: USA[191], *AFB_1-N^7-Gua
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 16/20, sample comp.: people from China, sample origin: Zhuqing (village), Fusui (county), China, contamination: natural, conc. range: 0.04–0.65 pg/mg creatinine*, Ø conc.: 0.28 pg/ mg creatinine*, sample year: originally conducted April 1999, country: USA[191], *AFB_1-N^7-Gua
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/50*, sample comp.: people from Egypt, sample origin: Qalyubiyah (governorate), Egypt, contamination: natural, conc.: 189 pg/ml, sample year: October 2004, country: Finland/UK/Egypt/Guinea[192], *34 male and 16 female children (HBV negative), age: 1–2.5 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, AFG_1, AFG_2, and AFM_1, literature[192]

incidence: 8/50*, sample comp.: people from Guinea, sample origin: lower Kindia (region), Guinea, contamination: natural, conc. range: 179–18,000 pg/ml, Ø conc.: 2,682 pg/ml?, sample year: July–August

2003, country: Finland/UK/Egypt/Guinea[192], *25 male and 25 female children (HBV positive), age: 2–4 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, AFG_1, AFG_2, and AFM_1, literature[192]

For detailed information please see the article.

incidence: 6/50*, sample comp.: people from Singapore, sample origin: Singapore General Hospital, Singapore, contamination: natural, conc. range: 0.185–2.3 ng/ml**, sample year: unknown, country: Singapore/France[193], *local male healthy persons, age: 20–66 years, **AFB_1-eq.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 31/60, sample comp.: people from Gambia, sample origin: ?, contamination: natural, conc. range: 0.100–24.5 ng/ml*, sample year: unknown, country: Singapore/France[193], *AFB_1-eq.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 34/86*, sample comp.: people from Taiwan, sample origin: Fukien Taiwanese (48.8 %), mainland Chinese who or whose parents migrated to Taiwan (37.2 %), and Hakka Taiwanese (14.0 %), Taiwan, contamination: natural, conc. range: 0.10–6.06 ng/ml**, sample year: August 1988–July 1992, country: Taiwan[194], *43 HbsAg carriers (19 af.) and 43 HbsAg non-carriers (15 af.), age: 33–66 years, **AFB_1-N^7-Gua adducts
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1 and AFP_1, literature[194]

For detailed information please see the article.

incidence: 5/161*, sample comp.: people from Nigeria, sample origin: University of Lagos Teaching Hospital, Nigeria, contamination: natural, Ø conc.: 2.87 ng/100 ml, sample year: unknown, country: USA/Nigeria[195], *79 male and 82 female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_{2a}, AFG_1, AFL, and AFM_1, literature[195]

incidence: 11/48*, sample comp.: people from Thailand, sample origin: Ubon (area), Thailand, contamination: natural, conc. range: 50–378 ng AFB_1-eq/ml, sample year: unknown, country: Thailand/France[196], *male and female persons, age: 30–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[196]

incidence: 3/46*, sample comp.: people from Thailand, sample origin: Korat (area), Thailand, contamination: natural, conc. range: 154–573 ng AFB_1-eq/ml, sample year: unknown, country: Thailand/France[196], *male and female persons, age: 30–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[196]

incidence: 7/50*, sample comp.: people from Thailand, sample origin: Chiang Mai (area), Thailand, contamination: natural, conc. range: 210–480 ng AFB_1-eq/ml**, sample year: unknown, country: Thailand/France[196], *male and female persons, age: 30–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[196]

incidence: 11/47*, sample comp.: people from Thailand, sample origin: Bangkok capital (area), Thailand, contamination: natural, conc. range: 63–4,776 ng AFB_1-eq/ml, sample year: unknown, country: Thailand/France[196], *male and female persons, age: 30–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[196]

incidence: 5/50*, sample comp.: people from Thailand, sample origin: Songkhla (area), Thailand, contamination: natural, conc. range: 400–2,510 ng AFB_1-eq/ml, sample year: unknown, country: Thailand/France[196], *male and female persons, age: 30–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[196]

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.03 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, DON, DOM-1, FB_1, HT-2, and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2 and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

incidence: 4/36*, sample comp.: people from Cameroon, sample origin: surrounding area of Yaounde? (capital), Cameroon, contamination: natural, conc. range: 0.07–0.155 µg/l, sample year: unknown, country: Cameroon[284], *20 male and 16 female healthy children, age: 1–12 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/31*, sample comp.: people from Cameroon, sample origin: University Teaching Hospital in Yaounde (capital), Cameroon, contamination: natural, conc. range: 0.109–2.840 µg/l, sample year: unknown, country: Cameroon[284], *16 male and 15 female children with kwashiorkor, age: 1–12 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/11*, sample comp.: people from Cameroon, sample origin: University Teaching Hospital in Yaounde (capital), Cameroon, contamination: natural, conc. range: 0.109–0.864 µg/l, sample year: unknown, country: Cameroon[284], *5 male and 6 female children with marasmic kwashiorkor, age: 1–12 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin B_2

incidence: 1/51*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc.: tr, sample year: unknown, country: USA/Thailand[2], *children with EFDV

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

These are further sa., not identical with the other sa. from literature[2]. For detailed information please see the article.

incidence: 25/1,228*, sample comp.: people from Zimbabwe, sample origin: Matabeleland south and north, Mashonaland west, central, and east, Manicaland, Midlands, and Masvingo (provinces), Zimbabwe, contamination: natural, Ø conc.: 1 ng/ml, sample year: January 1984–March 1985, country: Zimbabwe[77], *outpatients, schoolchildren, farm labourers, and middle class white donors

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFG_1, AFG_2, and AFM_1, literature[77]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination:

natural, conc.: 90 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. showing marasmic/kwashiorkor, **children, ***serial aflatoxin estimation after 12 h

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFL, AFM_1, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 90 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. showing marasmic/kwashiorkor, **children, ***serial aflatoxin estimation after 24 h

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFL, AFM_1, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 1/15*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 56 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFG_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 1/10*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 46 pg/ml, sample year: unknown, country: Sudan/UK[82], *9 children with marasmus (1 af.) and 1 child with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[82] (marasmus, marasmic kwashiorkor)

incidence: 0/3*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 6/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 2–4 ng/100 ml, Ø conc.: 2.67 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, literature[117] (kwashiorkor)

incidence: 1/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc.: 2 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum,

AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_{2a}, AFG_1, AFG_{2a}, AFM_1, AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/30*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 4.4–6.3 ng/ml, Ø conc.: 5.35 ng/ml, sample year: unknown, country: Sierra Leone[118], *male malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 1/24*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc.: 1.8 ng/ml, sample year: unknown, country: Sierra Leone[118], *female malnourished children

For whole literature[118]:

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 0/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: no contamination, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc): Human feces, AFB_1, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFM_1, and AFM_2, literature[180] (kwashiorkor)

incidence: 1/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega district, Kenya, contamination: natural, conc.: 1 ng on day 3**, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc): Human feces, AFB_1, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFM_1, and AFM_2, literature[180] (marasmic kwashiorkor)

For detailed information please see the article.

incidence: 2/99*, sample comp.: people from UK, sample origin: Merseyside (metropolitan county), UK, contamination: natural, conc. range: 0.13–0.24 nmol/l, Ø conc.: 0.185 nmol/l, sample year: unknown, country: UK[181], *male volunteers (control), age: 17–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/60*, sample comp.: people from Netherlands, sample origin: clinic in Amsterdam (capital), Netherlands, contamination: natural, conc. range:

0.09–0.13 nmol/l, Ø conc.: 0.11 nmol/l, sample year: unknown, country: UK[181], *heroin abusers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFL, AFB_1, AFM_1, and AFM_2, literature[181], Amsterdam

incidence: 6/61*, sample comp.: people from UK, sample origin: clinic in Merseyside (metropolitan county), UK, contamination: natural, conc. range: 0.13–1.53 nmol/l, sample year: unknown, country: UK[181], *heroin abusers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[181], Merseyside

incidence: 0/12*, sample comp.: people from UK, sample origin: clinic in London (capital), UK, contamination: no contamination, sample year: unknown, country: UK[181], *heroin abusers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 40/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.01–15.5 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, dry season

incidence: 9/97*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.2–48 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, rainy season

incidence: 18/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.2–152 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, dry season

incidence: 19/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.1–12 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, rainy season

incidence: 5/50, sample comp.: people from Egypt, sample origin: Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 0.8–2.20 pg/ml, Ø conc.: 1.4 pg/ml, sample year: October 2004, country: Finland/UK/Egypt/Guinea[192], *34 male and 16 female children (HBV negative), age: 1–2.5 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFG_1, AFG_2, and AFM_1, literature[192]

incidence: 29/50, sample comp.: people from Guinea, sample origin: lower Kindia

(region), Guinea, contamination: natural, conc. range: 0.6–43 pg/ml, Ø conc.: 5.7 pg/ml, sample year: July–August 2003, country: Finland/UK/Egypt/Guinea[192], *25 male and 25 female children (HBV positive), age: 2–4 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFG_1, AFG_2, and AFM_1, literature[192]

For detailed information please see the article.

incidence: 2/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc. range: 0.04–0.05 µg/l, Ø conc.: 0.045 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s
- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, DON, DOM-1, FB_1, HT-2, and ZEN; 1 sa. co-contaminated with AFB_2, 3-AcDON, and FB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, DON, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

Aflatoxin B_{2a}

incidence: 12/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 1–9 ng/100 ml, Ø conc.: 3.58 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFG_1, AFG_{2a}, and AFM_1, literature[117] (kwashiorkor)

incidence: 3/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 2–4 ng/100 ml, Ø conc.: 3 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFG_1, AFG_{2a}, AFM_1, and AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 72/161, sample comp.: people from Nigeria, sample origin: University of Lagos Teaching Hospital, Nigeria, contamination: natural, Ø conc.: 0.60 ng/100 ml, sample year: unknown, country: USA/Nigeria[195], *79 male and 82 female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFG_1, AFL, and AFM_1, literature[195]

Aflatoxin B

incidence: 7/74*, sample comp.: people from India, sample origin: Urban Health Center, Mysore (city), India, contamination: natural, conc. range: 0.02–0.05 µg/day, sample year: 1964–1967, country: India[197], *healthy children (control), age: 1–5 years; sa. showed a bluish fluorescent spot at AFB_1 Rf
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15/255*, sample comp.: people from India, sample origin: Cheluvamba Hospital, Mysore (city), India, contamination: natural, conc. range: 0.02–0.05 µg/day, sample year: 1964–1967, country: India[197], *children with Indian childhood cirrhosis, age: 1–5 years; sa. showed a bluish fluorescent spot at AFB_1 Rf

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin G_1

incidence: 17/40, sample comp.: people from Ghana, sample origin: greater Accra region, Ghana, contamination: natural, Ø conc.: 6.75 ng/ml, sample year: late April 19?? (wet season), country: Ghana[76], *apparently healthy adults (29 male and 11 female persons), age: 30–73 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFG_1, AFM_1, and AFQ_1, literature[76], Human serum, AFB_1, AFG_1, and AFQ_1, literature[76], Human urine, AFB_1, literature[76]

incidence: 282/1228*, sample comp.: people from Zimbabwe, sample origin: Matabeleland south and north, Mashonaland west, central, and east, Manicaland, Midlands, and Masvingo (provinces), Zimbabwe, contamination: natural, Ø conc.: 9 ng/ml, sample year: January 1984–March 1985, country: Zimbabwe[77], *outpatients, schoolchildren, farm labourers, and middle class white donors

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_2, and AFM_1, literature[77]

incidence: 18/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 1–11 ng/100 ml, Ø conc.: 4.78 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_{2a}, and AFM_1, literature[117] (kwashiorkor)

incidence: 13/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 2–8 ng/100 ml, Ø conc.: 3.57 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_{2a}, AFM_1, and AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/30*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 23.0–39.4 ng/ml, Ø conc.: 31.2 ng/ml, sample year: unknown, country: Sierra Leone[118], *male malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 3/24*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.01–17 ng/ml, sample year: unknown, country: Sierra Leone[118], *female malnourished children
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 1/5*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega district, Kenya, contamination: natural, conc.: 98 ng day**, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated
- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFL, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFG_2, AFM_1, and AFM_2, literature[180] (kwashiorkor)

incidence: 0/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: no contamination, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFB_2, AFM_1 and AFM_2, literature[180] (marasmic kwashiorkor)

For detailed information please see the article.

incidence: 51/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 2.9–169 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, dry season

incidence: 27/97*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.8–57.4 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, rainy season

incidence: 42/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.4–138 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, dry season

incidence: 18/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus,

Sierra Leone, contamination: natural, conc. range: 1.0–150 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, rainy season

incidence: 2/50, sample comp.: people from Egypt, sample origin: Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 72.1–81.1 pg/ml, Ø conc.: 76.6 pg/ml, sample year: October 2004, country: Finland/UK/Egypt/Guinea[192], *34 male and 16 female children (HBV negative), age: 1–2.5 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_2, and AFM_1, literature[192]

incidence: 1/50, sample comp.: people from Guinea, sample. origin: lower Kindia (region), Guinea, contamination: natural, conc.: 709 pg/ml, sample year: July–August 2003, country: Finland/UK/Egypt/Guinea[192], *25 male and 25 female children (HBV positive), age: 2–4 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_2, and AFM_1, literature[192]

For detailed information please see the article.

incidence: 16/161, sample comp.: people from Nigeria, sample origin: University of Lagos Teaching Hospital, Nigeria, contamination: natural, Ø conc.: 4.82 ng/100 ml, sample year: unknown, country: USA/Nigeria[195], *79 male and 82 female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_{2a}, AFL, and AFM_1, literature[195]

Aflatoxin G_2

incidence: 184/1,228*, sample comp.: people from Zimbabwe, sample origin: Matabeleland south and north, Mashonaland west, central, and east, Manicaland, Midlands, and Masvingo (provinces), Zimbabwe, contamination: natural, Ø conc.: 24 ng/ml, sample year: January 1984–March 1985, country: Zimbabwe[77], *outpatients, schoolchildren, farm labourers, and middle class white donors

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, and AFM_1, literature[77]

incidence: 2/15*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 24–80 pg/g, Ø conc.: 52 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFG_2, AFM_1, and AFM_2, 1 sa. contaminated solely with AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFM_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 0/10*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *9 children with marasmus and 1 child with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, and AFM_1, literature[82] (marasmus, marasmic kwashiorkor)

incidence: 0/3*, sample comp.: people from Sudan, sample origin: Children's

Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 1/5*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc.: 1 ng on day 2**, **, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated
- Co-contamination: 1 sa. co-contaminated with AFG_1 and AFG_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human stool, AFL, AFB_1, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFG_1, AFM_1, and AFM_2, literature[180] (kwashiorkor)

incidence: 0/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: no contamination, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human stool, AFB_1, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFB_2, AFM_1, and AFM_2, literature[180] (marasmic kwashiorkor)

For detailed information please see the article.

incidence: 3/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.1–1.5 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, dry season

incidence: 2/97*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.2–0.7 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, rainy season

incidence: 0/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: no contamination, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, dry season

incidence: 3/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 1.1–2.0 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, rainy season

incidence: 12/50, sample comp.: people from Egypt, sample origin: Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 0.9–8.0 pg/ml, Ø conc.: 2.2 pg/ml, sample year: October 2004, country: Finland/UK/Egypt/Guinea[192], *34 male and 16 female children (HBV negative), age: 1–2.5 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFG_1, AFG_1, and AFM_1, literature[192]

incidence: 18/50, sample comp.: people from Guinea, sample origin: lower Kindia (region), Guinea, contamination: natural, conc. range: 1.4–199 pg/ml, Ø conc.: 19.0 pg/ml, sample year: July–August 2003, country: Finland/UK/Egypt/Guinea[192], *25 male and 25 female children (HBV positive), age: 2–4 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, and AFM_1, literature[192]

For detailed information please see the article.

incidence: 1/27, sample comp.: people from Spain, sample origin: València (city), Spain, contamination: natural, conc.: tr, sample year: September/November 2010, country: Spain[276], *17 male and 10 female healthy persons, age: 21–77 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON and OTA, literature[276]

Aflatoxin G_{2a}

incidence: 5/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 1–3 ng/100 ml, Ø conc.: 1.60 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, and AFM_1, literature[117] (kwashiorkor)

incidence: 2/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 1–16 ng/100 ml, Ø conc.: 8.50 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFM_1, and AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin M_1

incidence: 2/51*, sample comp.: people from Thailand, sample origin: provincial hospital in northern Thailand, contamination: natural, conc. range: tr, sample year: unknown, country: USA/Thailand[2], *children with EFDV

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

These are further sa., not identical with the other sa. from literature[2]. For detailed information please see the article.

incidence: 83/91*, sample comp.: people from Ghana, sample origin: Dromankuma, Nkwanta, Hiawoanwu, and Kasei (villages), Ejura Sekyedumase (district), Ashanti (region), Ghana, contamination: natural, conc. range: ≤11,562.36 pg/mg creatinine, sample year: June–August 2002, country: USA/Ghana[12], *male and female persons, age of 19–86 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, AFB_1, literature[12]

For detailed information please see the article.

incidence: 1°/12* **, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 313.0 pg/ml, sample year: unknown, country: UK/Sudan[15], *infants, **includes healthy°, marasmus/kwashiorkor, kwashiorkor and hepatitis ca.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1 and AFM_2, literature[15]; Human breast milk, AFM_1 & AFM_2, literature[15]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFM_1, and AFM_2, literature[15]; Human urine, AFL, literature[15]

incidence: 1*/7**, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc.: 139 pg/ml, sample year: unknown, country: Kenya/UK[16], *10 year old girl with cirrhosis, **4 male and 3 female patients (age: 10 years-adult) with HCC, cirrhosis, and hepatitis

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[16]; Human serum, AFM_1 and AFM_2, literature[16]; Human urine, AFM_2, literature[16]

incidence: 1/20*, sample comp.: people from Egypt, sample origin: outpatient clinic AbBo El-Rish Hospital—Cairo University, Egypt, contamination: natural, conc.: 3.13 ng/ml, sample year: 2000–2002, country: Egypt[17], *female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human plasma, AFM_1 and OTA, literature[17]

incidence: 1007/1228*, sample comp.: people from Zimbabwe, sample origin: Matabeleland south and north, Mashonaland west, central, and east, Manicaland, Midlands, and Masvingo (provinces), Zimbabwe, contamination: natural, Ø conc.: 4.2 ng/ml, sample year: January 1984–March 1985, country: Zimbabwe[77], *outpatients, schoolchildren, farm labourers, and middle class white donors

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, and AFG_2, literature[77]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 185 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 6 h

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFL, and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, and AFM_2, literature[81]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 7,609 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. with marasmic kwashiorkor, **children, ***serial aflatoxin estimation after 12 h

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human liver, AFB_1, AFL, and AFM_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, and AFM_2, literature[81]

For detailed information please see the article.

incidence: 2/15*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 28–484 pg/ml, Ø conc.: 256 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFG_2, AFM_1, and AFM_2, 1 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_1, and AFM_2, literature[82] (kwashiorkor)

incidence: 2/10*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 487–1,075 pg/ml, Ø conc.: 781 pg/ml, sample year: unknown, country: Sudan/UK[82], *9 children with marasmus (2 af.) and 1 child with marasmic kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFB_2, literature[82] (marasmus, marasmic kwashiorkor)

incidence: 0/3*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 4/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 1–3 ng/100 ml, Ø conc.: 2.25 ng/100 ml, sample year: unknown, country: Egypt[117], *19 male and 11 female infants with PEM (kwashiorkor), age: 7–20 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, and AFG_{2a}, literature[117] (kwashiorkor)

incidence: 2/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc. range: 4–7 ng/100 ml, Ø conc.: 5.50 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFP, literature[117] (marasmus)

incidence: 0/10*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12/30*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.5–44.3 ng/ml, sample year: unknown, country: Sierra Leone[118], *male malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFL, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

incidence: 5/24*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 1.3–16.4 ng/ml, sample year: unknown, country: Sierra Leone[118], *female malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFL, AFG_2, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_2, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region),China,contamination: natural, conc. range: 0.42–730.2 pg/mg creatinine, sample year: unknown, country: USA/China[134], *voluntary residents (control), age: 20–55 years (receiving placebos for 0 months, baseline)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[134], placebos, 0 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.59–746.10 pg/mg creatinine, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 500 mg for 0 months, baseline)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[134], GTP 500, 0 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.52–308.27 pg/mg creatinine, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 1,000 mg for 0 months, baseline)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[134], GTP 1,000, 0 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.52–881.39 pg/mg creatinine, sample year: unknown, country: USA/China[134], *voluntary residents (control), age: 20–55 years (receiving placebos for 1 month)

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[134], placebos, 1 month

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.38–64.27 pg/mg creatinine, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 500 mg for 1 month)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[134], GTP 500, 1 month

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.77–51.50 pg/mg creatinine, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 1,000 mg for 1 month)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[134], GTP 1,000, 1 month

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.24–1,276.25 pg/mg creatinine, sample year: unknown, country: USA/China[134], *voluntary residents (control), age: 20–55 years (receiving placebos for 3 months)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[134], placebos, 3 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.18–222.35 pg/mg creatinine, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 500 mg for 3 months)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[134], GTP 500, 3 months

incidence: ?/40?*, sample comp.: people from China, sample origin: Sanhe and Zhuqing (villages) 45 km southwest of Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.12–338.85 pg/mg creatinine, sample year: unknown, country: USA/China[134], *voluntary residents, age: 20–55 years (receiving GTP 1,000 mg for 3 months)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, Human urine, AFB_1, literature[134], GTP 1,000, 3 months

For detailed information please see the article.

incidence: 42/42*, sample comp.: people from China, sample origin: Fushui (county), Guangxi (province), China, contamination: natural, conc. range: $\approx \leq 3.25$ µg/day, country: USA/China[139], *30 male and 12 female persons, age: 25–64 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[139]

incidence: 6/12*, sample comp.: people from Egypt, sample origin: Hepatology Outpatient Clinic of the Internal Medicine Department at the National Research Center and outpatient clinic of Professor

Dr. Yaseen Abd El-Ghaffar Charity Center for Liver Diseases and Research, Egypt, contamination: natural, Ø conc.: 0.98 ng/ml, sample year: December 2004–August 2005, country: Egypt[144], *6 male and 6 female healthy persons (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFM_1, literature[144], control

incidence: 19/46*, sample comp.: people from Egypt, sample origin: Hepatology Outpatient Clinic of the Internal Medicine Department at the National Research Center and outpatient clinic of Professor Dr. Yaseen Abd El-Ghaffar Charity Center for Liver Diseases and Research, Egypt, contamination: natural, Ø conc.: 3.82 ng/ml, sample year: December 2004–August 2005, country: Egypt[144], *30 male and 16 female HCC patients, Ø age: 56 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFM_1, literature[144], HCC

incidence: 11/12*, sample comp.: people from Egypt, sample origin: Hepatology Outpatient Clinic of the Internal Medicine Department at the National Research Center and outpatient clinic of Professor Dr. Yaseen Abd El-Ghaffar Charity Center for Liver Diseases and Research, Egypt, contamination: natural, Ø conc.: 43.22 ng/ml, sample year: December 2004–August 2005, country: Egypt[144], *7 male and 5 female cirrhotic patients, Ø age: 48 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFM_1, literature[144], cirrhosis

For detailed information please see the article.

incidence: 4/108*, sample comp.: people from USA, sample origin: pediatric referral centers in Georgia, Tennessee, and Alabama (states), USA, contamination: natural, conc. range: 50–170 ppt, Ø conc.: 97.5 ppt, sample year: January–March 1978, country: USA[148], *91 control subjects and 17 Reye's-syndrome ca. but no predominant contamination
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[148]; Human urine, AFB_1, literature[148]

For detailed information please see the article.

incidence: 24/27, sample comp.: people from China, sample origin: Zhuqing (village), 45 km southwest of Fusui (county capital), China, contamination: natural, conc. range: 0.90–1,258.0 ng/24-h, Ø conc.: 192.3 ng/24-h, sample year: April 1999, country: China/USA[151], *male and female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[151]; Human urine, AFB_1, AFP_1, and AFQ_1, literature[151]

incidence: 2/5*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc. range: 580 ng on day 1**, 339 ng/on day 2**, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated
- Co-contamination: 2 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFL, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFG_1, AFG_2, and AFM_2, literature[180] (kwashiorkor)

incidence: 1/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc.: 7,352 ng on day 2**, 423 ng on day 4**, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated

- Co-contamination: 1 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFB_2, and AFM_2, literature[180] (marasmic kwashiorkor)

For detailed information please see the article.

incidence: 0/99*, sample comp.: people from UK, sample origin: Merseyside (metropolitan county), UK, contamination: no contamination, sample year: unknown, country: UK[181], *male volunteers (control), age: 17–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, literature[181], control

incidence: 6/60*, sample comp.: people from Netherlands, sample origin: clinic in Amsterdam (capital), Netherlands, contamination: natural, conc. range: 1.03–29.09 nmol/l, sample year: unknown, country: UK[181], *heroin abusers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFL, AFB_1, AFB_2, and AFM_2, literature[181], Amsterdam

incidence: 6/61*, sample comp.: people from UK, sample origin: clinic in Merseyside (metropolitan county), UK, contamination: natural, conc. range: 0.12–1.46 nmol/l, sample year: unknown, country: UK[181], *heroin abusers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFB_2, literature[181], Merseyside

incidence: 0/12*, sample comp.: people from UK, sample origin: clinic in London (capital), UK, contamination: no contamination, sample year: unknown, country: UK[181], *heroin abusers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 56/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.5–374 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, dry season

incidence: 42/97*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.1–35 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_2, OTA, 4R-OTA, and OTB, literature[182], male, rainy season

incidence: 48/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 2.3–34 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, dry season

incidence: 55/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.3–124 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_2, OTA, 4R-OTA, and OTB, literature[182], female, rainy season

incidence: 67/317*, sample comp.: people from China, sample origin: 4 small geographically defined areas of Shanghai (city), China, contamination: natural, conc. range: 0.17–5.2 ng/ml, sample year: January 1986–September 1989, country: China/USA[183], *mostly men (267 control ca. (49 af.) and 50 HCC ca. (18 af.)), age: 45–64 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFP_1, literature[183]

For detailed information please see the article.

incidence: ?/252, sample comp.: people from China, sample origin: Fushui (county), China, contamination: natural, conc. range: ≤3.2 ng/ml, and 0.04–4.84 µg/day, sample year: September 1985, country: China/USA[186], *male and female persons
- Co-contamination: 29 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[186]

incidence: 58/72*, sample comp.: people from China, sample origin: Daxin Township at the mouth of the Yangtze River, Qidong (region), China, contamination: natural, conc. range: ≤144.8 pg/mg creatinine, median level: 9.3 pg/mg of creatinine, sample year: started July 1995, country: China/USA[187], *adults in good general health receiving a placebo for 4 weeks
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[187], placebo

incidence: 47/57*, sample comp.: people from China, sample origin: Daxin Township at the mouth of the Yangtze River, Qidong (region), China, contamination: natural, conc. range: ≤70.3 pg/mg creatinine, median level: 7.1 pg/mg of creatinine, sample year: started July 1995, country: China/USA[187], *adults in good general health receiving 125 mg oltipraz daily for 4 weeks
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[187], 125 mg oltipraz

incidence: 49/60*, sample comp.: people from China, sample origin: Daxin Township at the mouth of the Yangtze River, Qidong (region), China, contamination: natural, conc. range: ≤25.3 pg/mg creatinine, median level: 4.6 pg/mg of creatinine, sample year: started July 1995, country: China/USA[187], *adults in good general health receiving 500 mg oltipraz weekly for 4 weeks
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, literature[187], 500 mg oltipraz

incidence: 4/50, sample comp.: people from Egypt, sample origin: Qalyubiyah (governorate), Egypt, contamination: natural, conc. range: 5.0–6.2 pg/ml, Ø conc.: 5.5 pg/ml, sample year: October 2004, country: Finland/UK/Egypt/Guinea[192], *34 male and 16 female children (HBV negative), age: 1–2.5 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, and AFG_2, literature[192]

incidence: 32/50, sample comp.: people from Guinea, sample const.: people from Guinea, sample origin: lower Kindia (region), Guinea, contamination: natural, conc. range: 8.0–801 pg/ml, Ø conc.: 97.0 pg/ml, sample year: July–August 2003, country: Finland/UK/Egypt/Guinea[192], *25 male and 25 female children (HBV positive), age: 2–4 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, and AFG_2, literature[192]

For detailed information please see the article.

incidence: 86/86*, sample comp.: people from Taiwan, sample origin: Fukien Taiwanese (48.8 %), mainland Chinese who or whose parents migrated to Taiwan (37.2 %), and Hakka Taiwanese (14.0 %), Taiwan, contamination: natural, conc. range: pr., sample year: August 1988–July 1992, country: Taiwan[194], *43 HbsAg carriers and 43 HbsAg non-carriers, age: 33–66 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFP_1, literature[194]

For detailed information please see the article.

incidence: 14/161*, sample comp.: people from Nigeria, sample origin: University of Lagos Teaching Hospital, Nigeria, contamination: natural, Ø conc.: 0.69 ng/100 ml, sample year: unknown, country: USA/Nigeria[195], *79 male and 82 female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_{2a}, AFG_1, and AFL, literature[195]

incidence: 88/138*, sample comp.: people from China, sample origin: rural counties in mainland China, contamination: natural, conc. range: ≤108 ng/12 h, Ø conc.: 3.2 ng/12 h, sample year: 1989, country: Taiwan/China/USA[198], *male persons, age: 35–64 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 21/32*, sample comp.: people from Taiwan, sample origin: survey areas in Taiwan, contamination: natural, conc. range: ≤17 ng/12 h, Ø conc.: 2.7 ng/12 h, sample year: 1989, country: Taiwan/China/USA[198], *male persons, age: 35–64 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 78/145*, sample comp.: people from China, sample origin: 2 townships in Qidong (region), China, contamination: natural, conc. range: >3.6–243 ng/l**, sample year: July 1987–July 1998, country: China/USA[199], *male persons with HBV hepatitis for 10 years, Ø age: 39.2 years, **highest levels of AFM_1 seem to occur in men in the age range of 30–45
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 47/49*, sample comp.: people from China, sample origin: Fushui (county), China, contamination: natural, conc. range: 0.01–2.09 ppb/24 h, sample year: unknown, country: China[200], *people from high liver cancer incidence area
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 48/50*, sample comp.: people from China, sample origin: Fushui (county), China, contamination: natural, conc. range: 0.01–0.37 ppb/24 h, sample year: unknown, country: China[200], *people from low liver cancer incidence area
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 94/96*, sample comp.: people from China, sample origin: Qu Liu (county), Fushui (county), China, contamination: natural, conc. range: ≤2.09 ppb, sample year: unknown, country: China[200], *children from high liver cancer incidence area
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 87/96*, sample comp.: people from China, sample origin: Liu Qiao (county), Fushui (county), China, contamination: natural, conc. range: ≤0.61 ppb, sample year: unknown, country: China[200], *children from low liver cancer incidence area

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: ≤1.38 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, DON-15-GlcA, FB_1, FB_2, NIV, OTA, ZEN, ZEN-14-GlcA, and α-ZOL, literature[218]

incidence: 1/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc.: <LOQ, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, FB_1, NIV, and OTA; 1 sa. co-contaminated with AFM_1, DON, and FB_1; 1 sa. co-contaminated with AFM_1, DON, and ZEN; 7 sa. co-contaminated with AFM_1 and DON; 6 sa. contaminated solely with AFM_1 (DON and ZEN include any DON or ZEA metabolite; together for HIV positive and HIV sero-negative adults, $\Sigma = 175$)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, and OTA, literature[218]

incidence: 1/12, sample comp.: people from Korea, sample origin: Korea, contamination: natural, conc.: 0.009 ng/ml, sample year: unknown, country: Korea[219]

- Co-contamination: 1 sa. co-contaminated with AFM_1 and OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[219]

incidence: 54/69*, sample comp.: people from Brazil, sample origin: Piracicaba (city), São Paulo (city), Brazil, contamination: natural, conc. range: 0.6–1.7 pg/ml (9 sa.), 1.8–9.7 pg/ml (37 sa.), 9.8–39.9 pg/ml (8 sa.), sample year: unknown, country: Brazil[234], *persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/120*, sample comp.: people from Nigeria, sample origin: Nasarawa and Kaduna (states), northern part of Nigeria, contamination: natural, conc. range: ≤1.5 µg/l, sample year: July/August 2011, country: Nigeria/Austria/Cameroon/South Africa/USA[241], *rural residents, age: 1–80 years

- Co-contamination: not clear
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-15-GlcA, FB_1, FB_2, OTA, ZEN, and ZEN-14-GlcA, literature[241]

For detailed information please see the article.

incidence: 21/179*, sample comp.: people from USA, sample origin: San Antonio metropolitan area of Bexar (county), southern region of Texas, USA, contamination: natural, conc. range: 1.89–935.49 pg/mg creatinine, sample year: October 2007–May 2008, country: USA[247], *male and female persons, age: ≥18 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[247]

For detailed information please see the article.

incidence: 118/205, sample comp.: people from Czech Republic, sample origin: Benesov, Plzen, Usti nad Labem, and Zdar

nad Sazavou (areas), Czech Republic, contamination: natural, conc. range: 19.0–19.219 pg/g creatinine, sample year: 1997–1998, country: Czech Republic/France[257]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[257]

incidence: 98/160*, sample comp.: people from Malaysia, sample origin: non-academic and support staffs from Universiti Putra Malaysia, Malaysia, contamination: natural, conc. range: ≤0.0747 ng/ml, sample year: unknown, country: Malaysia[260], *74 male and 86 female persons, age: 23–57 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 31/220*, sample comp.: people from Cameroon, sample origin: Anta, Baga, and Bmaya (villages of the northwest region, humid forest with monomodal rainfall) and Diffa, BGwana, and Kake (villages of the southwest region, western highlands), Cameroon, contamination: natural, conc. range: 0.06–4.7 ng/ml, sample year: March 2012, country: Belgium[263], *124 male and 96 female children, age: 1.5–4.5 years

- Co-contamination: 2, 3 and 4 mycotoxins co-occurred per sample in 35 %, 5 % and 5 % ca., respectively
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, FB_1, OTA, ZEN, α-ZOL, and ß-ZOL, literature[263]

For detailed information please see the article.

incidence: 75/82*, sample comp.: people from Ghana, sample origin: Ejura Sekyedumase (district), Ashanti (region), southern Ghana, contamination: natural, conc. range: ≤11,536.36 pg/dl creatinine (median conc.), sample year: unknown, country: USA/Ghana[265], *adults, age: ≥19 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, AFB_1, literature[265]

For detailed information please see the article.

incidence: 17/25*, sample comp.: people from Czech Republic, sample origin: Usti nad Labem (area), Czech Republic, contamination: natural, conc. range: ≤1,872 pg/l, sample year: unknown, country: Czech Republic[269]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/25*, sample comp.: people from Czech Republic, sample origin: Plzen (area), Czech Republic, contamination: natural, conc. range: ≤1,952 pg/l, sample year: unknown, country: Czech Republic[269]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/25*, sample comp.: people from Czech Republic, sample origin: Benesov (area), Czech Republic, contamination: natural, conc. range: ≤6,064 pg/l, sample year: unknown, country: Czech Republic[269]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 19/25*, sample comp.: people from Czech Republic, sample origin: Zdar nad Sazavou (area), Czech Republic, contamination: natural, conc. range: ≤462 pg/l, sample year: unknown, country: Czech Republic[269]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 44/93*, sample comp.: people from Egypt, sample origin: Ganzour and Maleeg (villages), Menoufiya (governorate), Nile Delta, northern Egypt, contamination: natural, conc. range: 4.1–408.6 pg/mg creatinine, sample year: May–September 2006, country: Finland/UK/

USA/Egypt/China[273], *female persons, age: 18–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[273]; Human urine, DON and DOM-1, literature[273]

For detailed information please see the article.

incidence: 3/52*, sample comp.: people from Italy, sample origin: Bari, Triggiano, Mola di Bari, Monopoli, Adelfia, Conversano, Polgnano a Mare, Martina Franca, and Statte (municipalities), southern Italy, contamination: natural, conc. range: ≤0.146 ng/ml, Ø conc.: 0.068 ng/ml, sample year: April 2011, country: Italy[283], *26 male and 26 female persons, age: 3–85 years
- Co-contamination: 2 sa. co-contaminated with AFM_1, DON, FB_1, OTA, and ZEN; 1 sa. co-contaminated with AFM_1, DON, OTA, and ZEN; 27 sa. co-contaminated with DON, FB_1, OTA, and ZEN; 20 sa. co-contaminated with DON, OTA, and ZEN; 2 sa. co-contaminated with OTA and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, FB_1, OTA, ZEN, α-ZOL, and ß-ZOL, literature[283]

For detailed information please see the article.

incidence: ?/53*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.89–13,297.67 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting placebos, **measured at baseline
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], placebo (baseline)

incidence: ?/53*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.66–1,547.39 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 1.5 g NovaSil, **measured at baseline
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], 1.5 g NovaSil (baseline)

incidence: ?/53*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.69–3,901.90 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 3.0 g NovaSil, **measured at baseline
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], 3.0 g NovaSil (baseline)

incidence: ?/52*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 1.66–798.11 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting placebos, **measured after 1 month
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], placebo (1 month)

incidence: ?/53*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.46–4,338.52 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 1.5 g NovaSil, **measured after 1 month
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], 1.5 g NovaSil (1 month)

incidence: ?/52*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.70–5,882.71 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 3.0 g NovaSil, **measured after 1 month

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], 3.0 g NovaSil (1 month)

incidence: ?/55*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 2.02–5,006.34 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting placebos, **measured after 3 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], placebo (3 months)

incidence: ?/51*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 1.59–8,878.78 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 1.5 g NovaSil, **measured after 3 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], 1.5 g NovaSil (3 months)

incidence: ?/53*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.80–411.68 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 3.0 g NovaSil, **measured after 3 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], 3.0 g NovaSil (3 months)

incidence: ?/54*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.04–529.14 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting placebos, **measured after 4 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], placebo (4 months)

incidence: ?/43*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 2.87–10,501.81 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 1.5 g NovaSil, **measured after 4 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], 1.5 g NovaSil (4 months)

incidence: ?/52*, sample comp.: people from Ghana, sample origin: 6 communities from the Ejura-Sekyedumase District (ESD), Ashanti Region, Ghana, contamination: natural, conc. range: 0.39–873.72 pg/mg creatinine**, sample year: September 2005–April 2006, country: USA/Ghana[457], *subjects getting 3.0 g NovaSil, **measured after 4 months

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[457], 3.0 g NovaSil (4 months)

No significant difference was found in detection rate (frequency) among the 3 study groups.

For detailed information please see the article.

Aflatoxin M_2

incidence: 2/7, sample comp.: people from Kenya, sample origin: Kyeni Consolata Hospital (rural hospital), Embu (district), Kenya, contamination: natural, conc. range: 36–241 pg/ml, Ø conc.: 138.5 pg/ml, sample year: unknown, country: Kenya/UK[16], *2 male adults with cirrhosis and HCC, **4 male and 3 female patients (age: 10 years-adult) with HCC, cirrhosis, and hepatitis

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[16]; Human serum, AFM_1 and AFM_2, literature[16]; Human urine, AFM_1, literature[16]

incidence: 1*/12**, sample comp.: people from Liberia, Nigeria, and South Africa, sample origin: unknown, contamination: natural, conc.: 31 pg/ml***, sample year: unknown, country: UK[81], *at least 1 pos. ca. showing marasmus, **children, ***serial aflatoxin estimation after 6 h

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_2 and AFG_1, literature[81]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, and AFM_1, literature[81]; Human urine, AFB_1, AFB_2, AFL, and AFM_1, literature[81]

For detailed information please see the article.

incidence: 1/15*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 156 pg/ml, sample year: unknown, country: Sudan/UK[82], *children with kwashiorkor

- Co-contamination: 1 sa. co-contaminated with AFG_2, AFM_1, and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFB_1, AFB_2, and AFL, literature[82]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, and AFL, literature[82]; Human urine, AFB_2, AFG_1, and AFM_1, literature[82] (kwashiorkor)

incidence: 0/10*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *9 children with marasmus and 1 child with marasmic kwashiorkor

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, and AFM_1, literature[82] (marasmus, marasmic kwashiorkor)

incidence: 0/3*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital and Soba University Hospital, Khartoum (capital), Sudan, contamination: no contamination, sample year: unknown, country: Sudan/UK[82], *children with miscellaneous diseases

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human liver, AFG_1, AFG_2, AFL, and AFM_2, literature[82]; Human serum, AFB_1, literature[82]; Human urine, AFB_1, literature[82] (miscellaneous diseases)

incidence: 19/30*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 1.2–26.0 ng/ml, sample year: unknown, country: Sierra Leone[118], *male malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, OTA, 4R-OTA, and OTB, literature[118]

incidence: 16/24*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.5–32.0 ng/ml, sample year:

unknown, country: Sierra Leone[118], *female malnourished children
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, OTA, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 1/5*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc.: 108 ng on day 2**, sample year: October–December 1986, country: Kenya/UK[180], *children with kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human stool, AFB_1, AFL, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFG_1, AFG_2, and AFM_1, literature[180] (kwashiorkor)

incidence: 2/7*, sample comp.: people from Kenya, sample origin: St Mary's Hospital in Mumias (town), Kakamega (district), Kenya, contamination: natural, conc. range: 663 ng on day 2**, 3,873 ng on day 3**, 239 ng on day 4**, sample year: October–December 1986, country: Kenya/UK[180], *children with marasmic kwashiorkor on an aflatoxin-free diet, **total 24 h urine production calculated
- Co-contamination: 1 sa. co-contaminated with AFM_1 and AFM_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human stool, AFB_1, AFM_1, and AFM_2, literature[180]; Human urine, AFB_1, AFB_2, and AFM_1, literature[180] (marasmic kwashiorkor)

For detailed information please see the article.

incidence: 0/99*, sample comp.: people from UK, sample origin: Merseyside (metropolitan county), UK, contamination: no contamination, sample year: unknown, country: UK[181], *male volunteers (control), age: 17–40 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_2, literature[181], control

incidence: 6/60*, sample comp.: people from Netherlands and UK, sample origin: Amsterdam (capital), Netherlands, contamination: natural, conc. range: 0.40–1.88 nmol/l, sample year: unknown, country: UK[181], *heroin abusers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFL, AFB_2, and AFM_1, literature[181], Amsterdam

incidence: 0/61*, sample comp.: people from UK, sample origin: clinic in Merseyside (metropolitan county), UK, contamination: no contamination, sample year: unknown, country: UK[181], *heroin abusers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, and AFM_1, literature[181], Merseyside

incidence: 0/12*, sample comp.: people from UK, sample origin: clinic in London (capital), UK, contamination: no contamination, sample year: unknown, country: UK[181], *heroin abusers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 71/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 4.5–130 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, OTA, 4R-OTA, and OTB, literature[182], male, dry season

incidence: 62/97*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 1.3–41.3 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, OTA, 4R-OTA, and OTB, literature[182], male, rainy season

incidence: 48/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 4.5–94 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, OTA, 4R-OTA, and OTB, literature[182], female, dry season

incidence: 66/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 5.1–86 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, OTA, 4R-OTA, and OTB, literature[182], female, rainy season

Aflatoxin P_1

incidence: 8/27, sample comp.: people from China, sample origin: Zhuqing (village), 45 km southwest of Fusui (county capital), China, contamination: natural, conc. range: 80.4–3,569.7 ng/24-h, Ø conc.: 664.9 ng/24-h, sample year: April 1999, country: China/USA[151], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[151]; Human urine, AFB_1, AFM_1, and AFQ_1, literature[151]

incidence: 53/317*, sample comp.: people from China, sample origin: 4 small geographically defined areas of Shanghai (city), China, contamination: natural, conc. range: 0.59–16 ng/ml, sample year: January 1986–September 1989, country: China/USA[183], *mostly men (267 control ca. (39 af.) and 50 HCC ca. (14 af.)), age: 45–64 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[183]

For detailed information please see the article.

incidence: 70/86*, sample comp.: people from Taiwan, sample origin: Fukien Taiwanese (48.8 %), mainland Chinese who or whose parents migrated to Taiwan (37.2 %), and Hakka Taiwanese (14.0 %), Taiwan, contamination: natural, conc. range: pr., sample year: August 1988–July 1992, country: Taiwan[194], *43 HbsAg carriers and 43 HbsAg non-carriers, age: 33–66 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1 and AFM_1, literature[194]

For detailed information please see the article.

Aflatoxin P

incidence: 0/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *19 male and 11

female infants with PEM (kwashiorkor), age: 7–20 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFM_1, literature[117] (kwashiorkor)

incidence: 1/30*, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: natural, conc.: 2 ng/100 ml, sample year: unknown, country: Egypt[117], *16 male and 14 female infants with PEM (marasmus), age: 6–13 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, AFL, and AFM_1, literature[117]; Human urine, AFB_1, AFB_2, AFB_{2a}, AFG_1, AFG_{2a}, and AFM_1, literature[117] (marasmus)

incidence: 0/10* **, sample comp.: people from Egypt, sample origin: Alexandria University Children's Hospital at El-Shatby, Egypt, contamination: no contamination, sample year: unknown, country: Egypt[117], *6 male and 4 female healthy infants (control), age: 6–24 months
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin Q_1

incidence: 7/27, sample comp.: people from China, sample origin: Zhuqing Village, 45 km southwest of Fusui (county capital), China, contamination: natural, conc. range: 77.3–137.5 ng/24-h, Ø conc.: 92.2 ng/24-h, sample year: April 1999, country: China/USA[151], *male and female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFB_1, literature[151]; Human urine, AFB_1, AFM_1, and AFP_1, literature[151]

Aflatoxin

incidence: 6/8*, sample comp.: people from Kenya, sample origin: Kyeni Consolata Mission Hospital, Embu (district), Kenya, contamination: natural, conc. range: 3–533 pg/ml, Ø conc.: 223 pg/ml, sample year: October 1984–January 1985, country: Kenya/UK[19], * children (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[19], control

incidence: 5/11*, sample comp.: people from Kenya, sample origin: Kyeni Consolata Mission Hospital, Embu (district), Kenya, contamination: natural, conc. range: 6–986 pg/ml, Ø conc.: 261 pg/ml, sample year: October 1984–January 1985, country: Kenya/UK[19], *children with marasmus
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[19], marasmus

incidence: 3/5*, sample comp.: people from Kenya, sample origin: Kyeni Consolata Mission Hospital, Embu (district), Kenya, contamination: natural, conc. range: 60–4,425 pg/ml, Ø conc.: 1,294 pg/ml, sample year: October 1984–January 1985, country: Kenya/UK[19], *children with marasmic kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[19], marasmic kwashiorkor

incidence: 5/12*, sample comp.: people from Kenya, sample origin: Kyeni Consolata Mission Hospital, Embu (district), Kenya, contamination: natural, conc. range: 40–1,370 pg/ml, Ø conc.: 324 pg/ml, sample year: October 1984–January 1985, country: Kenya/UK[19], *children with kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[19], kwashiorkor

incidence: 20/20*, sample comp.: people from Gambia, sample origin: Keneba (village) in west Kiang district, Gambia, contamination: natural, conc. range: 48.2–7,099.2 ng/day**, sample year: October (end of rainy season) 19??, country: USA/France/UK[201], *10 male and 10 female persons thereof 10 HBV ca. but no predominant contamination, age: 15–56 years, **AF-N^7-Gua
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/112*, sample comp.: people from Taiwan, sample origin: 8 different townships in Taiwan with a fourfold variation in age-adjusted HCC mortality, contamination: natural, conc. range: 27.0–107.7 pg/ml (mean values), country: USA/Taiwan[203], *male persons partly HBV and/or HCC carriers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/134*, sample const.: people from Taiwan, sample origin: 8 different townships in Taiwan with a fourfold variation in age-adjusted HCC mortality, contamination: natural, conc. range: 20.3–61.9 pg/ml (mean values), country: USA/Taiwan[203], *female persons partly HBV and/or HCC carriers
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 53/87*, sample comp.: people from China, sample origin: Daxin Township at the mouth of the Yangtze River, Qidong (region), Jiangsu (province), China, contamination: natural, conc. range: ≤4.10 pg adduct/mg creatinine**, sample year: started in August 1997, country: USA/China[204], *males and female persons, age: 25–65 years ingesting placebos 3 times daily for 4 months, **AF-N^7-Gua
- Co-contamination: not reported
- Further contamination (organs, fluids, mycotoxins etc.): not reported

incidence: 52/82*, sample comp.: people from China, sample origin: Daxin Township at the mouth of the Yangtze River, Qidong (region), Jiangsu (province), China, contamination: natural, conc. range: ≤0.98 pg adduct/mg creatinine**, sample year: started in August 1997, country: USA/China[204], *males and female persons, age: 25–65 years ingesting 100 mg chlorophyllin 3 times daily for 4 months, **AF-N^7-Gua
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 20/20, sample comp.: people from China, sample origin: Guangxi (province), China, contamination: natural, conc. range: 0.1–10 ng/ml*, sample year: unknown, country: USA/China[205], *AF-eq.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxins

incidence: 21/106*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 191 pg/ml (geometric mean), sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children (control)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFL and AFS, literature[115], control

incidence: 18/70*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 508 pg/ml (geometric mean), sample year: beginning in February 1981, country:

UK/Sudan[115], *male and female children with marasmus
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFL and AFS, literature[115], marasmus

incidence: 8/32*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 742 pg/ml (geometric mean), sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children with marasmic kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFL and AFS, literature[115], marasmic kwashiorkor

incidence: 14/42*, sample comp.: people from Sudan, sample origin: Soba University Teaching Hospital and Children's Emergency Hospital, Khartoum (capital), Sudan, contamination: natural, conc.: 143 pg/ml (geometric mean), sample year: beginning in February 1981, country: UK/Sudan[115], *male and female children with kwashiorkor
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFL and AFS, literature[115], kwashiorkor

incidence: 64/65, sample comp.: people from Philippines, sample origin: Research Institute for Tropical Medicine, Alabang (city), south of Manila, (capital), Philippines, contamination: natural, conc. range: 0.10–4.77 ng/ml**, sample year: December 1986–January 1987, country: UK/Philippines[153], *children with ALRI, age: 0.08–12 years, weight for height: 6.6–23.1 kg/m, **AF-metabolites
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[153]

incidence: 44/155*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital (CEH) and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 1–9 pg/ml** (1 sa.), 10–99 pg/ml** (14 sa.), 100–999 pg/ml** (16 sa.), ≥1,000 pg/ml** (13 sa.), sample year: April 1981–April 1983, country: UK/Sudan[159], *children (control), age: 6–40 months, **AFS = AFB_1, AFL, and AFM_1
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFS, literature[159], control

incidence: 31/114*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital (CEH) and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 1–9 pg/ml** (1 sa.), 10–99 pg/ml** (10 sa.), 100–999 pg/ml** (11 sa.), ≥1,000 pg/ml** (9 sa.), sample year: April 1981–April 1983, country: UK/Sudan[159], *children with kwashiorkor, age: 4–41 months, **AFS = AFB_1, AFL, and AFM_1
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFS, literature[159], kwashiorkor

incidence: 30/77*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital (CEH) and Soba University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 10–99 pg/ml** (9 sa.), 100–999 pg/ml** (8 sa.), ≥1,000 pg/ml** (13 sa.), sample year: April 1981–April 1983, country: UK/Sudan[159], *children with marasmic kwashiorkor, age: 7–48 months, **AFS = AFB_1, AFL, and AFM_1
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFS, literature[159], marasmic kwashiorkor

incidence: 31/119*, sample comp.: people from Sudan, sample origin: Children's Emergency Hospital (CEH) and Soba

University Hospital, Khartoum (capital), Sudan, contamination: natural, conc. range: 10–99 pg/ml** (7 sa.), 100–999 pg/ml** (13 sa.), ≥1,000 pg/ml** (11 sa.), sample year: April 1981–April 1983, country: UK/Sudan[159], *children with marasmus, age: 7–48 months, **AFS = AFB_1, AFL, and AFM_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AFS, literature[159], marasmus

incidence: 13/112*, sample comp.: people from USA, sample origin: diverse geographic areas in USA, contamination: natural, conc. range: 1.1–9.4 ppb, Ø conc.: 4.67 ppb, sample year: February–July 2012, country: USA[225], *38 male and 84 female patients with CFS, age: 15–72 years

- Co-contamination: 8 sa. co-contaminated with AFS, OTA, and TRICHO; 4 sa. co-contaminated with AFS and TRICHO; 1 sa. contaminated solely with AFS
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA and TRICHO, literature[225]

incidence: 0/55*, sample comp.: people from USA, sample origin: diverse geographic areas in USA, contamination: no contamination, sample year: February–July 2012, country: USA[225], *28 male and 27 female healthy patients (control), age: 18–72 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/7*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: ≤0.800 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 4 female patients with slight CKDue, age: 9–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, FBS and OTS, literature[236], slight

incidence: 5/7*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: ≤0.037 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *6 male and 1 female patient/s with mild CKDue, age: 39–59 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, FBS and OTS, literature[236], mild

incidence: 4/6*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: ≤0.039 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 3 female patients with moderate CKDue, age: 11–60 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, FBS and OTS, literature[236], moderate

incidence: 4/6*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: ≤0.800 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 3 female patients with severe CKDue, age: 35–58 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTS, literature[236], severe

incidence: 0/5*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: no contamination, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 2 female patients with end stage CKDue, age: 30–65 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTS, literature[236], end stage

incidence: 6/6*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: 0.020–0.800 ng/ml, Ø conc.: 0.298 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *2 male and 4 female unaffected relatives of CKDue patients (control), age: 6–34 years

- Co-contamination: 1 sa. co-contaminated with AFS, FBS, and OTS; 5 sa. co-contaminated with AFS and OTS
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, FBS and OTS, literature[236], relatives control

incidence: 0/4*, sample comp.: people from Japan, sample origin: Japan, contamination: no contamination, sample year: August 2009, country: Japan/Sri Lanka[236], *4 female Japanese controls, age: 42–53 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTS, literature[236], Japanese controls

Aspergillus and ***Penicillium*** Toxins

Citrinin

incidence: 10/10*, sample comp.: people from Germany, sample origin: Dortmund? (city), Germany, contamination: natural, conc. range: <LOQ–0.20 ng/ml, sample year: winter 2010?, country: Germany[224], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, CIT, literature[224], Human urine, HO-CIT, literature[224]

incidence: 1/40*, sample comp.: people from Belgium (one of China), sample origin: small group of the Belgian population, Belgium, contamination: natural, conc.: 4.5 ng/mg creatinine, sample year: unknown, country: Belgium[264], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, OTA, OTα, 4R-OTA, ZEN, and ß-ZOL, literature[264]

For detailed information please see the article.

Dihydrocitrinone

incidence: 10/10*, sample comp.: people from Germany, sample origin: Dortmund? (city), Germany, contamination: natural, conc. range: <LOQ–1.12 ng/ml, sample year: winter 2010?, country: Germany[224], *male and female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, Human urine, CIT, literature[224]

Ochratoxin A

incidence: 2/2*, sample comp.: people from France, sample origin: Centre Hospitalier et Universitaire de Rouen (city), Hôpital de Boisguillaume, France, contamination: natural, conc. range: 367.0–1,801 ng/ml, Ø conc.: 1,084 ng/ml, sample year: unknown, country: France[31], * siblings (male and female)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human blood, OTA, literature[31]

incidence: 4/7*, sample comp.: people from UK, contamination: natural, sample origin: UK, conc. range: LOD/LOQ–0.9 µg/l (maximum: 0.023 µg/l), Ø conc.: 0.019 µg/l, sample year: 1999, country: EU[73], *male and female persons eating ethnic diet, age: 18–55 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma, Human plasma/serum, Human serum, OTA, literature[73], ethnic, normal, vegetarian

incidence: 24/32*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (maximum: 0.058 µg/l), Ø conc.: 0.0189 µg/l, sample year: 1999,

country: EU[73], *male and female persons eating normal diet, age: 18–55 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma, Human plasma/serum, Human serum, OTA, literature[73], ethnic, normal, vegetarian

incidence: 9/11*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: LOD/LOQ–0.9 µg/l (maximum: 0.054 µg/l), Ø conc.: 0.025 µg/l, sample year: 1999, country: EU[73], *male and female persons eating vegetarian diet, age: 18–55 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human funiculum, Human placenta, Human plasma, Human plasma/serum, Human serum, OTA, literature[73], ethnic, normal, vegetarian

incidence: 46/50*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: <0.01–0.058 ng/ml**, sample year: unknown, country: UK[106], *32 persons consumed normal, 11 vegetarian, and 7 ethnic diet but no significant differences associated with the ethnic diet of the subjects, **determined over a period of 27 days
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, OTA, literature[106]

For detailed information please see the article.

incidence: 4/11*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 2.81–6.70 ng/ml, Ø conc.: 5.25 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female patients with ESRD under conservative medical treatment, age: 9–55 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human serum, OTA, literature[113], ESRD, conservative

incidence: 1/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc.: 4.0 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female patients with ESRD under dialytic therapy, age: 10–58 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human serum, OTA, literature[113], ESRD, dialytic

incidence: 2/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.43–1.36 ng/ml, Ø conc.: 0.90 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female renal transplant recipients, age: 18–43 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human serum, OTA, literature[113], transplant

incidence: 8/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.69–8.19 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female patients with nephrotic syndrome, age: 5–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human serum, OTA, literature[113], nephrotic syndrome

incidence: 1/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc.: 4.64 ng/ml, sample year: unknown,

country: Egypt/France[113], *male and female patients with urothelial tumours, age: 38–70 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human serum, OTA, literature[113], urothelial tumours

incidence: 2/15*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc. range: 0.22–3.42 ng/ml, Ø conc.: 1.82 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female potential kidney donors, age: 22–50 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human serum, OTA, literature[113], kidney donors

incidence: 1/25*, sample comp.: people from Egypt, sample origin: Urology and Nephrology Center—Mansoura (city), Egypt, contamination: natural, conc.: 0.31 ng/ml, sample year: unknown, country: Egypt/France[113], *male and female healthy persons, age: 21–49 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human renal tissue, Human serum, OTA, literature[113], healthy

incidence: 10/30*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.3–26.6 ng/ml, sample year: unknown, country: Sierra Leone[118], *male malnourished children
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[118]

incidence: 3/24*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.7–16.0 ng/ml, sample year: unknown, country: Sierra Leone[118], *female malnourished children
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 5/5*, sample comp.: people from Bulgaria, sample origin: Gorno Peshtene (village), Vratza (district, high risk area of BEN), north-west Bulgaria, contamination: natural, conc. range: 16–98 ng/l**, Ø conc.: 50.8 ng/l (in total), country: Bulgaria/France[177], *healthy persons (each person gave an urine sa. on days 1, 6, 13, 20, and 27), age: 20–30 years, **resulting from 35 single values
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[177]

incidence: 11/11*, sample comp.: people from Bulgaria, sample origin: Beli Izvor (village), Vratza (district, high risk area of BEN), north-west Bulgaria, contamination: natural, conc. range: 36–860 ng/l**, Ø conc.: 168.64 ng/l (in total), country: Bulgaria/France[177], *healthy persons (each person gave an urine sa. on days 1, 6, 13, 20, and 27), age: 20–30 years, **resulting from 50 single values
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[177]

For detailed information please see the article.

incidence: 29/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.07–59 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[182], male, dry season

incidence: 26/97*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.6–72.2 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[182], male, rainy season

incidence: 34/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.08–148 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[182], female, dry season

incidence: 21/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.7–4.9 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, 4R-OTA, and OTB, literature[182], female, rainy season

incidence: 13/30*, sample comp.: people from Portugal, sample origin: Coimbra (city), Portugal, contamination: natural, conc. range: 0.011–0.208 ng/ml**, sample year: September 2005–February 2006, country: Portugal/Spain[210], *13 male (age: 22–67 years) and 17 female (age: 15–55 years) healthy resident individuals, **morning sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/30*, sample comp.: people from Portugal, sample origin: Coimbra (city), Portugal, contamination: natural, conc. range: 0.008–0.011 ng/ml**, sample year: September 2005–February 2006, country: Portugal/Spain[210], *13 male (age: 22–67 years) and 17 female (age: 15–55 years) healthy resident individuals, **afternoon sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/31*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc. range: 0.007–0.124 ng/ml**, sample year: April 2005, country: Portugal/Spain[210], *10 male (age: 18–51 years) and 21 female (age: 24–53 years) healthy individuals, **morning sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 26/31*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc. range: 0.008–0.089 ng/ml**, sample year: April 2005, country: Portugal/Spain[210], *10 male

(age: 18–51 years) and 21 female (age: 24–53 years) healthy individuals, **afternoon sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 0/3*, sample comp.: people from Bulgaria, sample origin: areas of high and low incidence of Balkan endemic nephropathy and urinary tract tumours, Vratza (district), Bulgaria, contamination: no contamination, sample year: unknown, country: France/India/Bulgaria[211], *healthy people in villages in non-endemic area
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/36*, sample comp.: people from Bulgaria, sample origin: areas of high and low incidence of Balkan endemic nephropathy and urinary tract tumours, Vratza (district), Bulgaria, contamination: natural, conc. range: 5–604 ng/l, sample year: unknown, country: France/India/Bulgaria[211], *patients with endemic nephropathy or urinary tract tumour
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/25*, sample comp.: people from Bulgaria, sample origin: areas of high and low incidence of Balkan endemic nephropathy and urinary tract tumours, Vratza (district), Bulgaria, contamination: natural, conc. range: 5–32 ng/l, sample year: unknown, country: France/India/Bulgaria[211], *patients with suspected endemic nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12/25*, sample comp.: people from Bulgaria, sample origin: areas of high and low incidence of Balkan endemic nephropathy and urinary tract tumours, Vratza (district), Bulgaria, contamination: natural, conc. range: 5–33 ng/l, sample year: unknown, country: France/India/Bulgaria[211], *family members of patients with endemic nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/32*, sample comp.: people from Bulgaria, sample origin: areas of high and low incidence of Balkan endemic nephropathy and urinary tract tumours, Vratza (district), Bulgaria, contamination: natural, conc. range: 5–43 ng/l, sample year: unknown, country: France/India/Bulgaria[211], *healthy members of healthy families in endemic villages
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/31*, sample comp.: people from Bulgaria, sample origin: areas of high and low incidence of Balkan endemic nephropathy and urinary tract tumours, Vratza (district), Bulgaria, contamination: natural, conc. range: 17–41 ng/l, sample year: unknown, country: France/India/Bulgaria[211], *healthy people in unaffected villages in endemic area
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12/16*, sample comp.: people from Hungary, sample origin: Besenyõtelek (village), Heves (county), northern part of Hungary, contamination: natural, conc. range: 0.006–0.065 ng/ml, Ø conc.: 0.022 ng/ml, sample year: April 2003, country: Hungary[212], *male and female healthy persons, age: 8–80 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/13*, sample comp.: people from Hungary, sample origin: Füzesabony (town), Heves (county), northern part of Hungary, contamination: natural, conc. range: 0.007–0.029 ng/ml, Ø conc.: 0.018 ng/ml, sample year: April 2003, country: Hungary[212], *male and female healthy persons, age: 8–80 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/16*, sample comp.: people from Hungary, sample origin: Debrecen (town), Hajdú-Bihar (county), eastern part of Hungary, contamination: natural, conc. range: 0.006–0.011 ng/ml, Ø conc.: 0.008 ng/ml, sample year: April 2003, country: Hungary[212], *male and female healthy persons, age: 8–80 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/9*, sample comp.: people from Hungary, sample origin: Komádi (village), Hajdú-Bihar (county), eastern part of Hungary, contamination: natural, conc. range: 0.006–0.019 ng/ml, Ø conc.: 0.010 ng/ml, sample year: April 2003, country: Hungary[212], *male and female healthy persons, age: 8–80 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/34*, sample comp.: people from Hungary, sample origin: Kaposvár (town), Somogy (county), south-western part of Hungary, contamination: natural, conc. range: 0.006–0.012 ng/ml, Ø conc.: 0.008 ng/ml, sample year: April 2003, country: Hungary[212], *male and female healthy persons, age: 8–80 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 42/60*, sample comp.: people from Portugal, sample origin: Coimbra (city), Portugal, contamination: natural, conc. range: 0.021–0.105 ng/ml, sample year: November 2004, country: Portugal/Czech Republic[213], *34 male (age: 22–73 years) and 26 female (age: 19–82 years) persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 22/38*, sample comp.: people from Italy, sample origin: south of Italy (Apulia) and north of Italy (S. Rita Hospital, Bari and Circolo-Fondazione Macchi Hospital), Varese (city), Italy, contamination: natural, conc. range: 0.012–0.046 ng/ml, sample year: unknown, country: Italy[214], *healthy individuals

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/3*, sample comp.: people from Italy, sample origin: Circolo-Fondazione Macchi Hospital, Varese (city), Italy, contamination: natural, conc. range: ≤0.140 ng/ml, sample year: unknown, country: Italy[214], *patients with KIN

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 16/22*, sample comp.: people from Portugal, sample origin: Lisbon region, Portugal, contamination: natural, conc. range: ≤0.071 ng/ml, sample year: November 2007–March 2008, country: Portugal[215], *male inhabitants of Lisbon, age: 23–75 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15/21*, sample comp.: people from Portugal, sample origin: Lisbon region, Portugal, contamination: natural, conc. range: ≤0.055 ng/ml, sample year: November 2007–March 2008, country: Portugal[215], *female inhabitants of Lisbon, age: 18–69 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 28/30*, sample comp.: people from Portugal, sample origin: Bragança (region), Portugal, contamination: natural, conc. range: ≤0.069 ng/ml, Ø conc.: 0.024 ng/ml, sample year: winter 2007, country: Portugal[216], *11 male and 19 female persons, age: 22–65 years, weight: 48–110 kg, height: 150–192 cm

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 22/30*, sample comp.: people from Portugal, sample origin: Porto (region), Portugal, contamination: natural, conc. range: ≤0.062 ng/ml, Ø conc.: 0.021 ng/ml, sample year: winter 2007, country: Portugal[216], *15 male and 15 female persons, age: 18–83 years, weight: 47–90 kg, height: 155–183 cm

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 16/30*, sample comp.: people from Portugal, sample origin: Coimbra (region), Portugal, contamination: natural, conc. range: ≤0.034 ng/ml, Ø conc.: 0.0124 ng/ml, sample year: winter 2007, country: Portugal[216], *12 male and 18 female persons, age: 22–80 years, weight: 51–98 kg, height: 150–188 cm

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 36/40*, sample comp.: people from Portugal, sample origin: Alentejo (region), Portugal, contamination: natural, conc. range: ≤0.064 ng/ml, Ø conc.: 0.023 ng/ml, sample year: winter 2007, country: Portugal[216], *18 male and 22 female persons, age: 23–96 years, weight: 52–95 kg, height: 150–182 cm

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/25*, sample comp.: people from Portugal, sample origin: Algarve (region), Portugal, contamination: natural, conc. range: ≤0.068 ng/ml, Ø conc.: 0.024 ng/ml, sample year: winter 2007, country: Portugal[216], *11 male and 14 female persons, age: 20–82 years, weight: 49–120 kg, height: 148–180 cm

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/18*, sample comp.: people from Croatia, sample origin: control village where EN is not known, Croatia, contamination: natural, conc. range: 0.005–0.02 ng/ml, Ø conc.: 0.01 ng/ml, sample year: spring 2000, country: Croatia[217], *control persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 19/45*, sample comp.: people from Croatia, sample origin: Kaniža (EN endemic village), Croatia, contamination: natural, conc. range: 0.005–0.086 ng/ml, Ø conc.: 0.017 ng/ml, sample year: spring 2000, country: Croatia[217], *inhabitants of Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/18*, sample comp.: people from Croatia, sample origin: control village where EN is not known, Croatia, contamination: natural, conc.: 0.01 ng/ml, Ø conc.: 0.01 ng/ml, sample year: spring 2005, country: Croatia[217], *control persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/45*, sample comp.: people from Croatia, sample origin: Kaniža (EN endemic village), Croatia, contamination: natural, conc. range: 0.005–0.015 ng/ml, Ø conc.: 0.007 ng/ml, sample year: spring 2005, country: Croatia[217], *inhabitants of Kaniža

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: ≤1.87 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine,

AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, FB_2, NIV, ZEN, ZEN-14-GlcA, and α-ZOL, literature[218]

incidence: 3/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc.: ≤0.83 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, FB_1, NIV, and OTA; 1 sa. co-contaminated with FB_1, FB_2, NIV, and OTA; 6 sa. co-contaminated with DON and OTA; 1 sa. co-contaminated with NIV and OTA; 18 sa. contaminated solely with OTA (DON and ZEA include any DON or ZEA metabolite; together for HIV positive and HIV sero-negative adults, Σ=175)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, and NIV, literature[218]

incidence: 12/12, sample comp.: people from Korea, sample origin: Korea, contamination: natural, conc. range: 0.013–0.093 ng/ml, Ø conc.: 0.031 ng/ml, sample year: unknown, country: Korea[219]

- Co-contamination: 1 sa. co-contaminated with AFM_1 and OTA; 11 sa. contaminated solely with OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, literature[219]

incidence: 193/233*, sample comp.: people from Turkey, sample origin: Diyarbakir, Istanbul, and Izmir (cities), Ankara (capital), Turkey, contamination: natural, conc. range: ≤75.60 ng/g creatinine, Ø conc.: 14.34 ng/ g creatinine, sample year: unknown, country: Turkey[220], *125 male and 108 female persons, age: 18–<65 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 87/112*, sample comp.: people from USA, sample origin: diverse geographic areas in USA, contamination: natural, conc. range: 2–14.6 ppb, Ø conc.: 6.2 ppb, sample year: February 2012–July 2012, country: USA[225], *38 male and 84 female patients with CFS, age: 15–72 years

- Co-contamination: 8 sa. co-contaminated with AFS, OTA, and TRICHO; 24 sa. co-contaminated with OTA and TRICHO; 55 sa. contaminated solely with OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and TRICHO, literature[225]

incidence: 0/55*, sample comp.: people from USA, sample origin: diverse geographic areas in USA, contamination: no contamination, sample year: February 2012–July 2012, country: USA[225], *28 male and 27 female healthy patients (control), age: 18–72 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14*, sample comp.: people from Bulgaria, sample origin: Gorno Peshtene and Beli Izvor (villages), Vratza (district), Bulgaria, contamination: natural, conc. range: 16–860 ng/l, Ø conc.: 141.4 ng/l, sample year: unknown, country: France/Bulgaria[229], *healthy volunteers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[229]

incidence: 14/14*, sample comp.: people from Bulgaria, sample origin: Gorno Peshtene and Beli Izvor (villages), Vratza (district), Bulgaria, contamination: natural, conc. range: 9.42–1,272.4 ng/day, Ø conc.: 170.9 ng/day, sample year: unknown, country: France/Bulgaria[229], *healthy volunteers

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, OTA, literature[229]

incidence: 9/72*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.057–0.562 ng/ml, Ø conc.: 0.237 ng/ml, sample year: October–December 2009, country: Spain[231], *29 male and 43 female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTα, literature[231], male and female

incidence: 3/29*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.111–0.562 ng/ml, Ø conc.: 0.304 ng/ml, sample year: October–December 2009, country: Spain[231], *male persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTα, literature[231], male

incidence: 6/43*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.057–0.445 ng/ml, Ø conc.: 0.204 ng/ml, sample year: October–December 2009, country: Spain[231], *female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTα, literature[231], female

incidence: 5/24*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.057–0.562 ng/ml, Ø conc.: 0.280 ng/ml, sample year: October–December 2009, country: Spain[231], *male and female persons, age: 18–29 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTα, literature[231], 18–29 years

incidence: 1/24*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc.: 0.111 ng/ml, sample year: October–December 2009, country: Spain[231], *male and female persons, age: 30–44 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTα, literature[231], 30–44 years

incidence: 3/24*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.077–0.363 ng/ml, Ø conc.: 0.208 ng/ml, sample year: October–December 2009, country: Spain[231], *male and female persons, age: >45 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTα, literature[231], >45 years

For detailed information please see the article.

incidence: 18/18*, sample comp.: people from Portugal, sample origin: Bragança (region), Portugal, contamination: natural, conc. range: <LOQ–0.042 ng/ml, Ø conc.: 0.021 ng/ml, sample year: winter 2007, country: Spain[237], *9 male and 9 female persons, age: 20–56 years, weight: 48–115 kg, height: 150–192 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/18*, sample comp.: people from Portugal, sample origin: Bragança (region), Portugal, contamination: natural, conc. range: ≤0.022 ng/ml, Ø conc.: 0. 013 ng/ml, sample year: summer 2008, country: Spain[237], *9 male and 9 female persons, age: 20–56 years, weight: 48–115 kg, height: 150–192 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 18/19*, sample comp.: people from Portugal, sample origin: Porto (region), Portugal, contamination: natural, conc. range: ≤0.062 ng/ml, Ø conc.: 0.021 ng/ml, sample year: winter 2007, country: Spain[237], *9 male and 10 female persons, age: 24–83 years, weight: 47–90 kg, height: 155–183 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/19*, sample comp.: people from Portugal, sample origin: Porto (region), Portugal, contamination: natural, conc. range: ≤0.040 ng/ml, Ø conc.: 0.017 ng/ml, sample year: summer 2008, country: Spain[237], *9 male and 10 female persons, age: 24–83 years, weight: 47–90 kg, height: 155–183 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/6*, sample comp.: people from Portugal, sample origin: Coimbra (region), Portugal, contamination: natural, conc. range: ≤0.011 ng/ml, Ø conc.: 0.010 ng/ml, sample year: winter 2007, country: Spain[237], *3 male and 3 female persons, age: 23–56 years, weight: 51–98 kg, height: 150–188 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/6*, sample comp.: people from Portugal, sample origin: Coimbra (region), Portugal, contamination: natural, conc. range: <LOQ–0.022 ng/ml, Ø conc.: 0.013 ng/ml, sample year: summer 2008, country: Spain[237], *3 male and 3 female persons, age: 23–56 years, weight: 51–98 kg, height: 150–188 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/35*, sample comp.: people from Portugal, sample origin: Lisboa (region), Portugal, contamination: natural, conc. range: <LOQ–0.071 ng/ml, Ø conc.: 0.025 ng/ml, sample year: winter 2007, country: Spain[237], *18 male and 17 female persons, age: 23–69 years, weight: 53–108 kg, height: 149–185 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 31/35*, sample comp.: people from Portugal, sample origin: Lisboa (region), Portugal, contamination: natural, conc. range: ≤0.033 ng/ml, Ø conc.: 0.013 ng/ml, sample year: summer 2008, country: Spain[237], *18 male and 17 female persons, age: 23–69 years, weight: 53–108 kg, height: 149–185 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/5*, sample comp.: people from Portugal, sample origin: Alentejo (region), Portugal, contamination: natural, conc. range: <LOQ–0.039 ng/ml, Ø conc.: 0.022 ng/ml, sample year: winter 2007, country: Spain[237], *2 male and 3 female persons, age: 23–81 years, weight: 57–77 kg, height: 152–173 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/5*, sample comp.: people from Portugal, sample origin: Alentejo (region), Portugal, contamination: natural, conc. range: 0.014–0.025 ng/ml, Ø conc.: 0.019 ng/ml, sample year: summer 2008, country: Spain[237], *2 male and 3 female persons, age: 23–81 years, weight: 57–77 kg, height: 152–173 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12/12*, sample comp.: people from Portugal, sample origin: Algarve (region), Portugal, contamination: natural, conc. range: <LOQ–0.068 ng/ml, Ø conc.: 0.022 ng/ml, sample year: winter 2007, country: Spain[237], *4 male and 8 female persons, age: 26–71 years, weight: 49–120 kg, height: 157–178 cm
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/12*, sample comp.: people from Portugal, sample origin: Algarve (region), Portugal, contamination: natural, conc. range: ≤0.039 ng/ml, Ø conc.: 0.023 ng/ml, sample year: summer 2008, country: Spain[237], *4 male and 8 female persons, age: 26–71 years, weight: 49–120 kg, height: 157–178 cm

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 34/120*, sample comp.: people from Nigeria, sample origin: Nasarawa and Kaduna (states), northern part of Nigeria, contamination: natural, conc. range: ≤0.6 µg/l, sample year: July/August 2011, country: Nigeria/Austria/Cameroon/South Africa/USA[241], *rural residents, age: 1–80 years

- Co-contamination: not clear
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-15-GlcA, FB_1, FB_2, ZEN, and ZEN-14-GlcA, literature[241]

For detailed information please see the article.

incidence: 31/40*, sample comp.: people from Croatia, sample origin: Osijek (city), eastern Croatia, contamination: natural, conc. range: ≤1.07 ng/ml**, sample year: unknown, country: Croatia[251], *urban and rural women in the third trimester of pregnancy, age: 26–33 years, **values measured before enzyme treatment of the sa.

- Co-contamination: not clear
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTα, literature[251]

For detailed information please see the article.

incidence: 6/6*, sample comp.: people from Germany, sample origin: Dortmund (city), Germany, contamination: natural, conc. range: 0.04–0.14 ng/ml, Ø conc.: 0.08 ng/ml, sample year: October 2008, country: Germany[261], *male persons, age: 20–57 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, OTA and OTα, literature[261]; Human urine, OTα, literature[261]

incidence: 7/7*, sample comp.: people from Germany, sample origin: Dortmund (city), Germany, contamination: natural, conc. range: 0.02–0.13 ng/ml, Ø conc.: 0.05 ng/ml, sample year: October 2008, country: Germany[261], *female persons, age: 20–57 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, OTA and OTα, literature[261]; Human urine, OTα, literature[261]

incidence: 70/220*, sample comp.: people from Cameroon, sample origin: Anta, Baga, and Bmaya (villages of the northwest region) and Diffa, BGwana, and Kake (villages of the southwest region), Cameroon, contamination: natural, conc. range: 0.04–2.4 ng/ml, sample year: March 2012, country: Belgium[263], *124 male and 96 female children, age: 1.5–4.5 years

- Co-contamination: 2, 3 and 4 mycotoxins co-occurred per sample in 35 %, 5 % and 5 % ca., respectively
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, FB_1, ZEN, α-ZOL, and ß-ZOL, literature[263]

For detailed information please see the article.

incidence: 4/40*, sample comp.: people from Belgium (one of China), sample origin: small group of the Belgian population, Belgium, contamination: natural, conc. range: 0.04–0.3 ng/mg creatinine, Ø conc.: 0.16 ng/mg creatinine, sample year: unknown, country: Belgium[264], *male and female persons

- Co-contamination: 1 sa. co-contaminated with DON, OTA, OTα, ZEN, and ß-ZOL; 1 sa. co-contaminated with DON, OTA, OTα, and ß-ZOL; 1 sa. co-contaminated with DON, OTA, and OTα; 1 sa. co-contaminated with OTA and 4R-OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, CIT, DON, OTα, 4R-OTA, ZEN, and ß-ZOL, literature[264]

For detailed information please see the article.

incidence: 3/27, sample comp.: people from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: tr, sample year: September/November 2010, country: Spain[276], *17 male and 10 female healthy persons, age: 21–77 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFG_2 and DON, literature[276]

incidence: 4/40*, sample comp.: people from Croatia, sample origin: Osijek (city), eastern area of Croatia, contamination: natural, conc. range: <LOQ, sample year: February 2011, country: Croatia/Austria/Norway/Cameroon/South Africa[277], *healthy non-smoking pregnant women all in their final trimester of gestation, age: 26–33 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, and DON-15-GlcA, literature[277]

For detailed information please see the article.

incidence: 53/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: 0.002–0.432 ng/ml**, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years, **determined by LC-MS/MS
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, ZEN, α-ZOL, and ß-ZOL, literature[278]

For detailed information please see the article.

incidence: 5/10*, sample comp.: people from Italy, sample origin: southern Italy, contamination: natural, conc. range: 0.02–0.19 ng/ml**, Ø conc.: 0.054 ng/ml**, sample year: unknown, country: Italy[282], *5 male and 5 female healthy persons, age: 26–87 years, **without enzymatic digestion with ß-glucuronidase/sulfatase
- Co-contamination: 2 sa. co-contaminated with DON and OTA; 3 sa. contaminated solely with OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/10*, sample comp.: people from Italy, sample origin: southern Italy, contamination: natural, conc. range: 0.02–0.25 ng/ml**, Ø conc.: 0.052 ng/ml**, sample year: unknown, country: Italy[282], *5 male and 5 female healthy persons, age: 26–87 years, **with enzymatic digestion with ß-glucuronidase/sulfatase
- Co-contamination: 7 sa. co-contaminated with DON and OTA; 1 sa. contaminated solely with OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): DOM, α-ZOL, and ß-ZOL were also detected in human urine

For detailed information please see the article.

incidence: 52/52*, sample comp.: people from Italy, sample origin: Bari, Triggiano, Mola di Bari, Monopoli, Adelfia, Conversano, Polgnano a Mare, Martina Franca, and Statte (municipalities), southern Italy, contamination: natural, conc. range: ≤2.129 ng/ml, Ø conc.: 0.144 ng/ml, sample year: April 2011, country: Italy[283], *26 male and 26 female persons, age: 3–85 years
- Co-contamination: 2 sa. co-contaminated with AFM_1, DON, FB_1, OTA, and ZEN; 1 sa. co-contaminated with AFM_1, DON, OTA, and ZEN; 27 sa. co-contaminated with DON, FB_1, OTA, and ZEN; 20 sa. co-contaminated with DON, OTA, and ZEN; 2 sa. co-contaminated with OTA and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, FB_1, ZEN, α-ZOL, and ß-ZOL, literature[283]

For detailed information please see the article.

incidence: 33/35*, sample comp.: people from Croatia, sample origin: villages in eastern Croatia, contamination: natural, conc. range: ≤5.22 ng/ml, sample year: July 2000, country: Croatia[372], *apparently healthy persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Ochratoxin α

incidence: 43/71*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.056–2.894 ng/ml, Ø conc.: 0.441 ng/ml, sample year: October–December 2009, country: Spain[231], *male and female persons (together evaluated)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[231], male and female

incidence: 18/28*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.056–1.387 ng/ml, Ø conc.: 0.387 ng/ml, sample year: October–December 2009, country: Spain[231], *male persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[231], male

incidence: 25/43*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.092–2.894 ng/ml, Ø conc.: 0.480 ng/ml, sample year: October–December 2009, country: Spain[231], *female persons
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[231], female

incidence: 11/24*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.092–2.894 ng/ml, Ø conc.: 0.775 ng/ml, sample year: October–December 2009, country: Spain[231], *male and female persons, age: 18–29 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[231], 18–29 years

incidence: 15/24*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.056–1.387 ng/ml, Ø conc.: 0.410 ng/ml, sample year: October–December 2009, country: Spain[231], *male and female persons, age: 30–44 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[231], 30–44 years

incidence: 17/23*, sample comp.: people from Spain, sample origin: Lleida (city), Spain, contamination: natural, conc. range: 0.099–1.073 ng/ml, Ø conc.: 0.251 ng/ml, sample year: October–December 2009, country: Spain[231], *male and female persons, age: >45 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[231], >45 years

Excluding the outlier of 21.62 ng/ml OTα, which belongs to a male individual from age group >45 years.

For detailed information please see the article.

incidence: 38/40*, sample comp.: people from Croatia, sample origin: Osijek (city), eastern Croatia, contamination: natural, conc. range: ≤1.86 ng/ml**, sample year: unknown, country: Croatia[251], *urban and rural women in the third trimester of pregnancy, age: 26–33 years, **values measured before enzyme treatment of the sa.
- Co-contamination: not clear
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTA, literature[251]

For detailed information please see the article.

incidence: 6/6*, sample comp.: people from Germany, sample origin: Dortmund (city), Germany, contamination: natural, conc. range: 0.74–4.06 ng/ml**, Ø conc.: 2.21 ng/ml**, sample year: October 2008, country: Germany[261], *male persons, age: 20–57 years, **OTα (total)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, OTA and OTα, literature[261]; Human urine, OTA, literature[261]

incidence: 7/7*, sample comp.: people from Germany, sample origin: Dortmund (city), Germany, contamination: natural, conc. range: 0.49–7.12 ng/ml**, Ø conc.: 3.46 ng/ml**, sample year: October 2008, country: Germany[261], *female persons, age: 20–57 years, **OTα (total)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human plasma, OTA and OTα, literature[261]; Human urine, OTA, literature[261]

incidence: 3/40*, sample comp.: people from Belgium (one of China), sample origin: small group of the Belgian population, Belgium, contamination: natural, conc. range: 2.5–6 ng/mg creatinine, Ø conc.: 4.3 ng/mg creatinine, sample year: unknown, country: Belgium[264], *male and female persons

- Co-contamination: 1 sa. co-contaminated with DON, OTA, OTα, ZEN, and ß-ZOL; 1 sa. co-contaminated with DON, OTA, OTα, and ß-ZOL; 1 sa. co-contaminated with DON, OTA, and OTα
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, CIT, DON, OTA, 4R-OTA, ZEN, and ß-ZOL, literature[264]

For detailed information please see the article.

4-Hydroxyochratoxin A

incidence: 12/30*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.04–21.0 ng/ml, country: Sierra Leone[118], *male malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]

incidence: 12/24*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.10–18.0 ng/ml, sample year: unknown, country: Sierra Leone[118], *female malnourished children

For whole literature[118]:

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, and OTB, literature[118]

For detailed information please see the article.

incidence: 50/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.1–29 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2 AFL, AFM_1, AFM_2, OTA, and OTB, literature[182], male, dry season

incidence: 28/97*, sample comp.: people from Sierra Leone, sample origin: school

near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.2–37 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[182], male, rainy season

incidence: 41/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.1–1.47 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, and OTB, literature[182], female, dry season

incidence: 48/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.2–33 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and OTB, literature[182], female, rainy season

incidence: 1/40*, sample comp.: people from Belgium (one of China), sample origin: small group of the Belgian population, Belgium, contamination: natural, conc.: <LOQ, sample year: unknown, country: Belgium[264], *male and female persons

- Co-contamination: 1 sa. co-contaminated with OTA and 4R-OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, CIT, DON, OTA, OTα, ZEN, and ß-ZOL, literature[264]

For detailed information please see the article.

Ochratoxin B

incidence: 7/30*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern province of Sierra Leone, contamination: natural, conc. range: 0.4–37.1 ng/ml, sample year: unknown, country: Sierra Leone[118], *male malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[118]

incidence: 4/24*, sample comp.: people from Sierra Leone, sample origin: Bo Government Hospital, southern Province of Sierra Leone, contamination: natural, conc. range: 2.0–33.3 ng/ml, sample year: unknown, country: Sierra Leone[118], *female malnourished children

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human feces, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, 4R-OTA, and OTB, literature[118]; Human serum, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, and OTA, literature[118]; Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[118]

For detailed information please see the article.

incidence: 64/134*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc.

range: 0.4–218 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[182], male, dry season

incidence: 31/97*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.05–45 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *male primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[182], male, rainy season

incidence: 51/110*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.6–124 ng/ml, sample year: March (dry season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[182], female, dry season

incidence: 41/93*, sample comp.: people from Sierra Leone, sample origin: school near to the Njala University Campus, Sierra Leone, contamination: natural, conc. range: 0.06–81 ng/ml, sample year: May (rainy season) 1992/1993, country: Sierra Leone[182], *female primary school children, age: 5–14 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, AFG_1, AFG_2, AFL, AFM_1, AFM_2, OTA, and 4R-OTA, literature[182], female, rainy season

Ochratoxins

incidence: 7/7*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: 0.013–0.360 ng/ml, Ø conc.: 0.044 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 4 female patients with slight CKDue, age: 9–40 years
- Co-contamination: not clear
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and FBS, literature[236], slight

incidence: 6/7*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: 0.006–0.058 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *6 male and 1 female patient/s with mild CKDue, age: 39–59 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and FBS, literature[236], mild

incidence: 5/6*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: ≤0.028 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 3 female patients with moderate CKDue, age: 11–60 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and FBS, literature[236], moderate

incidence: 4/6*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: ≤0.019 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 3 female patients with severe CKDue, age: 35–58 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS, literature[236], severe

incidence: 4/5*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: ≤0.010 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 2 female patients with end stage CKDue, age: 30–65 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/6*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: 0.32–0.223 ng/ml, Ø conc.: 0.104 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *2 male and 4 female unaffected relatives of CKDue patients (control), age: 6–34 years

- Co-contamination: 1 sa. co-contaminated with AFS, OTS, and FBS; 5 sa. co-contaminated with AFS and OTS
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and FBS, literature[236], relatives control

incidence: 4/4*, sample comp.: people from Japan, sample origin: Japan, contamination: natural, conc. range: 0.005–0.012 ng/ml, Ø conc.: 0.007 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *4 female Japanese controls, age: 42–53 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Fusarium Toxins

Deoxynivalenol

incidence: 11/11*, sample comp.: people from China, sample origin: Linxian county (high risk area), Henan (province), China, contamination: natural, conc. range: 14–94 ng/ml, Ø conc.: 37 ng/ml, sample year: unknown, country: UK/Canada/China/USA[206], *non-smoking female persons, age: 19–75 years, from high-risk area of DON exposure and OC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/4*, sample comp.: people from China, sample origin: Gejiu (low risk area), Yunnan (province), China, contamination: natural, conc. range: 4–18 ng/ml, Ø conc.: 12 ng/ml, sample year: unknown, country: UK/Canada/China/USA[206], * non-smoking female persons, age: 19–75 years, from low-risk area of DON exposure and OC

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 296/300*, sample comp.: people from UK, sample origin: U.K. adult National Diet and Nutrition Survey, contamination: natural, conc. range: ≤65.97 µg/day, sample year: 2000–2001, country: UK[207], *male and female persons (cereal intake was significantly associated with urinary DON)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/25*, sample comp.: people from UK, sample origin: U.K. individuals, contamination: natural, conc. range: 4.9–10.5 ng/mg creatinine (95 % CI), sample year: unknown, country: UK[208], *9 male and 16 female persons, age: 21–59 years, height: 1.52–1.96 m, weight: 51–93 kg, BMI: 19.2–32.0, with wheat-based food intake (normal diet)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/25*, sample comp.: people from UK, sample origin: U.K. individuals, contamination: natural, conc. range: 0.4–0.9 ng/mg creatinine (95 % CI), sample year: unknown, country: UK[208], *9 male and 16 female persons, age: 21–59 years, height: 1.52–1.96 m, weight: 51–93 kg,

BMI: 19.2–32.0, with wheat-reduction intervention accompanied by a significant 11-fold reduction of DON conc.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 8/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: <LOQ, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults
- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON-3-GlcA, DON-15-GlcA, FB_1, FB_2, NIV, OTA, ZEN, ZEN-14-GlcA, and α-ZOL, literature[218]

incidence: 3/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc.: <LOQ, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults
- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, FB_1, NIV, and OTA; 1 sa. co-contaminated with AFM_1, DON, and FB_1; 1 sa. co-contaminated with AFM_1, DON, and ZEN; 1 sa. co-contaminated with DON, FB_1, and NIV; 2 sa. co-contaminated with DON, NIV, and ZEN; 7 sa. co-contaminated with AFM_1 and DON; 1 sa. co-contaminated with DON and FB_1; 9 sa. co-contaminated with DON and NIV; 1 sa. co-contaminated with DON and ZEN; 6 sa. co-contaminated with DON and OTA; 43 sa. contaminated solely with DON (DON and ZEN include any DON or ZEN metabolite; together for HIV positive and HIV sero-negative adults, Σ = 175)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, and OTA, literature[218]

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.25 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s
- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, DON, DOM-1, FB_1, HT-2, and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, 3-AcDON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

incidence: 2/13*, sample comp.: people from Portugal, sample origin: north zone of Portugal, contamination: natural, conc. range: 1.8–8.8 ng/ml**, Ø conc.: 5.3 ng/ml**, sample year: unknown, country: Portugal[233], *5 male and 9 female (2 af.) healthy volunteers, age: 20–50 years, **free DON
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/13*, sample comp.: people from Portugal, sample origin: north zone of Portugal, contamination: natural, conc. range: 1.9–26.2 ng/ml**, Ø conc.: 16.3 ng/ml**, sample year: unknown, country: Portugal[233], *5 male (3 af.) and 9 female (6 af.) healthy volunteers, age: 20–50 years, **total DON
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/120*, sample comp.: people from Nigeria, sample origin: Nasarawa

and Kaduna (states), northern part of Nigeria, contamination: natural, conc.: 2.0 µg/l, sample year: July/August 2011, country: Nigeria/Austria/Cameroon/South Africa/USA[241], *rural residents, age: 1–80 years

- Co-contamination: DON, FB_2 and ZEN only observed in individuals who were contaminated with DON-15-GlcA, FB_1 or ZEN-14-GlcA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON-15-GlcA, FB_1, FB_2, OTA, ZEN, and ZEN-14-GlcA, literature[241]

For detailed information please see the article.

incidence: 85/85*, sample comp.: people from UK, sample origin: Bradford (city), UK, contamination: natural, conc. range: 0.5–116.7 ng/mg creatinine, Ø conc.: 10.3 ng/mg creatinine, sample year: January 2008–May 2009, country: UK/USA/France[245], *pregnant women (last trimester of pregnancy), age: 21–44 years, weight: 44–132 kg

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 2/2*, sample comp.: people from Italy, sample origin: Italy, contamination: natural, conc. range: 0.003–0.008 µg/ml, sample year: October 2006–May 2007, country: Italy[254], *healthy male and female person, age: 30 and 45 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): DON-G also present

For detailed information please see the article.

incidence: 37/220*, sample comp.: people from Cameroon, sample origin: Anta, Baga, and Bmaya (villages of the northwest region) and Diffa, BGwana, and Kake (villages of the southwest region), Cameroon, contamination: natural, conc. range: 0.1–77 ng/ml, sample year: March 2012, country: Belgium[263], *124 male and 96 female children, age: 1.5–4.5 years

- Co-contamination: 2, 3 and 4 mycotoxins co-occurred per sample in 35 %, 5 %, and 5 % ca., respectively
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, FB_1, OTA, ZEN, α-ZOL, and ß-ZOL, literature[263]

For detailed information please see the article.

incidence: 5/40*, sample comp.: people from Belgium (one of China), sample origin: small group of the Belgian population, Belgium, contamination: natural, conc. range: 3.7–67 ng/mg creatinine, Ø conc.: 29.62 ng/mg creatinine, sample year: unknown, country: Belgium[264], *male and female persons

- Co-contamination: 1 sa. co-contaminated with DON, OTA, OTα, ZEN, and ß-ZOL; 1 sa. co-contaminated with DON, OTA, OTα, and ß-ZOL; 1 sa. co-contaminated with DON, OTA and OTα; 1 sa. co-contaminated with DON and ZEN; 1 sa. contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, CIT, OTA, OTα, 4R-OTA, ZEN, and ß-ZOL, literature[264]

For detailed information please see the article.

incidence: 63/93*, sample comp.: people from Egypt, sample origin: Ganzour and Maleeg (villages), Menoufiya (governorate), Nile Delta northern Egypt, contamination: natural, conc. range: 0.5–59.9 ng/mg creatinine, sample year: May–September 2006, country: Finland/UK/USA/Egypt/China[273], *female persons, age: 18–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[273]; Human urine, AFM_1 and DOM-1, literature[273]

For detailed information please see the article.

incidence: 7/27, sample comp.: people from Spain, sample origin: València (city), Spain, contamination: natural, conc. range: tr, sample year: September/November 2010, country: Spain[276], *17 male and 10 female healthy persons, age: 21–77 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFG_2 and OTA, literature[276]

incidence: 31/40*, sample comp.: people from Croatia, sample origin: Osijek (city), eastern area of Croatia, contamination: natural, conc. range: <LOQ (21 sa.), ≤275.0 µg/l (10 sa.), sample year: February 2011, country: Croatia/Austria/Norway/Cameroon/South Africa[277], *healthy non-smoking pregnant women all in their final trimester of gestation, age: 26–33 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON-3-GlcA, DON-15-GlcA, and OTA, literature[277]

For detailed information please see the article.

incidence: 47/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: 0.45–53.4 ng/ml**, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years, **determined by LC-MS/MS

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, OTA, ZEN, α-ZOL, and ß-ZOL, literature[278]

incidence: 47/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: ≤14 ng/ml**, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years, **determined by "dilute-and shoot" LC-MS/MS

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, OTA, ZEN, α-ZOL, and ß-ZOL, literature[278]

For detailed information please see the article.

incidence: 5/10*, sample comp.: people from Italy, sample origin: southern Italy, contamination: natural, conc. range: 1.1–14.0 ng/ml**, Ø conc.: 3.96 ng/ml**, sample year: unknown, country: Italy[282], *5 male and 5 female healthy persons, age: 26–87 years, **without enzymatic digestion with ß-glucuronidase/sulfatase

- Co-contamination: 2 sa. co-contaminated with DON and OTA; 3 sa. contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/10*, sample comp.: people from Italy, sample origin: southern Italy, contamination: natural, conc. range: 1.1–14.2 ng/ml**, Ø conc.: 5.24 ng/ml**, sample year: unknown, country: Italy[282], *5 male and 5 female healthy persons, age: 26–87 years, **with enzymatic digestion with ß-glucuronidase/sulfatase

- Co-contamination: 7 sa. co-contaminated with DON and OTA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): DOM-1, α-ZOL, and ß-ZOL were also detected in human urine

For detailed information please see the article.

incidence: 50/52*, sample comp.: people from Italy, sample origin: Bari, Triggiano, Mola di Bari, Monopoli, Adelfia,

Conversano, Polgnano a Mare, Martina Franca, and Statte (municipalities), southern Italy, contamination: natural, conc. range: ≤67.36 ng/ml, Ø conc.: 11.89 ng/ml, sample year: April 2011, country: Italy[283], *26 male and 26 female persons, age: 3–85 years

- Co-contamination: 2 sa. co-contaminated with AFM_1, DON, FB_1, OTA, and ZEN; 1 sa. co-contaminated with AFM_1, DON, OTA, and ZEN; 27 sa. co-contaminated with DON, FB_1, OTA, and ZEN; 20 sa. co-contaminated with DON, OTA, and ZEN; 2 sa. co-contaminated with OTA and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, FB_1, OTA, ZEA, α-ZOL, and ß-ZOL, literature[283]

For detailed information please see the article.

incidence: 79/110*, sample comp.: people from Iran, sample origin: eastern and northern parts of Golestan (province), Iran, contamination: natural, conc. range: ≤6.5 ng/ml**, sample year: August/ September 2007, country: USA/UK/Iran/ France[285], *never smoking female persons, age: 39–72 years, **free and a glucuronide conjugate of DON

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 75/76*, sample comp.: people from France, sample origin: Calvados (area), Normandy (province), France, contamination: natural, conc. range: 0.5–28.8 ng/ml**, sample year: unknown, country: UK/France[286], *never smoking French farmers, age: 23–74 years, height: 1.60–1.90 m, weight: 50–105 kg, BMI: 17.1–34.1 kg/m^2

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DOM-1, literature[286]

For detailed information please see the article.

incidence: 23/34*, sample comp.: people from UK, sample origin: University of Leeds (city), UK, contamination: natural, conc. range: 0.5–9.3 ng/ml**, sample year: unknown, country: UK /France[287], *17 male and 18 female persons, age: 21–59 years, **free DON

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DOM-1, literature[287]

For detailed information please see the article.

incidence: 58/60*, sample comp.: people from China, sample origin: Shanghai Women's Health Study, China, contamination: natural, conc. range: ≤30.5 ng/mg creatinine**, sample year: 1997/1998, country: UK/USA/China[288], *female persons, age: 40–70 years, **free and a glucuronide metabolite of DON

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 198/210*, sample comp.: people from UK, sample origin: University of Leeds (city), UK, contamination: natural, conc. range: ≤78.2 ng/ml, sample year: unknown, country: UK/France[289], *17 male and 18 female persons, age: 21–59 years, normal diet (provide 6 urine sa. each)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 94/98*, sample comp.: people from UK, sample origin: University of Leeds (city), UK, contamination: natural, conc. range: ≤34.0 ng/ml, sample year: unknown, country: UK/France[289], *male and female persons, age: 21–59 years, partial intervention: prevention from consumption of foods likely to be contaminated with DON (23 individuals

provide 4 and 2 individuals provide 3 urine sa. each)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/40*, sample comp.: people from UK, sample origin: University of Leeds (city), UK, contamination: natural, conc. range: ≤3.2 ng/ml, sample year: unknown, country: UK/France[289], *male and female persons, age: 21–59 years, full intervention: restriction of all possible major sources of DON (10 individuals provide 4 urine sa. each)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 292/326*, sample comp.: people from Sweden, sample origin: Riksmaten (Swedish national survey) and six municipalities of Sweden, contamination: natural, conc. range: ≤65.8 ng/ml**, sample year: September/October 2009 and May 2010–July 2011, country: Sweden/USA/UK[292], *male and female persons, age: 18–80 years, **urinary levels of DON higher in men than in women
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 6/8*, sample comp.: person from Austria?, sample origin: unknown, contamination: natural, conc. range: 6 µg/l** (day 1), nd. (day 2), 82 µg/l** (day 3), 96 µg/l** (day 4), 101 µg/l** (day 5), 98 µg/l** (day 6), 11 µg/l** (day 7), nd. (day 8), sample year: unknown, country: Austria[294], *days (urine sa. from a male person, age: 27 years), **Σ of DON = DON, DON-3-GlcA, DON-7-GlcA or DON-8-GlcA, and DON-15-GlcA
- Co-contamination: 1 sa. co-contaminated with Σ DON and Σ ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, ZEN, literature[294]

For detailed information please see the article.

incidence: 6/27*, sample comp.: people from Austria, sample origin: Low Austria, Styria (provinces), and Vienna (capital), Austria, contamination: natural, conc. range: <LOQ**, sample year: unknown, country: Austria[295], *persons, age: 20–63 years, **not treated with ß-glucuronidase
- Co-contamination: 6 sa. co-contaminated with DON, DON-3-GlcA, and DON-15-GlcA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 26/27*, sample comp.: people from Austria, sample origin: Low Austria, Styria (provinces), and Vienna (capital), Austria, contamination: natural, conc. range: <LOQ–63 µg/l** ***, sample year: unknown, country: Austria[295], *persons, age: 20–63 years; **Σ DON eq., ***not treated with ß-glucuronidase
- Co-contamination: -
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 15/15*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: 0.3–27.5 ng/ml, sample year: July–December 2012, country: UK[462], *8 male and 7 female free living volunteers
- Co-contamination: ? sa. co-contaminated with DON and DOM-1; ? sa. contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15/15*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: 0.4–43.1 ng/ml, sample year: July/August 2013, country: UK[462], *8 male and 7 female free living volunteers

- Co-contamination: ? sa. co-contaminated with DON and DOM-1; ? sa. contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 9/16*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc. range: ≤84.5 µg/g creatinine, Ø conc.: 27.8 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *children of Valencia, age: 8–14 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/10*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc. range: ≤34.6 µg/g creatinine, Ø conc.: 13.7 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *young male adults of Valencia, age: 18–28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/6*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc. range: ≤69.1 µg/g creatinine, Ø conc.: 41.4 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *young female adults of Valencia, age: 18–28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/12*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc. range: ≤59.9 µg/g creatinine, Ø conc.: 15.7 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *male adults of Valencia, age: >28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/10*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc. range: ≤49.6 µg/g creatinine, Ø conc.: 26.9 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *female adults of Valencia, age: >28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For all participants (n = 54) of study[463] co-contamination was observed in the case of DON and HT-2 (4/54) and in the case of DON and NIV (7/54).

For all participants (n = 54) of study[463] further contamination was observed in the case of DOM-1, HT-2, and NIV.

incidence: 3/10*, sample comp.: people from Spain, sample origin: primary school in Valencia (city), Spain, contamination: natural, conc. range: ≤21.1 µg/g creatinine, Ø conc.: 7.4 µg/g creatinine, sample year: June 2013, country: Spain[464], *children of Valencia, age: 8–11 years

- Co-contamination: 1 sa. co-contaminated with DON and DOM-1; 2 sa. contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DOM-1, literature[464]

incidence: 14/14*, sample comp.: people from Tanzania, sample origin: Nyabula and Kikelelwa (villages), Tanzania, contamination: natural, conc. range: 4.7–36.8 ng/ml, Ø conc.: 15.0 ng/ml, sample year: June/July 2010**, country: Tanzania[465], *children of the 2 villages, age: 6–14 months, **visit 1 (maize harvest season)

- Co-contamination: -
- Further contamination (organs, tissues, fluids, mycotoxins etc.): in all sa. fDON was detected (visit 1)

incidence: 14/14*, sample comp.: people from Tanzania, sample origin: Nyabula and Kikelelwa (villages), Tanzania, contamination: natural, conc. range: 4.8–152.6 ng/ml, Ø conc.: 45.7 ng/ml, sample year: June/July 2011**, country: Tanzania[465], *children of the 2 villages, age: 6–14 months, **visit 3 (harvest season)

- Co-contamination: -
- Further contamination (organs, tissues, fluids, mycotoxins etc.): in all sa. fDON was detected (visit 3)

For detailed information please see the article.

Deoxynivalenol-3-*o*-Glucuronide

incidence: 16/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: ≤22.5 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-15-GlcA, FB_1, FB_2, NIV, OTA, ZEN, ZEN-14-GlcA, and α-ZOL, literature[218]

incidence: 3/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc.: ≤22.8 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, FB_1, NIV, and OTA; 1 sa. co-contaminated with AFM_1, DON, and FB_1; 1 sa. co-contaminated with AFM_1, DON, and ZEN; 1 sa. co-contaminated with DON, FB_1, and NIV; 2 sa. co-contaminated with DON, NIV, and ZEN; 7 sa. co-contaminated with AFM_1 and DON; 1 sa. co-contaminated with DON and FB_1; 9 sa. co-contaminated with DON and NIV; 1 sa. co-contaminated with DON and ZEN; 6 sa. co-contaminated with DON and OTA; 43 sa. contaminated solely with DON (DON and ZEN include any DON or ZEN metabolite; together for HIV positive and HIV sero-negative adults, Σ = 175)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-15-GlcA, FB_1, NIV, and OTA, literature[218]

incidence: 33/40*, sample comp.: people from Croatia, sample origin: Osijek (city), eastern area of Croatia, contamination: natural, conc. range: <LOQ (18 sa.), ≤298.1 µg/l (15 sa.), sample year: February 2011, country: Croatia/Austria/Norway/Cameroon/South Africa[277], *healthy non-smoking pregnant women all in their final trimester of gestation, age: 26–33 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-15-GlcA and OTA, literature[277]

For detailed information please see the article.

incidence: 14/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: <20 ng/ml**, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years, **determined by "dilute-and-shoot" LC-MS/MS

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-15-GlcA, FB_1, NIV, OTA, ZEN, α-ZOL, and ß-ZOL, literature[278]

For detailed information please see the article.

incidence: 2/2*, sample comp.: person from Austria?, sample origin: unknown, contamination: natural, conc. range: 31–32 µg/l, Ø conc.: 31.5 µg/l, sample year: unknown, country: Austria[293], *2 urine sa. obtained after regular diet

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 15/27*, sample comp.: persons from Austria, sample origin: Low Austria and Styria (provinces), Austria, contamination: natural, conc. range: <LOQ–13 µg/l**, sample year: unknown, country: Austria[295], *persons, age: 20–63 years, **not treated with ß-glucuronidase

- Co-contamination: 6 sa. co-contaminated with DON, DON-3-GlcA, and DON-15-GlcA; 9 sa. co-contaminated with DON-3-GlcA and DON-15-GlcA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

Deoxynivalenol-15-*o*-Glucuronide

incidence: 62/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: ≤96.2 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, FB_1, FB_2, NIV, OTA, ZEN, ZEN-14-GlcA, and α-ZOL, literature[218]

incidence: 10/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc.: ≤46.6 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, FB_1, NIV, and OTA; 1 sa. co-contaminated with AFM_1, DON, and FB_1; 1 sa. co-contaminated with AFM_1, DON, and ZEN; 1 sa. co-contaminated with DON, FB_1, and NIV; 2 sa. co-contaminated with DON, NIV, and ZEN; 7 sa. co-contaminated with AFM_1 and DON; 1 sa. co-contaminated with DON and FB_1; 9 sa. co-contaminated with DON and NIV; 1 sa. co-contaminated with DON and ZEN; 6 sa. co-contaminated with DON and OTA; 43 sa. contaminated solely with DON (DON and ZEN include any DON or ZEN metabolite; together for HIV positive and HIV sero-negative adults, $\Sigma = 175$)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, FB_1, NIV, and OTA, literature[218]

incidence: 6/120*, sample comp.: people from Nigeria, sample origin: Nasarawa and Kaduna (states), northern part of Nigeria, contamination: natural, conc. range: ≤8.0 µg/l, sample year: July/August 2011, country: Nigeria/Austria/Cameroon/South Africa/USA[241], *rural residents, age: 1–80 years

- Co-contamination: DON, FB_2 ad ZEA only observed in individuals who were contaminated with DON-15-GlcA, FB_1 or ZEN-14-GlcA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, FB_1, FB_2, OTA, ZEN, and ZEN-14-GlcA, literature[241]

For detailed information please see the article.

incidence: 39/40*, sample comp.: people from Croatia, sample origin: Osijek (city), eastern area of Croatia, contamination: natural, conc. range: ≤1,237.7 µg/l, sample year: February 2011, country: Croatia/Austria/Norway/Cameroon/South Africa[277], *healthy non-smoking pregnant women all in their final trimester of gestation, age: 26–33 years

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, and OTA, literature[277]

For detailed information please see the article.

incidence: 30/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: ≤47 ng/ml**, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years, **determined by "dilute-and-shoot" LC-MS/MS

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, FB_1, NIV, OTA, ZEN, α-ZOL, and ß-ZOL, literature[278]

For detailed information please see the article.

incidence: 26/27*, sample comp.: persons from Austria, sample origin: Low Austria and Styria (provinces), Austria, contamination: natural, conc. range: <LOQ–43 µg/l**, sample year: unknown, country: Austria[295], *persons, age: 20–63 years, **not treated with ß-glucuronidase

- Co-contamination: 6 sa. co-contaminated with DON, DON-3-GlcA, and DON-15-GlcA; 9 sa. co-contaminated with DON-3-GlcA and DON-15-GlcA; 11 sa. contaminated solely with DON-15-GlcA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

3-Acetyldeoxynivalenol

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.17 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with AFB_2, 3-AcDON, and FB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, DOM-1, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

Deepoxydeoxynivalenol

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.47 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, DON, DOM-1, FB_1, HT-2, and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, HT-2, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

incidence: 2/69*, sample comp.: people from Egypt, sample origin: Ganzour and Maleeg (villages), Menoufiya (governorate), Nile Delta northern Egypt, contamination: natural, conc. range: 0.10–0.12 ng/mg creatinine, sample year: May–September 2006, country: Finland/UK/USA/Egypt/China[273], *female persons, age: 18–40 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human serum, AF, literature[273]; Human urine, AFM_1 and DON, literature[273]

For detailed information please see the article.

incidence: 26/76*, sample comp.: people from France, sample origin: Calvados

(area), Normandy (province), France, contamination: natural, conc. range: 0.2–2.8 ng/ml**, sample year: unknown, country: UK /France[286], *never smoking French farmers, age: 23–74 years, height: 1.60–1.90 m, weight: 50–105 kg, BMI: 17.1–34.1 kg/m^2

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, literature[286]

For detailed information please see the article.

incidence: 1/34*, sample comp.: people from UK, sample origin: University of Leeds (city), UK, contamination: natural, conc.: 0.65 ng/ml**, sample year: unknown, country: UK /France[287], *17 male and 18 female persons, age: 21–59 years, **mean value of 2 different analyses

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, literature[287]

For detailed information please see the article.

incidence: 6?/15*, sample comp.: people from UK, sample origin: UK, contamination: natural, conc. range: LOQ–0.05 ng/ml, sample year: July–December 2012 and July/August 2013, country: UK[462], *8 male and 7 female free living volunteers

- Co-contamination: ? sa. co-contaminated with DON and DOM-1; ? sa. contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 1/16*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc.: 1.3 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *children of Valencia, age: 8–14 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): see below

incidence: 1/10*, sample comp.: people from Spain, sample origin: Valencia, Spain, contamination: natural, conc.: 4.2 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *young male adults of Valencia, age: 18–28 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): see below

incidence: 0/6*, sample comp.: people from Spain, sample origin: Valencia, Spain, contamination: no contamination, sample year: April–July 2013, country: Spain[463], *young female adults of Valencia, age: 18–28 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): see below

incidence: 0/12*, sample comp.: people from Spain, sample origin: Valencia, Spain, contamination: no contamination, sample year: April–July 2013, country: Spain[463], *male adults of Valencia, age: >28 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): see below

incidence: 0/10*, sample comp.: people from Spain, sample origin: Valencia, Spain, contamination: no contamination, sample year: April–July 2013, country: Spain[463], *female adults of Valencia, age: >28 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): see below

For all participants (n = 54) of study[463] further contamination was observed in the case of DON, HT-2, and NIV.

incidence: 1/10*, sample comp.: people from Spain, sample origin: primary school in Valencia, Spain, contamination: natural, conc.: 1.3 µg/g creatinine, sample year: June 2013, country: Spain[464], *children of Valencia, age: 8–11 years

- Co-contamination: 1 sa. co-contaminated with DON and DOM-1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, literature[464]

Fumonisin B_1

incidence: 56/75*, sample comp.: people from Mexico, sample origin: 1 urban and 3 suburban municipalities, Morelos (state), Mexico, contamination: natural, conc. range: ≤9,312 pg/ml, sample year: unknown, country: UK/Mexico/Germany[209], *young (being of childbearing age) female persons differing in maize-based tortilla consumption, age: 15–36 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 5/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: ≤14.8 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_2, NIV, OTA, ZEN, ZEN-14-GlcA, and α-ZOL, literature[218]

incidence: 1/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc.: <LOQ, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, FB_1, NIV, and OTA; 1 sa. co-contaminated with FB_1, FB_2, NIV, and OTA; 1 sa. co-contaminated with AFM_1, DON, and FB_1; 1 sa. co-contaminated with DON, FB_1, and NIV; 1 sa. co-contaminated with FB_1 and DON; 1 sa. contaminated solely with FB_1 (DON and ZEN include any DON or ZEN metabolite; together for HIV positive and HIV sero-negative adults, Σ = 175)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, NIV, and OTA, literature[218]

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.5 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, DON, DOM-1, FB_1, HT-2, and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, FB_2, HT-2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

incidence: 16/120*, sample comp.: people from Nigeria, sample origin: Nasarawa and Kaduna state, northern part of Nigeria, contamination: natural, conc. range: ≤12.8 µg/l, sample year: July/August 2011, country: Nigeria/Austria/Cameroon/South Africa/USA[241], *rural residents, age: 1–80 years

- Co-contamination: DON, FB_2 ad ZEN only observed in individuals who were contaminated with DON-15-GlcA, FB_1 or ZEN-14-GlcA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-15-GlcA, FB_2, OTA, ZEN, and ZEN-14-GlcA, literature[241]

For detailed information please see the article.

incidence: 24/220*, sample comp.: people from Cameroon, sample origin: Anta, Baga, and Bmaya (villages of the northwest region) and Diffa, BGwana, and Kake (villages of the southwest region), Cameroon, contamination: natural, conc.

range: 0.06–48 ng/ml, sample year: March 2012, country: Belgium[263], *124 male and 96 female children, age: 1.5–4.5 years
- Co-contamination: 2, 3 and 4 mycotoxins co-occurred per sample in 35 %, 5 % and 5 % ca., respectively
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, OTA, ZEN, α-ZEL, and ß-ZEL, literature[263]

For detailed information please see the article.

incidence: 52/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: 0.04–4.94 ng/ml**, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years, **determined by LC-MS/MS
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, DON-15-GlcA, NIV, OTA, ZEN, α-ZOL, and ß-ZOL, literature[278]

incidence: 28/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: ≤3.2 ng/ml**, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years, **determined by "dilute-and shoot" LC-MS/MS
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, DON-15-GlcA, NIV, OTA, ZEN, α-ZOL, and ß-ZOL, literature[278]

For detailed information please see the article.

incidence: 107/177*, sample comp.: people from Guatemala, sample origin: departments of Chimaltenango and Escuintla, Guatemala, contamination: natural, conc. range: ≤4.08 ng/ml, Ø conc.: 0.498 ng/ml, sample year: March 2011, country: USA/Guatemala[279], *101 male and 76 female healthy persons, age: 18–70 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 29/52*, sample comp.: people from Italy, sample origin: Bari, Triggiano, Mola di Bari, Monopoli, Adelfia, Conversano, Polgnano a Mare, Martina Franca, and Statte (municipalities), southern Italy, contamination: natural, conc. range: ≤0.352 ng/ml, Ø conc.: 0.055 ng/ml, sample year: April 2011, country: Italy[283], *26 male and 26 female persons, age: 3–85 years
- Co-contamination: 2 sa. co-contaminated with AFM_1, DON, FB_1, OTA, and ZEN; 1 sa. co-contaminated with AFM_1, DON, OTA, and ZEN; 27 sa. co-contaminated with DON, FB_1, OTA, and ZEN; 20 sa. co-contaminated with DON, OTA, and ZEN; 2 sa. co-contaminated with OTA and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, OTA, ZEN, α-ZOL, and ß-ZOL, literature[283]

For detailed information please see the article.

incidence: 43/44*, sample comp.: people from South Africa, sample origin: Centane (magisterial district), Eastern Cape Province, South Africa, contamination: natural, conc. range: 144–350 pg/ml**, sample year: unknown, country: South Africa/France/UK[290], *urine sa. of 22 female persons, age: 20–70 years, weight: 47–127 kg, **at baseline (consumption of customarily prepared maize-based food)
- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 40/42*, sample comp.: people from South Africa, sample origin: Centane (magisterial district), Eastern Cape Province, South Africa, contamination: natural, conc. range: 85–138 pg/ml**, sample year: unknown, country: South Africa/France/UK[290], *urine sa. of 22 female persons, age: 20–70 years, weight: 47–127 kg, **following intervention phase

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 36/43*, sample comp.: people from China, sample origin: Huaian (county), Jiangsu (province), China, contamination: natural, conc. range: 0.06–253.61 ng/mg creatinine**, sample year: 2005, country: USA/China[296], *18 male and 25 female persons, Ø age: 43.2 and 43.4 years, respectively, **urinary-free FB_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 28/34*, sample comp.: people from China, sample origin: Fusui (county), Guangxi Zhuang (autonomous region), China, contamination: natural, conc. range: 0.01–3.72 ng/mg creatinine**, sample year: 2005, country: USA/China[296], *19 male and 15 female persons, Ø age: 35.0 and 40.9 years, respectively, **urinary-free FB_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

Fumonisin B_2

incidence: 1/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc.: <LOQ, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: 1 sa. co-contaminated with FB_1, FB_2, NIV, and OTA (together for HIV positive and HIV sero-negative adults, $\Sigma = 175$)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, OTA, ZEN, ZEN-14-GlcA, and α-ZOL, literature[218]

incidence: 0/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: no contamination, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, and OTA, literature[218]

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 1.2 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with AFB_2, 3-AcDON, and FB_2
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, FB_1, HT-2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

incidence: 2/120*, sample comp.: people from Nigeria, sample origin: Nasarawa and Kaduna (states), northern part of Nigeria, contamination: natural, conc.

range: 1.0 µg/l, sample year: July/August 2011, country: Nigeria/Austria/Cameroon/South Africa/USA[241], *rural residents, age: 1–80 years

- Co-contamination: DON, FB_2 ad ZEN only observed in individuals who were contaminated with DON-15-GlcA, FB_1 or ZEN-14-GlcA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-15-GlcA, FB_1, OTA, ZEN, and ZEN-14-GlcA, literature[241]

For detailed information please see the article.

Fumonisins

incidence: 4/7*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc. range: ≤0.042 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 4 female patients with slight CKDue, age: 9–40 years

- Co-contamination: not clear
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and OTS, literature[236], slight

incidence: 1/7*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc.: 0.036 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *6 male and 1 female patient/s with mild CKDue, age: 39–59 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and OTS, literature[236], mild

incidence: 1/6*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc.: 0.130 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 3 female patients with moderate CKDue, age: 11–60 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and OTS, literature[236], moderate

incidence: 0/6*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: no contamination, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 3 female patients with severe CKDue, age: 35–58 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and FBS, literature[236], severe

incidence: 0/5*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: no contamination, sample year: August 2009, country: Japan/Sri Lanka[236], *3 male and 2 female patients with end stage CKDue, age: 30–65 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTS, literature[236], end stage

incidence: 1/6*, sample comp.: people from Sri Lanka, sample origin: Medawachchiya and Girandrukotte (towns), Sri Lanka, contamination: natural, conc.: 0.093 ng/ml, sample year: August 2009, country: Japan/Sri Lanka[236], *2 male and 4 female unaffected relatives of CKDue patients (control), age: 6–34 years

- Co-contamination: 1 sa. co-contaminated with AFS, OTS, and FBS
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and OTS, literature[236], relatives control

incidence: 0/4*, sample comp.: people from Japan, sample origin: Japan, contamination: no contamination, sample year: August 2009, country: Japan/Sri Lanka[236], *4 female Japanese controls, age: 42–53 years

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, OTS, literature[236], Japanese control

HT-2 Toxin

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.57 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, DON, DOM-1, FB_1, HT-2, and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, FB_1, FB_2, and ZEN, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

incidence: 1/16*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc.: 12.6 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *children of Valencia, age: 8–14 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/10*, sample comp.: people from Spain, sample origin: Valencia, Spain, contamination: no contamination, sample year: April–July 2013, country: Spain[463], *young male adults of Valencia, age: 18–28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/6*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: no contamination, sample year: April–July 2013, country: Spain[463], *young female adults of Valencia, age: 18–28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/12*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc.: 13.9 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *male adults of Valencia, age: >28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/10*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc. range: ≤15.8 µg/g creatinine, Ø conc.: 14.5 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *female adults of Valencia, age: >28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For all participants (n = 54) of study[463] co-contamination was observed in the case of DON and HT-2 (4/54).

For all participants (n = 54) of study[463] further contamination was observed in the case of DON, DOM-1, and NIV.

Nivalenol

incidence: 20/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: ≤22.0 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, FB_2, OTA, ZEN, ZEN-14-GlcA, and α-ZOL, literature[218]

incidence: 5/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon,

contamination: natural, conc.: ≤20.2 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, FB_1, NIV, and OTA; 1 sa. co-contaminated with FB_1, FB_2, NIV, and OTA; 1 sa. co-contaminated with DON, FB_1, and NIV; 2 sa. co-contaminated with DON, NIV, and ZEN; 9 sa. co-contaminated with DON and NIV; 1 sa. co-contaminated with NIV and OTA; 10 sa. contaminated solely with NIV (DON and ZEN include any DON or ZEN metabolite; together for HIV positive and HIV sero-negative adults, $\Sigma = 175$)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, and OTA, literature[218]

incidence: 9/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: ≤3.7 ng/ml**, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years, **determined by "dilute-and-shoot" LC-MS/MS

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, DON-15-GlcA, FB_1, OTA, ZEN, α-ZOL, and ß-ZOL, literature[278]

For detailed information please see the article.

incidence: 0/16*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: no contamination, sample year: April–July 2013, country: Spain[463], *children of Valencia, age: 8–14 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/10*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc.: 14.4 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *young male adults of Valencia, age: 18–28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/6*, sample comp.: people from Spain, sample origin: Valencia (city), Spain, contamination: natural, conc. range: 10.2–15.2 µg/g creatinine, Ø conc.: 12.7 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *young female adults of Valencia, age: 18–28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/12*, sample comp.: people from Spain, sample origin: Valencia, Spain, contamination: natural, conc. range: 15.4–17.6 µg/g creatinine, Ø conc.: 16.5 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *male adults of Valencia, age: >28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/10*, sample comp.: people from Spain, sample origin: Valencia, Spain, contamination: natural, conc. range: 16.5–17.3 µg/g creatinine, Ø conc.: 16.9 µg/g creatinine, sample year: April–July 2013, country: Spain[463], *female adults of Valencia, age: >28 years

- Co-contamination: see below
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For all participants (n = 54) of study[463] co-contamination was observed in the case of DON and NIV (7/54).

For all participants (n = 54) of study[463] further contamination was observed in the case of DON, DOM-1, and HT-2.

Trichothecenes

incidence: 46/112*, sample comp.: people from USA, sample origin: diverse

geographic areas in USA, contamination: natural, conc. range: 0.21–5.72 ppb, Ø conc.: 0.85 ppb, sample year: February 2012–July 2012, country: USA[225], *38 male and 84 female patients with CFS, age: 15–72 years

- Co-contamination: 8 sa. co-contaminated with AFS, OTA, and TRICHO; 24 sa. co-contaminated with OTA and TRICHO; 4 sa. co-contaminated with AFS and TRICHO; 10 sa. contaminated solely with TRICHO
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFS and OTA, literature[225]

incidence: 0/55*, sample comp.: people from USA, sample origin: diverse geographic areas in USA, contamination: no contamination, sample year: February 2012–July 2012, country: USA[225], *28 male and 27 female healthy patients (control), age: 18–72 years

- Co-contamination: not reported
- Further contamination (organs, fluids, mycotoxins etc.): not reported

Zearalanone

incidence: 29/163*, sample comp.: people from USA, sample origin: New Jersey (state), USA, contamination: natural, conc. range: 0.04–1.57 ng/ml**, Ø conc.: 0.22 ng/ml**, sample year: unknown, country: USA[222], *girls, age: 9–10 years, **specific gravity corrected data

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, ZEN, α-ZAL, α-ZOL, ß-ZAL, and ß-ZOL, literature[222]

For detailed information please see the article.

α-Zearalanol

incidence: 35/163*, sample comp.: people from USA, sample origin: New Jersey (state), USA, contamination: natural, conc. range: 0.01–1.23 ng/ml**, Ø conc.: 0.20 ng/ml**, sample year: unknown, country: USA[222], *girls, age: 9–10 years, **specific gravity corrected data

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, ZAN, ZEN, α-ZOL, ß-ZAL, and ß-ZOL, literature[222]

For detailed information please see the article.

incidence: 8/42*, sample comp.: people from Tunisia, sample origin: surgery services at Salah Azaiz Hospital at Tunis (capital) and cancer center at Ariana Hospital, Tunisia, contamination: natural, conc. range: ≤3.17 ng/ml, sample year: unknown, country: Tunisia/Spain[371], *healthy female persons

- Co-contamination: 1 sa. co-contaminated with α-ZAL and ß-ZAL; 7 sa. contaminated solely with α-ZAL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, ZEN and ß-ZAL, literature[371]

ß-Zearalanol

incidence: 17/163*, sample comp.: people from USA, sample origin: New Jersey (state), USA, contamination: natural, conc. range: 0.02–2.76 ng/ml**, Ø conc.: 0.40 ng/ml**, sample year: unknown, country: USA[222], *girls, age: 9–10 years, **specific gravity corrected data

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, ZAN, ZEN, α-ZAL, α-ZOL, and ß-ZOL, literature[222]

For detailed information please see the article.

incidence: 1/42*, sample comp.: people from Tunisia, sample origin: surgery services at Salah Azaiz Hospital at Tunis (capital) and cancer center at Ariana Hospital, Tunisia, contamination: natural, conc.: pr., sample year: unknown, country: Tunisia/Spain[371], *healthy female persons

- Co-contamination: 1 sa. co-contaminated with α-ZAL and ß-ZAL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, ZEN and α-ZAL, literature[371]

Zearalenone

incidence: 4/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: ≤1.42 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, and ZEN; 2 sa. co-contaminated with DON, NIV, and ZEN; 1 sa. co-contaminated with DON and ZEN (DON and ZEN include any DON or ZEN metabolite; together for HIV positive and HIV sero-negative adults, $\Sigma = 175$)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, FB_2, NIV, OTA, ZEN-14-GlcA, and α-ZOL, literature[218]

incidence: 0/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: no contamination, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, and OTA, literature[218]

incidence: 90/163*, sample comp.: people from USA, sample origin: New Jersey (state), USA, contamination: natural, conc. range: 0.04–22.34 ng/ml**, Ø conc.: 1.28 ng/ml**, sample year: unknown, country: USA[222], *girls, age: 9–10 years, **specific gravity corrected data

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, ZAN, α-ZAL, α-ZOL, ß-ZAL, and ß-ZOL, literature[222]

For detailed information please see the article.

incidence: 1/10*, sample comp.: people from China, sample origin: Wuhan (city), China, contamination: natural, conc.: 0.16 µg/l, sample year: November 2011, country: China[226], *6 male, 3 lactating and 1 pregnant person/s

- Co-contamination: 1 sa. co-contaminated with AFB_1, AFB_2, DON, DOM-1, FB_1, HT-2, and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFB_1, AFB_2, DON, 3-AcDON, DOM-1, FB_1, FB_2, and HT-2, literature[226]; Human feces, AFB_1, FB_1, NEO, OTA, T2TRI, α-ZOL, and ß-ZOL, literature[226]; Human breast milk, AFM_1, literature[226]; Human amniotic fluid, AFB_1 and OTA, literature[226]

incidence: 1/120*, sample comp.: people from Nigeria, sample origin: Nasarawa and Kaduna (states), northern part of Nigeria, contamination: natural, conc.: 0.3 µg/l, sample year: July/August 2011, country: Nigeria/Austria/Cameroon/South Africa/USA[241], *rural residents, age: 1–80 years

- Co-contamination: DON, FB_2 ad ZEA only observed in individuals who were contaminated with DON-15-GlcA, FB_1 or ZEN-14-GlcA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-15-GlcA, FB_1, FB_2, OTA, and ZEN-14-GlcA, literature[241]

For detailed information please see the article.

incidence: 9/220*, sample comp.: people from Cameroon, sample origin: Anta, Baga, and Bmaya (villages of the northwest region) and Diffa, BGwana, and Kake (villages of the southwest region), Cameroon, contamination: natural, conc. range: 0.65–5.0 ng/ml, sample year: March 2012, country: Belgium[263], *124 male and 96 female children, age: 1.5–4.5 years

- Co-contamination: 2, 3 and 4 mycotoxins co-occurred per sample in 35 %, 5 % and 5 % ca., respectively
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, FB_1, OTA, α-ZOL, and ß-ZOL, literature[263]

For detailed information please see the article.

incidence: 4/40*, sample comp.: people from Belgium (one of China), sample origin: small group of the Belgian population, Belgium, contamination: natural, conc. range: <LOQ–10.8 ng/mg creatinine, sample year: unknown, country: Belgium[264], *male and female persons

- Co-contamination: 1 sa. co-contaminated with DON, OTA, OTα, ZEN, and ß-ZOL; 2 sa. co-contaminated with ZEN and ß-ZOL; 1 sa. co-contaminated with ZEN and DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, CIT, DON, OTA, OTα, 4R-OTA, and ß-ZOL, literature[264]

For detailed information please see the article.

incidence: 54/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: 0.012–3.15 ng/ml**, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years, **determined by LC-MS/MS

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, OTA, α-ZOL, and ß-ZOL, literature[278]

For detailed information please see the article.

incidence: 52/52*, sample comp.: people from Italy, sample origin: Bari, Triggiano, Mola di Bari, Monopoli, Adelfia, Conversano, Polgnano a Mare, Martina Franca, and Statte (municipalities), southern Italy, contamination: natural, conc. range: ≤0.120 ng/ml, Ø conc.: 0.057 ng/ml, sample year: April 2011, country: Italy[283], *26 male and 26 female persons, age: 3–85 years

- Co-contamination: 2 sa. co-contaminated with AFM_1, DON, FB_1, OTA, and ZEN; 1 sa. co-contaminated with AFM_1, DON, OTA, and ZEN; 27 sa. co-contaminated with DON, FB_1, OTA, and ZEN; 20 sa. co-contaminated with DON, OTA, and ZEN; 2 sa. co-contaminated with OTA and ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, FB_1, OTA, α-ZOL, and ß-ZOL, literature[283]

For detailed information please see the article.

incidence: 5/8*, sample comp.: person from Austria?, sample origin: unknown, contamination: natural, conc. range: 0.30–0.59 µg/l**, Ø conc.: 0.39 µg/l**, sample year: unknown, country: Austria[294], *days (urine sa. from a male person, age: 27 years), **Σ of ZEN = ZEN and ZEN-14-GlcA

- Co-contamination: 1 sa. co-contaminated with Σ DON and Σ ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, literature[294]

For detailed information please see the article.

incidence: 1/42*, sample comp.: people from Tunisia, sample origin: surgery services at Salah Azaiz Hospital at Tunis (capital) and cancer center at Ariana Hospital, Tunisia, contamination: natural, conc.: pr., sample year: unknown, country: Tunisia/Spain[371], *healthy female persons

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, α-ZAL and ß-ZAL, literature[371]

Zearalenone-14-Glucuronide

incidence: 4/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: 3.38–31 µg/l, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, and ZEN; 2 sa. co-contaminated with DON, NIV, and ZEN; 1 sa. co-contaminated with DON and ZEN (DON and ZEN include any DON or ZEN metabolite; together for HIV positive and HIV sero-negative adults, $\Sigma = 175$)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, FB_2, NIV, OTA, ZEN, and α-ZOL, literature[218]

incidence: 0/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: no contamination, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, and OTA, literature[218]

incidence: 8/120*, sample const.: people from Nigeria, sample origin: Nasarawa and Kaduna (states), northern part of Nigeria, contamination: natural, conc. range: ≤44.5 µg/l, sample year: July/August 2011, country: Nigeria/Austria/Cameroon/South Africa/USA[241], *rural residents, age: 1–80 years

- Co-contamination: DON, FB_2 ad ZEN only observed in individuals who were contaminated with DON-15-GlcA, FB_1 or ZEN-14-GlcA
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-15-GlcA, FB_1, FB_2, OTA, and ZEN, literature[241]

For detailed information please see the article.

α-Zearalenol

incidence: 2/145*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: natural, conc. range: <LOQ, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV positive adults

- Co-contamination: 1 sa. co-contaminated with AFM_1, DON, and ZEN; 2 sa. co-contaminated with DON, NIV, and ZEN; 1 sa. co-contaminated with DON and ZEN (DON and ZEN include any DON or ZEN metabolite; together for HIV positive and HIV sero-negative adults, $\Sigma = 175$)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, FB_2, NIV, OTA, ZEN, and ZEN-14-GlcA, literature[218]

incidence: 0/30*, sample comp.: people from Cameroon, sample origin: southern tropical zone in the Centre Regional headquarters, Yaounde (capital) and the western highlanders, North West Regional headquarters, Bamenda (city), Cameroon, contamination: no contamination, sample year: September 2011 (dry season), country: Cameroon/Austria/South Africa/USA[218], *HIV sero-negative adults

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, and OTA, literature[218]

incidence: 60/163*, sample comp.: people from USA, sample origin: New Jersey (state), USA, contamination: natural, conc. range: 0.003–7.16 ng/ml**, Ø conc.: 0.41 ng/ml**, sample year: unknown, country: USA[222], *girls, age: 9–10 years, **specific gravity corrected data

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, ZAN, ZEN, α-ZAL, ß-ZAL, and ß-ZOL, literature[222]

For detailed information please see the article.

incidence: 9/220*, sample comp.: people from Cameroon, sample origin: Anta, Baga, and Bmaya (villages of the northwest region) and Diffa, BGwana, and Kake (villages of the southwest region), Cameroon, contamination: natural, conc. range: 0.26–1.3 ng/ml, sample year: March 2012, country: Belgium[263], *124 male and 96 female children, age: 1.5–4.5 years

- Co-contamination: 2, 3 and 4 mycotoxins co-occurred per sample in 35 %, 5 % and 5 % ca., respectively
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, FB_1, OTA, ZEN, and ß-ZOL, literature[263]

For detailed information please see the article.

incidence: 50/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: 0.009–3.72 ng/ml, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, OTA, ZEN, and ß-ZOL, literature[278]

For detailed information please see the article.

incidence: 52/52*, sample comp.: people from Italy, sample origin: Bari, Triggiano, Mola di Bari, Monopoli, Adelfia, Conversano, Polgnano a Mare, Martina Franca, and Statte (municipalities), southern Italy, contamination: natural, conc. range: ≤0.176 ng/ml, Ø conc.: 0.077 ng/ml, sample year: April 2011, country: Italy[283], *26 male and 26 female persons, age: 3–85 years

- Co-contamination: data not suitable
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, FB_1, OTA, ZEA, and ß-ZOL, literature[283]

For detailed information please see the article.

ß-Zearalenol

incidence: 39/163*, sample comp.: people from USA, sample origin: New Jersey (state), USA, contamination: natural, conc. range: 0.02–1.02 ng/ml**, Ø conc.: 0.21 ng/ml**, sample year: unknown, country: USA[222], *girls, age: 9–10 years, **specific gravity corrected data

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, ZAN, ZEN, α-ZAL, α-ZOL, and ß-ZAL, literature[222]

For detailed information please see the article.

incidence: 18/220*, sample comp.: people from Cameroon, sample origin: Anta, Baga, and Bmaya (villages of the northwest region) and Diffa, BGwana, and Kake (villages of the southwest region), Cameroon, contamination: natural, conc. range: 0.02–12.5 ng/ml, sample year: March 2012, country: Belgium[263], *124 male and 96 female children, age: 1.5–4.5 years

- Co-contamination: 2, 3 and 4 mycotoxins co-occurred per sample in 35 %, 5 % and 5 % ca., respectively

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, FB_1, OTA, ZEN, and α-ZOL, literature[263]

For detailed information please see the article.

incidence: 4/40*, sample comp.: people from Belgium (one of China), sample origin: small group of the Belgian population, Belgium, contamination: natural, conc. range: 2.5–20 ng/mg creatinine, Ø conc.: 9.45 ng/mg creatinine, sample year: unknown, country: Belgium[264], *male and female persons

- Co-contamination: 1 sa. co-contaminated with DON, OTA, OTα, ZEN, and ß-ZOL; 1 sa. co-contaminated with DON, OTA, OTα, and ß-ZOL; 2 sa. co-contaminated with ZEN and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, CIT, DON, OTA, OTα, 4R-OTA, and ZEN literature[264]

For detailed information please see the article.

incidence: 41/54*, sample comp.: people from South Africa, sample origin: Gcina, NoBuswana, Qolora-by-the-Sea, and Nontshinga (villages), Centane region in the former Transkei region, Eastern Cape Province, South Africa, contamination: natural, conc. range: 0.016–5.94 ng/ml, sample year: unknown, country: South Africa/Italy/UK/Austria[278], *female persons, age: 19–97 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, DON, DON-3-GlcA, DON-15-GlcA, FB_1, NIV, OTA, ZEN, and α-ZOL, literature[278]

For detailed information please see the article.

incidence: 51/52*, sample comp.: people from Italy, sample origin: Bari, Triggiano, Mola di Bari, Monopoli, Adelfia, Conversano, Polgnano a Mare, Martina Franca, and Statte (municipalities), southern Italy, contamination: natural, conc. range: ≤0.135 ng/ml, Ø conc.: 0.090 ng/ml, sample year: April 2011, country: Italy[283], *26 male and 26 female persons, age: 3–85 years

- Co-contamination: data not suitable
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human urine, AFM_1, DON, FB_1, OTA, ZEA, and α-ZOL literature[283]

For detailed information please see the article.

Animal

Beef

Beef liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1
incidence: ?/?, sample comp.: livers from beefs of USA?, sample origin: USA?, contamination: natural, conc.: 0.72 ng/g, sample year: unknown, country: USA[301]
- Co-contamination: 1 sa. co-contaminated with AFB_1, AFG_1, and AFM_1 (if only 1 sa. is contaminated)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, AFB_1, literature[301]

Aflatoxin G_1
incidence: ?/?, sample comp.: livers from beefs of the USA?, sample origin: USA?, contamination: natural, conc.: 0.21 ng/g, sample year: unknown, country: USA[301]
- Co-contamination: 1 sa. co-contaminated with AFB_1, AFG_1, and AFM_1 (if only 1 sa. is contaminated)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, AFB_1, literature[301]

Aflatoxin M_1
incidence: ?/?, sample comp.: livers from beefs of the USA?, sample origin: USA?, contamination: natural, conc.: 0.25 ng/g, sample year: unknown, country: USA[301]
- Co-contamination: 1 sa. co-contaminated with AFB_1, AFG_1, and AFM_1 (if only 1 sa. is contaminated)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, AFB_1, literature[301]

Boar

Boar kidney may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A
incidence: 23/23*, sample comp.: kidneys from boars in Italy, sample origin: hunted wild boars in the Calabria region of southern Italy, contamination: natural, conc. range: 0.1–3.9 μg/kg, Ø conc.: 1.1 μg/kg, sample year: 2009/2010, country: Italy[414]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Boar liver, Boar muscle, Boar urinary bladder, OTA, literature[414]

Boar liver may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A
incidence: 23/23*, sample comp.: livers from boars in Italy, sample origin: hunted wild boars in the Calabria region of southern Italy, contamination: natural, conc. range: 0.1–2.0 μg/kg, Ø conc.: 0.6 μg/kg, sample year: 2009/2010, country: Italy[414]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Boar kidney, Boar muscle, Boar urinary bladder, OTA, literature[414]

Boar muscle may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A
incidence: 23/23*, sample comp.: muscles from boars in Italy, sample origin: hunted wild boars in the Calabria region of southern Italy, contamination: natural, conc. range: 0.1–1.3 μg/kg, Ø conc.: 0.3 μg/kg, sample year: 2009/2010, country: Italy[414]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Boar kidney, Boar liver, Boar urinary bladder, OTA, literature[414]

M. Weidenbörner, *Natural Mycotoxin Contamination in Humans and Animals*,
DOI 10.1007/978-3-319-16039-9_2

Boar urinary bladder may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A
incidence: 23/23*, sample comp.: urinary bladders from boars in Italy, sample origin: hunted wild boars in the Calabria region of southern Italy, contamination: natural, conc. range: 0.1–1.7 µg/kg, Ø conc.: 0.5 µg/kg, sample year: 2009/2010, country: Italy[414]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Boar kidney, Boar liver, Boar muscle, OTA, literature[414]

Bovine see Cow

Broiler

Broiler serum may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A
incidence: 13/30, sample comp.: serum from broilers in Italy, sample origin: conventional poultry farms in northern Italy, contamination: natural, conc. range: 0.006–0.131 ng/ml*, sample year: 2006, country: Italy[448]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Hen serum, OTA, literature[448], conventional production

incidence: 5/13, sample comp.: serum from broilers in Italy, sample origin: organic poultry farms in northern Italy, contamination: natural, conc. range: 0.003–0.014 ng/ml*, sample year: 2006, country: Italy[448]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Hen serum, OTA, literature[448], organic production

see also **Chicken**, **Hen** and **Poultry**

Buffalo

Buffalo milk, raw
may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin M_1
incidence: 32/38*, sample comp.: milk from buffaloes in India, sample origin: around Anand town and Gujarat Agricultural University (GAU) farm, India, contamination: natural, Ø conc.: 0.076 µg/l, sample year: unknown, country: India[303], *milk from individual animals
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[303], individual

incidence: 27/28*, sample comp.: milk from buffaloes in India, sample origin: Primary Milk Producers Co-operative Societies in villages around Anand town and Gujarat Agricultural University (GAU) farms of Anand Campus, India, contamination: natural, Ø conc.: 0.074 µg/l, sample year: unknown, country: India[303], *bulk milk
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[303], bulk

incidence: 4/43, sample comp.: milk from buffaloes in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 4–39 ng/kg, sample year: 2002, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[304], 2002

incidence: 20/47, sample comp.: milk from buffaloes in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 4–43 ng/kg, sample year: 2003, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw,

Sheep/goat milk, raw, AFM_1, literature[304], 2003

incidence: 18/59, sample comp.: milk from buffaloes in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 5–23 ng/kg, sample year: 2004, country: Italy[304]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Sheep/goat milk, raw, AFM_1, literature[304], 2004

incidence: 18/58, sample comp.: milk from buffaloes in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 4–676 ng/kg, sample year: 2005, country: Italy[304]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Sheep/goat milk, raw, AFM_1, literature[304], 2005

incidence: 108/116*, sample comp.: milk from buffaloes in India, sample origin: villages (periurban) surrounding Hyderabad (city), India, contamination: natural, conc. range: 0.6–15 ng/ml (59 sa.), 16–30 ng/ml (37 sa.), 31–45 ng/ml (11 sa.), 48 ng/ml (1 sa.), sample year: unknown, country: India/UK[305], *milk from individual buffaloes

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/100*, sample comp.: milk from buffaloes in India, sample origin: Ananthapur (rural) area of Andhra Pradesh (state), India, contamination: natural, conc. range: 0.6–15 ng/ml (2 sa.), sample year: unknown, country: India/UK[305], *milk from individual buffaloes

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 76/107, sample comp.: milk from buffaloes in Pakistan, sample origin: main districts of Punjab (province), Pakistan, contamination: natural, conc. range: 4–845.4 ng/l, Ø conc.: 212.2 ng/l, sample year: November 2010–April 2011, country: Pakistan[428]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 22/48, sample comp.: milk from buffaloes in Pakistan, sample origin: milking sites and farmhouses from major cities of Punjab (province), Pakistan, contamination: natural, conc. range: ≤0.137 µg/kg, sample year: November 2009–April 2010, country: Pakistan/Spain[429]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[429], Punjab

incidence: 24/46, sample comp.: milk from buffaloes in Pakistan, sample origin: milking sites and farmhouses from major cities of NWFP (Khyber Pakhtunkhwa = formerly the North-West Frontier Province), Pakistan, contamination: natural, conc. range: ≤0.350 µg/kg, sample year: November 2009–April 2010, country: Pakistan/Spain[429]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[429], NWFP

incidence: 8/10, sample comp.: milk from buffaloes in Iran, sample origin: different parts of Sush (city) in Khuzestan (province), Iran, contamination: natural, conc. range: 19.1–209.5 ng/l, Ø conc.: 93.2 ng/l, sample year: February/March 2012 (winter), country: Iran[430]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[430], winter

incidence: 20/30, sample comp.: milk from buffaloes in Iran, sample origin: different parts of Sush (city) in Khuzestan (province), Iran, contamination: natural, conc. range: 19.5–422.7 ng/l, Ø conc.: 109.1 ng/l, sample year: April/May 2012 (spring), country: Iran[430]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[430], spring

incidence: 18/20, sample comp.: milk from buffaloes in Iran, sample origin: different

parts of Sush (city) in Khuzestan (province), Iran, contamination: natural, conc. range: 12.7–367.3 ng/l, Ø conc.: 138.4 ng/l, sample year: June/July 2012 (summer), country: Iran[430]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[430], summer

incidence: 34/126*, sample comp.: milk from buffaloes in Turkey, sample origin: Afyonkarahisar (city) and different districts, Turkey, contamination: natural, conc. range: ≤0.032 µg/l, sample year: August 2012–January 2013, country: Turkey[431], *Anatolian buffaloes
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

see also **Cow milk, raw**, **Goat milk, raw**, **Sheep milk, raw**, and **Sheep/goat milk, raw**

Calf

Calf liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 1/1?, sample comp.: Hereford calves of Australia, sample origin: property near Inglewood (town), southern Darling Downs (region), Queensland (state), Australia, contamination: natural, conc.: 0.5 µg/kg, sample year: June 1980, country: Australia[306]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Calf mucosa may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin

incidence: 6/9*, sample comp.: calves in Canada, sample origin: Alberta (state), Canada, contamination: natural, conc. range: 1–3 ppb** (average conc.), sample year: 2009–2011, country: Canada[412], *dairy calves, **in the hemorrhaged jejunal mucosa
- Co-contamination: 6 sa. co-contaminated with AF and FB
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Calf mucosa, FB, literature[412]

Fusarium Toxins

Fumonisin

incidence: 6/9*, sample comp.: calves in Canada, sample origin: Alberta (state), Canada, contamination: natural, conc. range: 50–350 ppb** (average conc.), sample year: 2009–2011, country: Canada[412], *dairy calves, **in the hemorrhaged jejunal mucosa
- Co-contamination: 6 sa. co-contaminated with AF and FB
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Calf mucosa, AF, literature[412]

see also ***Cattle***

Camel

Camel fetus may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Gliotoxin

incidence: 1/1*, sample comp.: fetus from camel in the UAE, sample origin: allantois from fetus (camel), UAE, contamination: natural, conc.: tr, sample year: unknown, country: Germany/UAE[307], *camel died after 3 days
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Camel intestine, Camel rumen, GLI, literature[307]

Camel intestine may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Gliotoxin

incidence: 1/2*, sample comp.: intestine from camels in the UAE, sample origin: colon (camel), UAE, contamination: natural, conc.: tr, sample year: unknown, country: Germany/UAE[307], *camels died after 4 and 5 days, respectively

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Camel fetus, Camel rumen, GLI, literature[307]

incidence: 1/2, sample comp.: intestine from camels in the UAE, sample origin: duodenum (camel), UAE, contamination: natural, conc.: tr, sample year: unknown, country: Germany/UAE[307]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Camel fetus, Camel rumen, GLI, literature[307]

Camel liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxins

incidence: 8/8*, sample comp.: camels in the UAE, sample origin: camel farm, UAE, contamination: natural, Ø conc.: 18.2 µg/kg, sample year: February (rainy season), country: UAE/Saudi Arabia[358], *5 male and 3 female Arabian camels, age: 5–7 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Camel rumen, AFS, literature[358]

Camel milk, raw may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin M_1

incidence: 6/20, sample comp.: milk from camels in UAE, sample origin: privately owned camel farms in the Sweihan area, vicinity of Abu Dhabi (capital), UAE, contamination: natural, conc. range: 0.25–0.8 ng/ml, Ø conc.: 0.46 ng/ml, sample year: unknown, country: UAE/UK[56]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1, literature[56]

incidence: 6/24, sample comp.: milk from camels in Egypt, sample origin: Mariut Research Station and Bourg El-Arab camel farms (north western coastal desert), Egypt, contamination: natural, conc. range: 0.3–0.5 µg/l (3 sa.), 0.5–0.7 µg/l (1 sa.), 0.7–0.9 µg/l (2 sa., maximum: 0.85 µg/l), Ø conc.: 0.55 µg/l, sample year: unknown, country: Egypt[413]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Camel rumen may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxins

incidence: 8*/8**, sample comp.: camels in the UAE, sample origin: camel farm, UAE, contamination: natural, Ø conc.: 243.4 µg/kg, sample year: February (rainy season), country: UAE/Saudi Arabia[358], *ruminal contents, **5 male and 3 female Arabian camels, age: 5–7 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Camel liver, AFS, literature[358]

Gliotoxin

incidence: 2/2, sample comp.: rumen from camels in the UAE, sample origin: rumen (camel), UAE, contamination: natural, conc. range: tr, sample year: unknown, country: Germany/UAE[307]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Camel fetus, Camel intestine, GLI, literature[307]

Camel ruminal content see **Camel rumen**

Canine see **Dog**

Cat

Cat kidney may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 16/26*, sample comp.: kidneys from cats in Austria, sample origin: Austria?, contamination: natural, conc. range: 0.1–1.63 µg/kg, Ø conc.: 0.85 µg/kg, sample year: unknown, country: Austria[308], *dead cats, age: 9 of the 16 contaminated cats 2 months–13 years (more data not available)

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog kidney, OTA, literature[308]

Cattle

Cattle bile may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

α-Zearalanol (Zeranol)

incidence: 8/70, sample comp.: bile from cattles in Northern Ireland, sample origin: castrated male cattles for slaughter, North Ireland, contamination: natural, conc. range: 1.0–3.0 ng/ml*, Ø conc.: 1.65 ng/ml*, sample year: June 1994, country: Northern Ireland, UK[309], *most probable of *Fusarium* origin

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cattle bile, α-ZOL and ß-ZOL, literature[309]

α-Zearalenol

incidence: 8?/70, sample comp.: bile from cattles in Northern Ireland, sample origin: castrated male cattles for slaughter, North Ireland, contamination: natural, conc. range: ≤20.5 ng/ml*, sample year: June 1994, country: Northern Ireland, UK[309], *most probable of *Fusarium* origin

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cattle bile, α-ZAL and ß-ZOL, literature[309]

β-Zearalenol

incidence: 8?/70, sample comp.: bile from cattles in Northern Ireland, sample origin: castrated male cattles for slaughter, North Ireland, contamination: natural, conc. range: ≤23.4 ng/ml*, sample year: June 1994, country: Northern Ireland, UK[309], *most probable of *Fusarium* origin

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cattle bile, α-ZAL and α-ZOL, literature[309]

Cattle urine may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Sterigmatocystin

incidence: 10/10, sample comp.: urine from Black cattles in Japan, sample origin: Japan, contamination: natural, conc. range: 29.1–138.3 pg/mg creatinine*, Ø conc.: 70.4 pg/mg creatinine*, sample year: unknown, country: Japan[460], *pre-incubated with ß-glucuronidase/arylsulfatase

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

Fusarium Toxins

Zearalanols

incidence: 282/415*, sample comp.: urine from cattles in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤12.3 ng/ml**, sample year: May 1992–March 1993, country: New Zealand[311], *export animals, **most probable of *Fusarium* origin

- Co-contamination: 282 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cattle urine,

ZEL, literature[311]; Deer urine, Goat urine, Horse urine, Lamb urine, Sheep urine, ZAL and ZEL, literature[311]

Zearalenols

incidence: 282/415*, sample comp.: urine from cattles in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤163 ng/ml, sample year: May 1992–March 1993, country: New Zealand[311], *export animals

- Co-contamination: 282 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cattle urine, ZAL, literature[311]; Deer urine, Goat urine, Horse urine, Lamb urine, Sheep urine, ZAL and ZEL, literature[311]

see also ***Cow***

Chicken

Chicken gizzard may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 16/60*, sample comp.: livers from chickens in Serbia, sample origin: chicken farms in the northern agricultural area of Serbia, contamination: natural, conc. range: 0.25–9.94 ng/g, sample year: 2010, country: Serbia[438], *Cobb 500 and Hubbard strain chickens

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Chicken kidney, Chicken liver, OTA, literature[438], northern

incidence: 0/30*, sample comp.: livers from chickens in Serbia, sample origin: chicken farms in the central agricultural area of Serbia, contamination: no contamination, sample year: 2010, country: Serbia[438], *Cobb 500 and Hubbard strain chickens

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Chicken kidney may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 17/60*, sample comp.: kidneys from chickens in Serbia, sample origin: chicken farms in the northern agricultural area of Serbia, contamination: natural, conc. range: 0.1–7.02 ng/g, sample year: 2010, country: Serbia[438], *Cobb 500 and Hubbard strain chickens

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Chicken gizzard, Chicken liver, OTA, literature[438], northern

incidence: 0/30*, sample comp.: kidneys from chickens in Serbia, sample origin: chicken farms in the central agricultural area of Serbia, contamination: no contamination, sample year: 2010, country: Serbia[438], *Cobb 500 and Hubbard strain chickens

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Chicken liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 122/225*, sample comp.: livers from chickens in Thailand, sample origin: retail or fresh market of five regions in Bangkok (capital), Thailand, contamination: natural, conc. range: 0.003–35.45 ppb, Ø conc.: 2.473 ppb, sample year: March–May 1996 (summer season), July–September 1996 (rainy season), and November 1996–January 1997 (winter season), country: Thailand[312], *chickens, age: 45 days

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A
incidence: 23/60*, sample comp.: livers from chickens in Serbia, sample origin: chicken farms in the northern and central agricultural area of Serbia, contamination: natural, conc. range: 0.14–3.9 ng/g, sample year: 2010, country: Serbia[438], *Cobb 500 and Hubbard strain chickens
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Chicken gizzard, Chicken kidney, OTA, literature[438], northern

incidence: 0/30*, sample comp.: livers from chickens in Serbia, sample origin: chicken farms in the central agricultural area of Serbia, contamination: no contamination, sample year: 2010, country: Serbia[438], *Cobb 500 and Hubbard strain chickens
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Chicken muscle may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1
incidence: 97/225*, sample comp.: muscles from chickens of Thailand, sample origin: retail or fresh market of five regions in Bangkok (capital), Thailand, contamination: natural, conc. range: 0.024–24.34 ppb, Ø conc.: 0.744 ppb, sample year: March–May 1996 (summer season), July–September 1996 (rainy season), and November 1996–January 1997 (winter season), country: Thailand[312], *chickens, age: 45 days
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A
incidence: 5/13, sample comp.: muscle meat from chickens in Portugal, sample origin: supermarkets located in Coimbra (city), Portugal, contamination: natural, conc. range: LOD–LOQ, sample year: October 2002–February 2003, country: Portugal[373]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig muscle, Turkey muscle, OTA, literature[373]

see also **Broiler**, **Hen** and **Poultry**

Cow

Cow liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1
incidence: 1/68*, sample comp.: liver from a crossbred adult cow in USA, sample origin: northern Texas, USA, contamination: natural, conc.: 5 ng/g, sample year: unknown, country: USA[313], *only 1 of 68 cows investigated
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Cow milk, raw may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1
incidence: 16/40, sample comp.: milk from cows in Iran, sample origin: milk churns of traditional and semi-industrial cattle farms, Barbol (city), northern Iran, contamination: natural, sample year: January 2006, conc. range: 0.40–22.00 ng/l, country: Iran[314]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[314], January

incidence: 20/40, sample comp.: milk from cows in Iran, sample origin: milk churns of traditional and semi-industrial cattle farms, Barbol (city), northern Iran, contamination: natural, sample year: February 2006, conc. range: 0.25–18.70 ng/l, country: Iran[314]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[314], February

incidence: 20/40, sample comp.: milk from cows in Iran, sample origin: milk churns of traditional and semi-industrial cattle farms, Barbol (city), northern Iran, contamination: natural, sample year: March 2006, conc. range: 0.51–14.34 ng/l, country: Iran[314]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[314], March

Aflatoxin M_1

incidence: 20/60, sample comp.: milk from cows in Turkey, sample origin: Istanbul (capital), Turkey, contamination: natural, conc. range: 5.4–30.50 ng/l (15 sa.), 61.2–300.20 ng/l (5 sa.), Ø conc.: 48.34 ng/l, sample year: April–June 2007, country: Turkey[53]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1, literature[53]

incidence: 50/50, sample comp.: milk from cows in Jordan, sample origin: different locations in Jordan, contamination: natural, conc. range: 7.05–129.79 ng/kg, Ø conc.: 56.17 ng/kg, sample year: November–February 2012, country: Jordan[266]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, AFM_1, literature[266]

incidence: 30/34*, sample comp.: milk from cows in India, sample origin: around Anand town and Gujarat Agricultural University (GAU) farm, India, contamination: natural, Ø conc.: 0.143 µg/l, sample year: unknown, country: India[303], *milk from individual animals
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, AFM_1, literature[303], individual

incidence: 31/32*, sample comp.: milk from buffaloes in India, sample origin: Primary Milk Producers Co-operative Societies in villages around Anand town and Gujarat Agricultural University (GAU) farms of Anand Campus, India, contamination: natural, Ø conc.: 0.110 µg/l, sample year: unknown, country: India[303], *bulk milk
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, AFM_1, literature[303], bulk

incidence: 3/20, sample comp.: milk from bovines in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 7–14 ng/kg, sample year: 2002, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, AFM_1, literature[304], 2002

incidence: 22/42, sample comp.: milk from bovines in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 6–244 ng/kg, sample year: 2003, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, Sheep/goat milk, raw, AFM_1, literature[304], 2003

incidence: 33/59, sample comp.: milk from bovines in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 6–770 ng/kg, sample year: 2004, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, Sheep/goat milk, raw, AFM_1, literature[304], 2004

incidence: 68/114, sample comp.: milk from bovines in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 4–1,262 ng/kg, sample year: 2005, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, Sheep/goat milk, raw, AFM_1, literature[304], 2005

incidence: 16/40, sample comp.: milk from cows in Iran, sample origin: milk churns of traditional and semi-industrial cattle farms, Barbol (city), northern Iran, contamination: natural, conc. range: 6.5–352.3 ng/l, sample year: January 2006, country: Iran[314]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFB_1, literature[314], January

incidence: 26/40, sample comp.: milk from cows in Iran, sample origin: milk churns of traditional and semi-industrial cattle farms, Barbol (city), northern Iran, contamination: natural, conc. range: 4.0–299.0 ng/l, sample year: February 2006, country: Iran[314]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFB_1, literature[314], February

incidence: 26/40, sample comp.: milk from cows in Iran, sample origin: milk churns of traditional and semi-industrial cattle farms, Barbol (city), northern Iran, contamination: natural, conc. range: 8.2–299.0 ng/l, sample year: March 2006, country: Iran[314]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFB_1, literature[314], March

incidence: 4/25, sample comp.: milk from cows in Egypt, sample origin: different areas in Cairo (governorate), Egypt, contamination: natural, conc. range: 0.25–0.97 µg/l, Ø conc.: 0.62 µg/l, sample year: August 1996, country: Egypt[315]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/25, sample comp.: milk from cows in Egypt, sample origin: different areas in El-Giza (governorate), Egypt, contamination: natural, conc. range: 0.35–3.72 µg/l, Ø conc.: 1.23 µg/l, sample year: August 1996, country: Egypt[315]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/30* sample comp.: milk from cows in Poland, sample origin: different sizes from the Cracow District, Poland, contamination: natural, conc. range: 3.6–10.6 ng/kg, sample year: 1993–1994, country: Poland/Germany[316], *milk collected during indoor period of the cows feeding cycle
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 37/157* sample comp.: milk from cows in Poland, sample origin: Cracow's Dairy Co-operative, Poland, contamination: natural, conc. range: <10 ng/kg (25 sa.), 10–50 ng/kg (12 sa., maximum: 25.0 ng/kg), sample year: 1993–1994, country: Poland/Germany[316], *milk collected during indoor period of the cows feeding cycle
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 303/6,246*, sample comp.: milk from cows in France, sample origin: France, contamination: natural, conc. range: 0.05–0.5 µg/l (284 sa.), >0.5–≤5 µg/l (19 sa.), sample year: November 1978–May 1992: country: France[317], *milk and milk powder
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 40/40, sample comp.: milk from cows in USA, sample origin: USA, contamination: natural, conc. range:

0.001–0.273 ppb, sample year: unknown, country: USA[318]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 46/376, sample comp.: milk from cows in Czechoslovakia, sample origin: dairy plant producing milk baby foods, Czechoslovakia, contamination: natural, conc. range: 0.025–0.1 µg/l (44 sa.), >0.1 µg/l (2 sa.), sample year: autumn 1987-spring 1988, country: Czechoslovakia[319]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 27/89, sample comp.: milk from cows in Czechoslovakia, sample origin: farms in an area of common dairy plant, Czechoslovakia, contamination: natural, conc. range: 0.025–0.1 µg/l (21 sa.), 0.1–0.5 µg/l (6 sa.), sample year: 1988–1989, country: Czechoslovakia[320]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 11/22, sample comp.: milk, probably from cows in Poland, sample origin: state-owned farms and milk from market, Poland, contamination: natural, conc. range: 0.010–0.250 µg/l, sample year: 1980/1981?, country: Poland[321]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 24/409, sample comp.: milk from cows in UK, sample origin: England, Scotland, and North Ireland, contamination: natural, conc. range: 0.02–0.05 µg/kg (10 sa.), 0.05–0.1 µg/kg (6 sa.), >0.1 µg/kg (8 sa.), sample year: 1981–1983, country: UK[322]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/71, sample comp.: milk from cows in Cyprus, sample origin: farms in Cyprus, contamination: natural, conc. range: 0.03–0.04 µg/l, Ø conc.: 0.035 µg/l, sample year: 1993/1995/1996, country: Cyprus[323]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/99, sample comp.: milk from cows in Greece, sample origin: different areas of northern Greece, contamination: natural, conc. range: 0.10–0.13 µg/kg, sample year: November 1986–March 1987, country: Greece[324]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 43/43*, sample comp.: milk from cows in Italy, sample origin: dairy farms delivering their milk to cheese factories located in Reggio and Modena (provinces), Italy, contamination: natural, conc. range: 1–10 ng/kg (11 sa.), 11–50 ng/kg (18 sa.), 51–100 ng/kg (14 sa.), Ø conc.: 37 µg/kg, sample year: 1993, country: Italy[325], *milk destined for Parmigiano Reggiano cheese production
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 55/55*, sample comp.: milk from cows in Italy, sample origin: dairy farms delivering their milk to cheese factories located in Reggio and Modena (provinces), Italy, contamination: natural, conc. range: 1–10 ng/kg (13 sa.), 11–50 ng/kg (33 sa.), 51–100 ng/kg (7 sa.), 270 ng/kg (1 sa.), 406 ng/kg (1 sa.), Ø conc.: 38 µg/kg, sample year: 1994, country: Italy[325], *milk destined for Parmigiano Reggiano cheese production
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 51/63*, sample comp.: milk from cows in Italy, sample origin: dairy farms delivering their milk to cheese factories located in Reggio and Modena (provinces), Italy, contamination: natural, conc. range: 1–10 ng/kg (49 sa.), 11–50 ng/kg (2 sa.), sample year: 1995, country:

Italy[325], *milk destined for Parmigiano Reggiano cheese production
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 42/45*, sample comp.: milk from cows in Italy, sample origin: dairy farms delivering their milk to cheese factories located in Reggio and Modena (provinces), Italy, contamination: natural, conc. range: 1–10 ng/kg (26 sa.), 11–50 ng/kg (15 sa.), 51–100 ng/kg (1 sa.), sample year: 1996, country: Italy[325], *milk destined for Parmigiano Reggiano cheese production
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 66/66*, sample comp.: milk from cows in Italy, sample origin: dairy farms delivering their milk to cheese factories located in Reggio and Modena (provinces), Italy, contamination: natural, conc. range: 1–10 ng/kg (30 sa.), 11–50 ng/kg (32 sa.), 51–100 ng/kg (3 sa.), >100 ng/kg (1 sa.), Ø conc.: 22 µg/kg, sample year: 1998, country: Italy[325], *milk destined for Parmigiano Reggiano cheese production
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 60/60*, sample comp.: milk from cows in Italy, sample origin: dairy farms delivering their milk to cheese factories located in Reggio and Modena (provinces), Italy, contamination: natural, conc. range: 1–10 ng/kg (39 sa.), 11–50 ng/kg (21 sa.), Ø conc.: 10 µg/kg, sample year: 1999, country: Italy[325], *milk destined for Parmigiano Reggiano cheese production
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 75?/78*, sample comp.: milk from cows in Italy, sample origin: Lombardy and Emilia Romagna (regions), northern Italy, contamination: natural, conc. range: <5–93 ng/l, sample year: October 2001–October 2002, country: Italy[326], *organically produced milk: 49 % of the organic sa. above the legal limit (50 ng/l, set by EU Regulation 466/2001)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 71?/78*, sample comp.: milk from cows in Italy, sample origin: Lombardy and Emilia Romagna (regions), northern Italy, contamination: natural, conc. range: <5–66 ng/l, sample year: October 2001–October 2002, country: Italy[326], *conventionally produced milk: 10 % of the conventional sa. above the legal limit (50 ng/l, set by EU Regulation 466/2001)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 66/107*, sample comp.: milk from cows in Italy, sample origin: Reggio Emilia (province), Italy, contamination: natural, conc. range: 6–101 ppt, sample year: February 1991–January 1992, country: Italy[327], *sa. taken in winter
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_2, literature[327], winter

incidence: 56/107*, sample comp.: milk from cows in Italy, sample origin: Reggio Emilia (province), Italy, contamination: natural, conc. range: 3–60 ppt, sample year: February 1991–January 1992, country: Italy[327], *sa. taken in summer
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_2, literature[327], summer

incidence: 6/56, sample comp.: milk from cows in Argentina, sample origin: directly from farms, Argentina, contamination: natural, conc. range: 0.012–0.030 µg/l, Ø conc.: 0.016 µg/l, sample year: March 1999–September 1999 (winter), country: Argentina[328]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/118, sample comp.: milk from cows in UK, sample origin: sa. collected by Milk Marque from farms throughout England and Wales, contamination: natural, conc. range: 0.01–0.04 µg/kg (9 sa.), 0.05–0.10 µg/kg (1 sa.), 0.18 µg/kg (1 sa.), sample year: 1988, country: UK[329]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 26/127, sample comp.: milk from cows in UK, sample origin: sa. collected by Milk Marque from farms throughout England and Wales, contamination: natural, conc. range: 0.01–0.04 µg/kg (20 sa.), 0.05–0.10 µg/kg (5 sa.), 0.16 µg/kg (1 sa.), sample year: 1989, country: UK[329]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/40, sample comp.: milk from cows in UK, sample origin: sa. collected by Milk Marque from farms throughout England and Wales, contamination: natural, conc. range: 0.01–0.04 µg/kg (8 sa.), 0.05–0.10 µg/kg (3 sa., maximum: 0.09 µg/kg), sample year: winter 1995?, country: UK[329]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/39, sample comp.: milk from cows in UK, sample origin: sa. collected by Milk Marque from farms throughout England and Wales, contamination: natural, conc. range: 0.01–0.04 µg/kg (2 sa., maximum: 0.03 µg/kg), sample year: summer 1995?, country: UK[329]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25/31, sample comp.: milk from cows in Portugal, sample origin: individual farms, Portugal, contamination: natural, conc. range: 0.005–0.010 µg/l (17 sa.), 0.011–0.020 µg/l (2 sa.), 0.021–0.050 µg/l (6 sa.), sample year: June–September 1999, country: Portugal[330]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/10*, sample comp.: milk from cows in Turkey, sample origin: street milkmen, Bursa (province), Turkey, contamination: natural, conc.: 10.8 ng/l, sample year: August 2000?, country: Turkey[331], *5 raw and 5 pasteurized milk sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 22/30, sample comp.: milk from cows in Greece, sample origin: milk producers all over Greece, contamination: natural, conc. range: 5–10 ng/l (7 sa.), 11–20 ng/l (10 sa.), 21–50 ng/l (4 sa.), 55 ng/l (1 sa.), sample year: December 1999–May 2000, country: Greece[332]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Goat milk, raw, Sheep milk, raw, AFM_1, literature[332], December 1999

incidence: 18/28, sample comp.: milk from cows in Greece, sample origin: milk producers all over Greece, contamination: natural, conc. range: 5–10 ng/l (3 sa.), 11–20 ng/l (10 sa.), 21–50 ng/l (4 sa.), 60 ng/l (1 sa.), sample year: December 2000–May 2001, country: Greece[332]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Goat milk, raw, Sheep milk, raw, AFM_1, literature[332], December 2000

incidence: 7/50, sample comp.: milk from cows in Brazil, sample origin: "Medio Vale do Paraiba" (main milk-producing area) of São Paulo (city), Brazil, contamination: natural, conc. range: 0.1–1.68 µg/l, Ø conc.: 0.59 µg/l, sample year: July 1979–September 1981, country: Brazil[333]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 66/67, sample comp.: milk from cows in Thailand, sample origin: farm

milk-cans, Thailand, contamination: natural, conc. range: >0–0.05 ppb (9 sa.), >0.05–0.125 ppb (16 sa.), >0.125–0.25 ppb (19 sa.), >0.25–0.5 ppb (5 sa.), >0.5 ppb (17 sa.), sample year: June 1995–January 1996, country: Thailand[334]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 50/85, sample comp.: milk from cows in Egypt, sample origin: Assiut (province), Egypt, contamination: natural, conc. range: ≤15 ppt, sample year: October 1999–February 2000, country: Egypt[335]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/42, sample comp.: milk from cows in Brazil, sample origin: 12 municipal districts in the north of Paraná State, Brazil, contamination: natural, conc. range: 0.29505–1.9749 µg/l, Ø conc.: 0.68485 µg/l, sample year: July 2001–November 2002, country: Brazil[336]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 84/105*, sample comp.: milk from cows in Netherlands, sample origin: different regions in Netherlands, contamination: natural, conc. range: 0.015–0.090 µg/l, sample year: 1981, country: Netherlands[337], *raw as well as heat-treated milk sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/9*, sample comp.: milk from cows in Kuwait, sample origin: local producer at the outskirts of Kuwait (city), Kuwait, contamination: natural, conc. range: 0.20–0.21 µg/l, Ø conc.: 0.206 µg/l, sample year: July–September 1998, country: Kuwait[338], *fresh milk sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15*/30, sample comp.: milk from cows in Iran, sample origin: village producers (small-scale with 1–2 cows) around Isfahan (city), Iran, contamination: natural, conc. range: 50–500 µg/kg, sample year: 1973, country: Iran[339], *all sa. contained AFM_1, 3 sa. additionally AFM_2, and 2 sa. additionally AFB_1 and AFM_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2*/20, sample comp.: milk from cows in Iran, sample origin: large-scale producers (large-scale with 100–300 cows) around Isfahan (city), Iran, contamination: natural, conc. range: 8–10 µg/kg, sample year: 1973, country: Iran[339], *the 2 sa. contained AFM_1

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 21*/37, sample comp.: milk from cows in Iran, sample origin: village producers (small-scale with 1–2 cows) around Isfahan (city), Iran, contamination: natural, conc. range: 50–250 µg/kg, sample year: 1974, country: Iran[339], *all sa. contained AFM_1, and 5 sa. additionally AFM_1 and AFM_2

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/8, sample comp.: milk from cows in Iran, sample origin: large-scale producers (large-scale with 100–300 cows) around Isfahan (city), Iran, contamination: no contamination, sample year: 1974, country: Iran[339]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/31, sample comp.: milk from cows in Italy, sample origin: Bari (province), southern Italy, contamination: natural, conc. range: 5–24 ng/kg (7 sa.), 91 ng/kg (1 sa.), sample year: unknown, country: Italy[340]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 72/72, sample comp.: milk from cows in Iran, sample origin:

individual farms in various areas, Iran, contamination: natural, conc. range: 4.3–91.8 ng/l, Ø conc.: 24.21 ng/l, sample year: 2005/2006, country: Iran[341]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/22, sample comp.: milk from cows in Brazil, sample origin: Marilla (region), Brazil, contamination: natural, conc. range: >0.01 µg/l (5 sa.), 0.02–0.05 µg/l (6 sa.), >0.05–<0.5 µg/l (2 sa.), sample year: 2002/2003, country: Brazil[342]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/33*, sample comp.: milk from cows in France, sample origin: Brittany (region), western France, contamination: natural, conc.: tr, sample year: winter 2003, country: France[343], *raw bulk milk from Holstein breed cows
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, OTA, literature[343], Brittany winter

incidence: 0/33*, sample comp.: milk from cows in France, sample origin: Brittany (region), western France, contamination: no contamination, sample year: summer 2003, country: France[343], *raw bulk milk from Holstein breed cows
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/33*, sample comp.: milk from cows in France, sample origin: Pays de la Loire (region), western France, contamination: natural, conc. range: tr, sample year: winter 2003, country: France[343], *raw bulk milk from Holstein breed cows
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/33*, sample comp.: milk from cows in France, sample origin: Pays de la Loire (region), western France, contamination: no contamination, sample year: summer 2003, country: France[343], *raw bulk milk from Holstein breed cows
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, OTA, literature[343], Pays de la Loire summer

incidence: 0/34*, sample comp.: milk from cows in France, sample origin: Aquitaine (region), western France, contamination: no contamination, sample year: winter 2003, country: France[343], *raw bulk milk from Holstein breed cows
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, OTA, literature[343], Aquitaine winter

incidence: 3/34*, sample comp.: milk from cows in France, sample origin: Aquitaine (region), western France, contamination: natural, conc. range: tr–26 ng/l, sample year: summer 2003, country: France[343], *raw bulk milk from Holstein breed cows
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/32*, sample comp.: milk from cows in France, sample origin: Poitou-Charentes (region), western France, contamination: natural, conc.: tr, sample year: winter 2003, country: France[343], *raw bulk milk from Holstein breed cows
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/32*, sample comp.: milk from cows in France, sample origin: Poitou-Charentes (region), western France, contamination: natural, conc.: 8 ng/l, sample year: summer 2003, country: France[343], *raw bulk milk from Holstein breed cows
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 98/98, sample comp.: milk from cows in Iran, sample origin: Gorgan, Hamedan, Rasht, Shiraz, and Tehran (regions), Iran, contamination: natural,

conc. range: ≤0.050 µg/l (61 sa.), 0.05–0.10 µg/l (29 sa.), 0.1–0.392 µg/l (8 sa.), sample year: April 2003–February 2004, country: Iran[344]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 7/9, sample comp.: milk from cows in Libya, sample origin: Zuwarah and Sabratha (north-west provinces), Libya, contamination: natural, conc. range: 0.03–0.05 ng/ml (1 sa.), >0.05–0.73 ng/ml (6 sa.), Ø conc.: 0.377 ng/ml, sample year: July/August 2002, country: Scotland, UK[345]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12/17, sample comp.: milk from cows in Libya, sample origin: Az zawiyah (north-west province), Libya, contamination: natural, conc. range: >0.08–0.28 ng/ml (12 sa.), Ø conc.: 0.12 ng/ml, sample year: July/August 2002, country: Scotland, UK[345]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/12, sample comp.: milk from cows in Libya, sample origin: Aziziyah (north-west province), Libya, contamination: natural, conc. range: >0.08–3.13 ng/ml (8 sa.), Ø conc.: 0.49 ng/ml, sample year: July/August 2002, country: Scotland, UK[345]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/11, sample comp.: milk from cows in Libya, sample origin: Tripoli (capital), Libya, contamination: natural, conc. range: >0.08–2.68 ng/ml (8 sa.), Ø conc.: 0.72 ng/ml, sample year: July/August 2002, country: Scotland, UK[345]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/10, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.03–0.19 µg/l, sample year: January 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.02–021 µg/l, sample year: February 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/11, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.02–0.28 µg/l, sample year: March 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab city, Iran, contamination: natural, conc. range: 0.02–0.16 µg/l, sample year: April 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.02–0.19 µg/l, sample year: May 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.02–0.15 µg/l, sample year: June 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural,

conc. range: 0.015–0.13 µg/l, sample year: July 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.015–0.14 µg/l, sample year: August 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.03–0.09 µg/l, sample year: September 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.02–0.21 µg/l, sample year: October 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.02–0.28 µg/l, sample year: November 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/9, sample comp.: milk from cows in Iran, sample origin: dairy plants of Sarab (city), Iran, contamination: natural, conc. range: 0.04–0.28 µg/l, sample year: December 2001, country: Iran[346]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/92, sample comp.: milk from cows in Spain, sample origin: dairy farms across Leon (province), Spain, contamination: natural, conc. range: 14.0–24.9 ng/l*, Ø conc.: 20.5 ng/l*, sample year: autumn 2000–spring 2001, country: Spain[347], *ELISA data
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.39–0.70 µg/l, Ø conc.: 0.503 µg/l, sample year: January 2005, country: Pakistan[348]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.38–0.57 µg/l, Ø conc.: 0.466 µg/l, sample year: February 2005, country: Pakistan[348]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.25–0.47 µg/l, Ø conc.: 0.404 µg/l, sample year: March 2005, country: Pakistan[348]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.31–0.50 µg/l, Ø conc.: 0.398 µg/l, sample year: April 2005, country: Pakistan[348]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.28–0.39 µg/l, Ø conc.: 0.323 µg/l, sample year: May 2005, country: Pakistan[348]
- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.27–0.49 µg/l, Ø conc.: 0.351 µg/l, sample year: June 2005, country: Pakistan[348]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.16–0.39 µg/l, Ø conc.: 0.329 µg/l, sample year: July 2005, country: Pakistan[348]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.01–0.42 µg/l, Ø conc.: 0.199 µg/l, sample year: August 2005, country: Pakistan[348]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.17–0.40 µg/l, Ø conc.: 0.328 µg/l, sample year: September 2005, country: Pakistan[348]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.27–0.45 µg/l, Ø conc.: 0.345 µg/l, sample year: October 2005, country: Pakistan[348]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.30–0.47 µg/l, Ø conc.: 0.403 µg/l, sample year: November 2005, country: Pakistan[348]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/14, sample comp.: milk from cows in Pakistan, sample origin: 14 districts of the Punjab province, Pakistan, contamination: natural, conc. range: 0.25–0.47 µg/l, Ø conc.: 0.403 µg/l, sample year: December 2005, country: Pakistan[348]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 60/94*, sample comp.: milk from cows in Argentina, sample origin: dairy farms from Villa Maria basin, Cordoba (province), Argentina, contamination: natural, conc. range: ≤0.07 µg/l, sample year: March–September 2007, country: Argentina[349], *feeding of animals based on stored reserves

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/7, sample comp.: milk from cows in Brazil, sample origin: producers in southern Brazil, contamination: natural, conc. range: 0.756–0.914 µg/l, Ø conc.: 0.835 µg/l, sample year: July–October 2012, country: Brazil[385]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/35, sample comp.: milk from cows in Lebanon, sample origin: local small farms from various regions of Lebanon, contamination: natural, conc. range: 2.63–126 ng/l, Ø conc.: 60.4 ng/l, sample year: March–May, June–July (summer), country: Lebanon[411]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 84/100, sample comp.: milk from cows in Iran, sample origin: Sarab (region) milk collection centers, Iran, contamination:

natural, conc. range: 30–630 ng/l, sample year: spring, summer, and autumn 2009, winter 2010, country: Iran[417]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/48, sample comp.: milk from cows in Morocco, sample origin: 4 sectors of Fez city, northern center of Morocco, contamination: natural, conc. range: 10–100 ng/l, Ø conc.: 43.1 ng/l, sample year: October 2009–September 2010, country: Morocco/France[418]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 42/44, sample comp.: milk from cows in Sudan, sample origin: dairy farms and vendors in Omdurman (city), Khartoum (capital), and Khartoum North, Khartoum State, Sudan, contamination: natural, conc. range: 0.22–6.90 µg/l, sample year: 2009, country: Sudan[419]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 70/74, sample comp.: milk from cows in Syria, sample origin: north, south, and east of Syria, contamination: natural, conc. range: 20–690 ng/l, Ø conc.: 143 ng/l, sample year: April 2005–April 2006, country: Syria[423]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Goat milk, raw, Sheep milk, raw, AFM_1, literature[423]

incidence: 106/186, sample comp.: milk from cows in Iran, sample origin: traditional dairy farms and industrial dairy farms, Hamedan (district), western Iran, contamination: natural, conc. range: 17.4–258 ng/l*, sample year: June–August 2000 (summer), country: Iran[424], *no. of sa. ≥50 ng/l: 3 sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 134/186, sample comp.: milk from cows in Iran, sample origin: traditional dairy farms and industrial dairy farms, Hamedan (district), western Iran, contamination: natural, conc. range: 15–>410 ng/l*, sample year: November 1999–March 2000 (winter), country: Iran[424], *no. of sa. ≥50 ng/l: 11 sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 101/158*, sample comp.: milk from cows in Iran, sample origin: traditional dairy farms, Hamedan (district), western Iran, contamination: natural, conc. range: 15–>410 ng/l**, sample year: 2000, country: Iran[424], *summer and winter sa., **no. of sa. ≥50 ng/l: 12 sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 18/28*, sample comp.: milk from cows in Iran, sample origin: industrial dairy farms, Hamedan district, western Iran, contamination: natural, conc. range: 16–>410 ng/l**, sample year: 2000, country: Iran[424], *summer and winter sa., **no. of sa. ≥50 ng/l: 2 sa.
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 24/30, sample comp.: milk from cows in China, sample origin: dairy farms in Beijing (capital), China, contamination: natural, conc. range: ≤237.4 ng/kg, sample year: April 2012, country: China[427]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, OTA, ZEN, and α-ZOL, literature[427]

incidence: 20/41, sample comp.: milk from cows in Pakistan, sample origin: milking sites and farmhouses from major cities of Punjab (province), Pakistan, contamination: natural, conc. range: ≤0.062 µg/kg, sample year: November 2009–April 2010, country: Pakistan/Spain[429]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, AFM_1, literature[429], Punjab

incidence: 22/43, sample comp.: milk from cows in Pakistan, sample origin: milking sites and farmhouses from major cities of NWFP (Khyber Pakhtunkhwa = formerly the North-West Frontier Province), Pakistan, contamination: natural, conc. range: ≤0.084 µg/kg, sample year: November 2009–April 2010, country: Pakistan/Spain[429]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, AFM_1, literature[429], NWFP

incidence: 4/10, sample comp.: milk from cows in Iran, sample origin: different parts of Sush (city) in Khuzestan (province), Iran, contamination: natural, conc. range: 4.5–14.1 ng/l, Ø conc.: 6.1 ng/l, sample year: February/March 2012 (winter), country: Iran[430]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, AFM_1, literature[430], winter

incidence: 20/30, sample comp.: milk from cows in Iran, sample origin: different parts of Sush (city) in Khuzestan (province), Iran, contamination: natural, conc. range: 3.6–100.9 ng/l, Ø conc.: 32.6 ng/l, sample year: April/May 2012 (spring), country: Iran[430]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, AFM_1, literature[430], spring

incidence: 20/20, sample comp.: milk from cows in Iran, sample origin: different parts of Sush (city) in Khuzestan (province), Iran, contamination: natural, conc. range: 23.2–419.5 ng/l, Ø conc.: 114.9 ng/l, sample year: June/July 2012 (summer), country: Iran[430]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, AFM_1, literature[430], summer

incidence: 46/50, sample comp.: milk from cows in South Korea, sample origin: 50 central cattle ranches in South Korea, contamination: natural, conc. range: ~0.05 µg/l (36 sa.), 0.05 < ~0.1 µg/l (10 sa.), sample year: January 2008 (winter), country: South Korea[434]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 47/50, sample comp.: milk from cows in South Korea, sample origin: 50 southern cattle ranches in South Korea, contamination: natural, conc. range: ~0.05 µg/l (36 sa.), 0.05 < ~0.1 µg/l (11 sa.), sample year: January 2008 (winter), country: South Korea[434]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 35/50, sample comp.: milk from cows in South Korea, sample origin: 50 central cattle ranches in South Korea, contamination: natural, conc. range: ~0.05 µg/l (33 sa.), 0.05 < ~0.1 µg/l (2 sa.), sample year: January 2009 (winter), country: South Korea[434]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 31/50, sample comp.: milk from cows in South Korea, sample origin: 50 southern cattle ranches in South Korea, contamination: natural, conc. range: ~0.05 µg/l (29 sa.), 0.05 < ~0.1 µg/l (2 sa.), sample year: January 2009 (winter), country: South Korea[434]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 26/59, sample comp.: milk from cows in South Korea, sample origin: 59 central cattle ranches in South Korea, contamination: natural, conc. range: <LOQ (16 sa.), >LOQ ~ 0.05 µg/l (10 sa.), sample year: August 2007, country: South Korea[435]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 21/35, sample comp.: milk from cows in South Korea, sample origin: 35 southern east cattle ranches in South Korea, contamination: natural, conc. range:

<LOQ (13 sa.), >LOQ ~ 0.05 µg/l (8 sa.), sample year: August 2007, country: South Korea[435]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/6, sample comp.: milk from cows in South Korea, sample origin: 6 southern west cattle ranches in South Korea, contamination: natural, conc.: 0.05–0.5, sample year: August 2007, country: South Korea[435]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/86, sample comp.: milk from cows in Turkey, sample origin: storage place in Kayseri (city), Turkey, contamination: natural, conc. range: 3.4–32.7 ppt, sample year: unknown, country: Turkey[437]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 65/113*, sample comp.: milk from cows in Indonesia, sample origin: 5 different areas of Yogyakarta (province), Indonesia, contamination: natural, conc. range: 5–25 ng/l, Ø conc.: 8.53 ng/l, sample year: 2006, country: Indonesia/Austria[441], *fresh cow milk
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 66/80, sample comp.: milk from cows in Iran, sample origin: bulk tanks of milk from dairy plants, Esfahan (city), Iran, contamination: natural, conc. range: 10–30 ng/l (7 sa.), 31–50 ng/l (21 sa.), 51–100 ng/l (23 sa.), >100 ng/l (15 sa.), sample year: September 2006–September 2007, country: Iran[443]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 51/60, sample comp.: milk from cows in Iran, sample origin: bulk tanks of milk from dairy plants, Shahr-e Kord (city), Iran, contamination: natural, conc. range: 10–30 ng/l (14 sa.), 31–50 ng/l (17 sa.), 51–100 ng/l (13 sa.), >100 ng/l (7 sa.), sample year: September 2006–September 2007, country: Iran[443]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.10–0.41 µg/l, Ø conc.: 0.25 µg/l, sample year: April 2006, country: Iran[444]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.10–0.21 µg/l, Ø conc.: 0.16 µg/l, sample year: May 2006, country: Iran[444]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.10–0.20 µg/l, Ø conc.: 0.15 µg/l, sample year: June 2006, country: Iran[444]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.10–0.20 µg/l, Ø conc.: 0.13 µg/l, sample year: July 2006, country: Iran[444]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.01–0.20 µg/l, Ø conc.: 0.10 µg/l, sample year: August 2006, country: Iran[444]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.10–0.21 µg/l, Ø conc.: 0.16 µg/l, sample year: September 2006, country: Iran[444]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.12–0.31 µg/l, Ø conc.: 0.21 µg/l, sample year: October 2006, country: Iran[444]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.10–0.20 µg/l, Ø conc.: 0.15 µg/l, sample year: November 2006, country: Iran[444]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.20–0.40 µg/l, Ø conc.: 0.31 µg/l, sample year: December 2006, country: Iran[444]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.13–0.23 µg/l, Ø conc.: 0.17 µg/l, sample year: January 2007, country: Iran[444]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.10 µg/l, Ø conc.: 0.10 µg/l, sample year: February 2007, country: Iran[444]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/6, sample comp.: milk from cows in Iran, sample origin: 6 dairy farms, Kerman Province, Iran, contamination: natural, conc. range: 0.10–0.20 µg/l, Ø conc.: 0.15 µg/l, sample year: March 2007, country: Iran[444]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 80/80, sample comp.: milk from cows in Thailand, sample origin: collecting center in the central region of Thailand, contamination: natural, conc. range: ≤0.05 µg/l (42 sa.), 0.051–0.075 µg/l (27 sa.), 0.075–0.100 µg/l (10 sa.), 0.102 µg/l (1 sa.), Ø conc.: 0.050 µg/l, sample year: April/May 2006 (summer), country: Thailand[445]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 80/80, sample comp.: milk from cows in Thailand, sample origin: collecting center in the central region of Thailand, contamination: natural, conc. range: ≤0.05 µg/l (27 sa.), 0.051–0.075 µg/l (13 sa.), 0.075–0.100 µg/l (30 sa.), ≥0.100 µg/l (10 sa., maximum: 0.128 µg/l), Ø conc.: 0.071 µg/l, sample year: September/October 2006 (rainy season), country: Thailand[445]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 80/80, sample comp.: milk from cows in Thailand, sample origin: collecting center in the central region of Thailand, contamination: natural, conc. range: ≤0.05 µg/l (16 sa.), 0.051–0.075 µg/l (12 sa.), 0.075–0.100 µg/l (31 sa.), ≥0.100 µg/l (21 sa., maximum: 0.197 µg/l), Ø conc.: 0.089 µg/l, sample year: January/February 2007 (winter), country: Thailand[445]

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/12, sample comp.: milk from cows in Italy, sample origin: different areas on Sicily (island, autonomous region), Italy, contamination: natural, conc. range: ≤3–5 ng/l (5 sa.), 10 ng/l (1 sa.), sample year: January–June 2012, country: Italy[447]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Goat milk, raw, Sheep milk, raw, AFM_1, literature[447]

incidence: 29/45, sample comp.: milk from cows in India, sample origin: milk producers from the states of Karnataka and Tamil Nadu, India, contamination: natural, conc. range: 0.02–0.05 µg/l (7 sa.), 0.05–0.1 µg/l (5 sa.), 0.1–0.5 µg/l (11 sa.), >0.5–3.8 µg/l (6 sa.), sample year: April–July 2011?, country: India[449]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 26/28*, sample comp.: milk from cows in China, sample origin: milk stations in Beijing (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (22 sa.), 30.0–49.9 ng/l (1 sa.), 50.0–99.9 ng/l (3 sa.), sample year: September 2010, country: China[454], *milk sa. from large-scale farms

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 18/23*, sample comp.: milk from cows in China, sample origin: milk stations in Beijing (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (12 sa.), 30.0–49.9 ng/l (1 sa.), 50.0–99.9 ng/l (5 sa.), sample year: September 2010, country: China[454], *milk sa. from milk processing plants

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 24/29*, sample comp.: milk from cows in China, sample origin: milk stations in Beijing (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (21 sa.), 30.0–49.9 ng/l (2 sa.), 50.0–99.9 ng/l (1 sa.), sample year: September 2010, country: China[454], *milk sa. from small farm cooperatives

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 37/49*, sample comp.: milk from cows in China, sample origin: milk stations in Hebei (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (33 sa.), 30.0–49.9 ng/l (1 sa.), 50.0–99.9 ng/l (3 sa.), sample year: September 2010, country: China[454], *milk sa. from large-scale farms

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 23/31*, sample comp.: milk from cows in China, sample origin: milk stations in Hebei (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (18 sa.), 30.0–49.9 ng/l (2 sa.), 50.0–99.9 ng/l (2 sa.), 100.0–129.9 ng/l (1 sa.), sample year: September 2010, country: China[454], *milk sa. from small farm cooperatives

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/9*, sample comp.: milk from cows in China, sample origin: milk stations in Shanxi (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (6 sa.), sample year: September 2010, country: China[454], *milk sa. from large-scale farms

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/13*, sample comp.: milk from cows in China, sample origin: milk stations in Shanxi (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (5 sa.), sample year: September 2010, country: China[454], *milk sa. from milk processing plants

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 32/52*, sample comp.: milk from cows in China, sample origin: milk

stations in Shanxi (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (28 sa.), 30.0–49.9 ng/l (2 sa.), 50.0–99.9 ng/l (2 sa.), sample year: September 2010, country: China[454], *milk sa. from small farm cooperatives
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 46/50*, sample comp.: milk from cows in China, sample origin: milk stations in Shanghai (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (32 sa.), 30.0–49.9 ng/l (6 sa.), 50.0–99.9 ng/l (8 sa.), sample year: September 2010, country: China[454], *milk sa. from large-scale farms
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 9/10*, sample comp.: milk from cows in China, sample origin: milk stations in Shanghai (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (6 sa.), 50.0–99.9 ng/l (3 sa.), sample year: September 2010, country: China[454], *milk sa. from milk processing plants
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 37/39*, sample comp.: milk from cows in China, sample origin: milk stations in Guangdong (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (30 sa.), 30.0–49.9 ng/l (5 sa.), 50.0–99.9 ng/l (2 sa.), sample year: September 2010, country: China[454], *milk sa. from large-scale farms
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/20*, sample comp.: milk from cows in China, sample origin: milk stations in Guangdong (province), China, contamination: natural, conc. range: 5.0–29.9 ng/l (11 sa.), 30.0–49.9 ng/l (1 sa.), 50.0–99.9 ng/l (5 sa.), sample year: September 2010, country: China[454], *milk sa. from milk processing plants
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/1*, sample comp.: milk from cows in China, sample origin: milk stations in Guangdong (province), China, contamination: natural, conc.: 50.0–99.9 ng/l (1 sa.), sample year: September 2010, country: China[454], *milk sa. from small farm cooperatives
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 35/35, sample comp.: milk from cows in Sudan, sample origin: dairy farms from Omdurman (city), Karthoum (capital) and Khartoum North, Sudan, contamination: natural, conc. range: 0.05–0.99 µg/kg (20 sa.), 1–2 µg/kg (13 sa.), >2–2.52 µg/kg (2 sa.), sample year: unknown, country: Sudan[455]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 41/45, sample comp.: milk from cows in Turkey, sample origin: local farms in the vicinity of Kars (city), Turkey, contamination: natural, conc. range: 51–75 ng/l (30 sa.), >75 ng/l (11 sa.), sample year: May/July 2006?, country: Turkey[458]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 19/50, sample comp.: milk from cows in Iran, sample origin: supermarkets in Alexandria (city), Egypt, contamination: natural, conc. range: 23–73 ng/l, Ø conc.: 49.74 ng/l, sample year: February 2008–March 2009, country: Iran[459]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aflatoxin M_2

incidence: 37/107*, sample comp.: milk from cows in Italy, sample origin: Reggio Emilia (province), Italy, contamination: natural, conc. range: 2–17 ppt, sample year: February 1991–January 1992, country: Italy[327], *sa. taken in winter

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[327], winter

incidence: 21/107*, sample comp.: milk from cows in Italy, sample origin: Reggio Emilia (province), Italy, contamination: natural, conc. range: 1–12 ppt, sample year: February 1991–January 1992, country: Italy[327], *sa. taken in summer

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[327], summer

Aflatoxin M_1 & M_2

incidence: 23/26, sample comp.: milk from cows in USA, sample origin: Florida? (state), USA, contamination: natural, conc. range: 0.10–1.43 ppb, Ø conc.: 0.59 ppb, sample year: unknown, country: USA[350]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Aspergillus and *Penicillium* Toxins

Ochratoxin A

incidence: 1/33*, sample comp.: milk from cows in France, sample origin: Brittany (region), western France, contamination: natural, conc.: 6.6 ng/l, sample year: winter 2003, country: France[343], *raw bulk milk from Holstein breed cows

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[343], Brittany winter

incidence: 0/33*, sample comp.: milk from cows in France, sample origin: Brittany (region), western France, contamination: no contamination, sample year: summer 2003, country: France[343], *raw bulk milk from Holstein breed cows

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/33*, sample comp.: milk from cows in France, sample origin: Pays de la Loire (region), western France, contamination: no contamination, sample year: winter 2003, country: France[343], *raw bulk milk from Holstein breed cows

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[343], Pays de la Loire winter

incidence: 1/33*, sample comp.: milk from cows in France, sample origin: Pays de la Loire (region), western France, contamination: natural, conc.: 5.0 ng/l, sample year: summer 2003, country: France[343], *raw bulk milk from Holstein breed cows

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/34*, sample comp.: milk from cows in France, sample origin: Aquitaine (region), western France, contamination: natural, conc.: 6.4 ng/l, sample year: winter 2003, country: France[343], *raw bulk milk from Holstein breed cows

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/34*, sample comp.: milk from cows in France, sample origin: Aquitaine (region), western France, contamination: no contamination, sample year: summer 2003, country: France[343], *raw bulk milk from Holstein breed cows

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[343], Aquitaine summer

incidence: 0/32*, sample comp.: milk from cows in France, sample origin: Poitou-Charentes (region), western France, contamination: no contamination, sample year: winter 2003, country: France[343], *raw bulk milk from Holstein breed cows

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[343], Poitou-Charentes winter

incidence: 0/32*, sample comp.: milk from cows in France, sample origin: Poitou-

Charentes (region), western France, contamination: no contamination, sample year: summer 2003, country: France[343], *raw bulk milk from Holstein breed cows
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, literature[343], Poitou-Charentes summer

incidence: 29/30, sample comp.: milk from cows in China, sample origin: dairy farms in Beijing (capital), China, contamination: natural, conc. range: ≤84.1 ng/kg, sample year: April 2012, country: China[427]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, ZEN, and α-ZOL, literature[427]

Fusarium Toxins

Fumonisin B_1

incidence: 1/155, sample comp.: milk from cows in USA, sample origin: Wisconsin (state), USA, contamination: natural, conc.: 1.29 ng/ml, sample year: March–May 1993, country: USA[351]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/1, sample comp.: milk from cows in Italy, sample origin: retail shops, Italy, contamination: natural, conc.: 0.32 µg/kg, sample year: unknown, country: Italy[422]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Zearalenone

incidence: 7/30, sample comp.: milk from cows in China, sample origin: dairy farms in Beijing (capital), China, contamination: natural, conc. range: ≤45.8 ng/kg, sample year: April 2012, country: China[427]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, OTA, and α-ZOL, literature[427]

α-Zearalenol

incidence: 28/30, sample comp.: milk from cows in China, sample origin: dairy farms in Beijing (capital), China, contamination: natural, conc. range: ≤73.5 ng/kg, sample year: April 2012, country: China[427]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, AFM_1, OTA, and ZEN, literature[427]

see also **Buffalo milk, raw**, **Goat milk, raw**, **Sheep milk, raw**, and **Sheep/goat milk, raw**

Cow serum may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 5/14*, sample comp.: serum from a cow in Japan, sample origin: station in Iida (city), Nagano Prefecture, Japan, contamination: natural, conc. range: ≤0.11 ng/ml**, Ø conc.: 0.020 ng/ml**, sample year: November 1985, country: Japan[432], *marketed cows, **tested by ELISA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Horse serum, Pig serum, OTA, literature[432], Lot B

Cow udder may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Gliotoxin

incidence: 1/1*, sample comp.: udder from a cow in Germany, sample origin: Holstein-Friesian cow, Germany, contamination: natural, conc.: 9.2 mg/kg, sample year: unknown, country: Germany[310], *cow, few days after calving, developed severe mastitis with swelling, induration and pain in the right posterior quarter, age: 8 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Cow urine may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Zearalenone

incidence: 10/10?, sample comp.: urine from cows in Croatia, sample origin: farms in different regions in Croatia, contamination: natural, Ø conc.: 24.35 ng/ml, sample year: unknown, country: Croatia[453]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, ZEN, literature[453]

see also **Cattle**

Deer

Deer urine may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Zearalanols

incidence: 14/41*, sample comp.: urine from deers in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤0.94 ng/ml**, sample year: May 1992–March 1993, country: New Zealand[311], *export animals, **most probable of *Fusarium* origin

- Co-contamination: 14 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Deer urine, ZEL, literature[311]; Cattle urine, Goat urine, Horse urine, Lamb urine, Sheep urine, ZAL and ZEL, literature[311]

Zearalenols

incidence: 14/41*, sample comp.: urine from deers in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤15 ng/ml, sample year: May 1992–March 1993, country: New Zealand[311], *export animals

- Co-contamination: 14 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Deer urine, ZAL, literature[311]; Cattle urine, Goat urine, Horse urine, Lamb urine, Sheep urine, ZAL and ZEL, literature[311]

Dog

Dog brain may contain the following mycotoxins and/or their metabolites:
Penicillium Toxins

Penitrem A

incidence: 1/1*, sample comp.: male Welsh Springer spaniel in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: 4.22 µg/kg, sample year: unknown, country: Norway/Sweden[352], *Welsh Springer spaniel, age: 5 years

- Co-contamination: 1 sa. co-contaminated with PEA and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, ROC, literature[352]; Dog kidney, Dog liver, PEA, PEE, and ROC, literature[352] (Welsh Springer spaniel)

incidence: 1/1*, sample comp.: female poodle in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: pr, sample year: unknown, country: Norway/Sweden[352], *poodle, age: 4 years

- Co-contamination: 1 sa. co-contaminated with PEA, PEE and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, PEE, literature[352], poodle

Penitrem E

incidence: 1/1*, sample comp.: female poodle in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: pr, sample year: unknown, country: Norway/Sweden[352], *poodle, age: 4 years

- Co-contamination: 1 sa. co-contaminated with PEA, PEE and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, PEA, literature[352], poodle

Roquefortine C

incidence: 1/1*, sample comp.: male Welsh Springer spaniel in Norway/Sweden?, sample origin: Norway/Sweden?,

contamination: natural, conc.: pr, sample year: unknown, country: Norway/Sweden[352], *Welsh Springer spaniel, age: 5 years
- Co-contamination: 1 sa. co-contaminated with PEA and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, PEA, literature[352]; Dog liver, Dog kidney, PEA and ROC, literature[352] (Welsh Springer spaniel)

incidence: 1/1*, sample comp.: female poodle in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: pr, sample year: unknown, country: Norway/Sweden[352], *poodle, age: 4 years
- Co-contamination: 1 sa. co-contaminated with PEA, PEE and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, PEE, literature[352], poodle

Dog kidney may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 1/2, sample comp.: male Walker hounds in USA*, sample origin: USA, contamination: natural, conc.: 0.4 ng/g, sample year: unknown, country: USA[436], *dogs age: 2 and 5 years
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog liver, AFB_1, literature[436]

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 3/3, sample comp.: dogs in Austria, sample origin: Austria?, contamination: natural, conc. range: 0.26–0.35 µg/kg, Ø conc.: 0.305 µg/kg, sample year: unknown, country: Austria[308]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cat kidney, OTA, literature[308]

Penicillium Toxins

Penitrem A

incidence: 1/1*, sample comp.: male Welsh Springer spaniel in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: pr, sample year: unknown, country: Norway/Sweden[352], *Welsh Springer spaniel, age: 5 years
- Co-contamination: 1 sa. co-contaminated with PEA, PEE and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, PEA and ROC, literature[352]; Dog kidney, PEE and ROC, literature[352]; Dog liver, PEA, PEE, and ROC, literature[352] (Welsh Springer spaniel)

Penitrem E

incidence: 1/1*, sample comp.: male Welsh Springer spaniel in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: pr, sample year: unknown, country: Norway/Sweden[352], *Welsh Springer spaniel, age: 5 years
- Co-contamination: 1 sa. co-contaminated with PEA, PEE and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, Dog kidney, PEA and ROC, literature[352]; Dog liver, PEA, PEE, and ROC, literature[352] (Welsh Springer spaniel)

Roquefortine C

incidence: 1/1*, sample comp.: male Welsh Springer spaniel in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: pr, sample year: unknown, country: Norway/Sweden[352], *Welsh Springer spaniel, age: 5 years
- Co-contamination: 1 sa. co-contaminated with PEA, PEE and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, PEA and ROC, literature[352]; Dog kidney, PEA and PEE, literature[352]; Dog liver, PEA, PEE, and ROC, literature[352] (Welsh Springer spaniel)

Dog liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 1?/3*, sample comp.: cattle dog, kelpie, and German collie cross in Australia**, sample origin: cattle property in south-west Queensland (state), Australia, contamination: natural, conc.: 0.002 ppm, sample year: unknown, country: Australia[433], *in stomach contents (vomit), **dogs age: 9 months, 18 months, and 30 months, respectively

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog stomach, AFB_1 and AFG_1, literature[433]

incidence: 1/2, sample comp.: male Walker hounds in USA*, sample origin: USA, contamination: natural, conc.: 0.8 ng/g, sample year: unknown, country: USA[436], *dogs age: 2 and 5 years, respectively

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog kidney, AFB_1, literature[436]

Aflatoxin M_1

incidence: 7/9*, sample comp.: Basset hounds, Australian shepherd, Airedale terrier, Labrador Mix, USA, sample origin: dogs of Athens, Benton, and Knoxville (cities), Tennessee (state), USA, contamination: natural, conc. range: 0.60–4.40 ppb, Ø conc.: 1.99 ppb, sample year: unknown, country: USA[354], *2 male and 4 female Basset hounds, 1 female Australian shepherd, 1 female spayed Airedale terrier and 1 male neutered Labrador Mix, age: 1.25–6 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Penicillium Toxins

Penitrem A

incidence: 1/1*, sample comp.: male Welsh Springer spaniel in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: pr, sample year: unknown, country: Norway/Sweden[352], *Welsh Springer spaniel, age: 5 years

- Co-contamination: 1 sa. co-contaminated with PEA, PEE and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, PEA and ROC, literature[352]; Dog kidney, PEA, PEE, and ROC, literature[352]; Dog liver, PEE and ROC, literature[352] (Welsh Springer spaniel)

Penitrem E

incidence: 1/1*, sample comp.: male Welsh Springer spaniel in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: 5 µg/kg, sample year: unknown, country: Norway/Sweden[352], *Welsh Springer spaniel, age: 5 years

- Co-contamination: 1 sa. co-contaminated with PEA, PEE and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, PEA and ROC, literature[352]; Dog kidney, PEA, PEE, and ROC, literature[352]; Dog liver, PEA and ROC, literature[352] (Welsh Springer spaniel)

Roquefortine C

incidence: 1/1*, sample comp.: male Welsh Springer spaniel in Norway/Sweden?, sample origin: Norway/Sweden?, contamination: natural, conc.: pr, sample year: unknown, country: Norway/Sweden[352], *Welsh Springer spaniel, age: 5 years

- Co-contamination: 1 sa. co-contaminated with PEA, PEE and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog brain, PEA and ROC, literature[352]; Dog kidney, PEA, PEE, and ROC, literature[352]; Dog liver, PEA and PEE, literature[352] (Welsh Springer spaniel)

Dog stomach may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 1?/3*, sample comp.: cattle dog, kelpie, and German collie cross in Australia**, sample origin: cattle property in south-west Queensland (state), Australia, contamination: natural, conc.: 100 ppm, sample year: unknown, country: Australia[433], *in stomach contents (vomit), **dogs age: 9 months, 18 months, and 30 months, respectively

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog liver, AFB_1, literature[433]; Dog stomach, AFG_1, literature[433]

Aflatoxin G_1

incidence: 1?/3*, sample comp.: cattle dog, kelpie, German collie cross in Australia**, sample origin: cattle property in south-west Queensland (state), Australia, contamination: natural, conc.: 40 ppm, sample year: unknown, country: Australia[433], *in stomach contents (vomit), **dogs age: 9 months, 18 months, and 30 months, respectively

- Co-contamination: 1 sa. co-contaminated with AFB_1 and AFG_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog liver, Dog stomach, AFB_1, literature[433]

Penicillium Toxins

Penitrem A

incidence: 1/1*, sample comp.: male English setter, Norway/Sweden?, sample origin: vomitus of the dog, Norway/Sweden?, contamination: natural, conc.: ca. 30,000 μg/kg** ***, sample year: unknown, country: Norway/Sweden[352], *English setter, age: 10 years, *in stomach contents (vomit), ***semiquantitative determination

- Co-contamination: 1 sa. co-contaminated with PEA and THO
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog stomach, THO, literature[352]

incidence: ?/2*, sample comp.: spayed Miniature Schnauzer bitch and a crossbred Schnauzer in South Africa, sample origin: vomitus of the dogs, South Africa, contamination: natural, conc.: 2.6 μg/g wet mass, sample year: unknown, country: South Africa/Norway[353], *2 Schnauzers, age: 2 and 3 years, weight: ≈20 and 25 kg

- Co-contamination: 1 or 2 sa. co-contaminated with PEA and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog stomach, ROC, literature[353]

incidence: 6/7*, sample comp.: dogs exhibiting neurologic signs, USA, sample origin: vomitus of the dogs, USA, contamination: natural, conc. range: pr, sample year: unknown, country: USA[415]

- Co-contamination: 6 sa. co-contaminated with PEA and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog stomach, ROC, literature[415]

Roquefortine C

incidence: ?/2*, sample comp.: spayed Miniature Schnauzer bitch and a crossbred Schnauzer in South Africa, sample origin: vomitus of the dogs, South Africa, contamination: natural, conc.: 34 μg/g wet mass, sample year: unknown, country: South Africa/Norway[353], *2 Schnauzers, age: 2 and 3 years, weight: ≈20 and 25 kg

- Co-contamination: 1 or 2 sa. co-contaminated with PEA and ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog stomach, PEA, literature[353]

incidence: 7/7*, sample comp.: dogs exhibiting neurologic signs, USA, sample origin: vomitus of the dogs, USA, contamination: natural, conc. range: pr, sample year: unknown, country: USA[415]

- Co-contamination: 6 sa. co-contaminated with PEA and ROC; 1 sa. contaminated solely with ROC
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog stomach, PEA, literature[415]

Thomitrem

incidence: 1/1*, sample comp.: male English setter, Norway/Sweden?, sample origin: vomitus of the dog, Norway/Sweden?, contamination: natural, conc.: ca. 40,000 µg/kg** ***, sample year: unknown, country: Norway/Sweden[352], *English setter, age: 10 years, *in stomach contents (vomit), ***semiquantitative determination

- Co-contamination: 1 sa. co-contaminated with PEA and THO
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Dog stomach, PEA, literature[352]

Dog vomitus see **Dog stomach**

Duck

Duck liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 1/8*, sample comp.: domestic Chinese brown ducks, China, sample origin: local farms in Qidong (region), China, contamination: natural, conc.: 3.71 ng AFB_1-FAPY/mg DNA** or 6.38 pmol/mg DNA, sample year. 1988/1989, country: France/India/China/Thailand[355], *7 domestic Chinese brown ducks, age: adult (at least 3 years old), were infected with HCC (1 additionally contaminated with AFB_1), **liver DNA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Egg may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: ?/?, sample comp.: eggs from laying hens in USA?, sample origin: USA?, contamination: natural, conc.: ~0.075 ng/g, sample year: unknown, country: USA[301]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Beef liver, AFB_1, AFG_1, and AFM_1, literature[301]

Aflatoxins

incidence: 5/40*, sample comp.: eggs produced in Jordan, sample origin: local markets in Jordan, contamination: natural, conc. range: 0.20–5.80 µg/kg, sample year: January–May 2007, country: Jordan[425], *eggs from Hubbard hens

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Meat, AFS, literature[425]

Fusarium Toxins

Deoxynivalenol

incidence: 8/10, sample comp.: eggs from laying hens in Belgium, sample origin: private breeders from different provinces of Belgium, contamination: natural, conc. range: tr–7.5 ppb, sample year: autumn 2006, country: Belgium[302]

- Co-contamination: 2 sa. co-contaminated with DON and DOM-1; 6 sa. contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DOM-1, ZEN, α-ZOL, and ß-ZOL, literature[302], autumn

incidence: 9/10, sample comp.: eggs from laying hens in Belgium, sample origin: private breeders from different provinces of Belgium, contamination: natural, conc. range: tr–17.9 ppb, sample year: spring 2007, country: Belgium[302]

- Co-contamination: 1 sa. co-contaminated with DON and DOM-1; 8 sa. contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DOM-1, ZEN, α-ZOL, and ß-ZOL, literature[302], spring

For detailed information please see the article.

Deepoxydeoxynivalenol

incidence: 3/10, sample comp.: eggs from laying hens in Belgium, sample origin:

private breeders from different provinces of Belgium, contamination: natural, conc. range: 2.4–4.8 ppb, Ø conc.: 3.8 ppb, sample year: autumn 2006, country: Belgium[302]

- Co-contamination: 2 sa. co-contaminated with DON and DOM-1; 1 sa. contaminated solely with DOM-1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DON, ZEN, α-ZOL, and ß-ZOL, literature[302], autumn

incidence: 1/10, sample comp.: eggs from laying hens in Belgium, sample origin: private breeders from different provinces of Belgium, contamination: natural, conc.: 23.7 ppb, sample year: spring 2007, country: Belgium[302]

- Co-contamination: 1 sa. co-contaminated with DON and DOM-1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DON, ZEN, α-ZOL, and ß-ZOL, literature[302], spring

For detailed information please see the article.

α-Zearalenol

incidence: 9/10, sample comp.: eggs from laying hens in Belgium, sample origin: private breeders from different provinces of Belgium, contamination: natural, conc. range: tr, sample year: autumn 2006, country: Belgium[302]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DON, DOM-1, ZEN, and ß-ZOL, literature[302], autumn

incidence: 2/10, sample comp.: eggs from laying hens in Belgium, sample origin: private breeders from different provinces of Belgium, contamination: natural, conc. range: tr, sample year: spring 2007, country: Belgium[302]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DON, DOM-1, ZEN, and ß-ZOL, literature[302], spring

For detailed information please see the article.

ß-Zearalenol

incidence: 6/10, sample comp.: eggs from laying hens in Belgium, sample origin: private breeders from different provinces of Belgium, contamination: natural, conc. range: tr, sample year: autumn 2006, country: Belgium[302]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DON, DOM-1, ZEN, and α-ZOL, literature[302], autumn

incidence: 3/10, sample comp.: eggs from laying hens in Belgium, sample origin: private breeders from different provinces of Belgium, contamination: natural, conc. range: tr, sample year: spring 2007, country: Belgium[302]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DON, DOM-1, ZEN, and α-ZOL, literature[302], spring

For detailed information please see the article.

Zearalenone

incidence: 6/10, sample comp.: eggs from laying hens in Belgium, sample origin: private breeders from different provinces of Belgium, contamination: natural, conc. range: tr, sample year: autumn 2006, country: Belgium[302]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DON, DOM-1, α-ZOL, and ß-ZOL, literature[302], autumn

incidence: 1/10, sample comp.: eggs from laying hens in Belgium, sample origin: private breeders from different provinces of Belgium, contamination: natural, conc.: tr, sample year: spring 2007, country: Belgium[302]

- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, DON, DOM-1, α-ZOL, and ß-ZOL, literature[302], spring

For detailed information please see the article.

Ewe's milk, raw see **Sheep milk, raw**

Gilt

Gilt bile may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Zearalenone

incidence: 52/52, sample comp.: gilts with reproductive problems, Germany, sample origin: slaughterhouse Landshut (city), Germany, contamination: natural, conc. range: ≤40 ng/ml, sample year: unknown, country: Germany[359]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Gilt bile, α-ZOL, literature[359]

α-Zearalenol

incidence: 52/52, sample comp.: gilts with reproductive problems, Germany, sample origin: slaughterhouse Landshut (city), Germany, contamination: natural, conc. range: ≤66.1 ng/ml, sample year: unknown, country: Germany[359]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Gilt bile, ZEN, literature[359]

Goat

Goat milk, raw may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin M_1

incidence: 4/10, sample comp.: milk from goats in Greece, sample origin: milk producers all over Greece, contamination: natural, conc. range: 11–20 ng/l (2 sa.), 21–50 ng/l (2 sa.), sample year: December 1999–May 2000, country: Greece[332]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Sheep milk, raw, AFM_1, literature[332], December 1999

incidence: 8/12, sample comp.: milk from goats in Greece, sample origin: milk producers all over Greece, contamination: natural, conc. range: 5–10 ng/l (7 sa.), 11–20 ng/l (1 sa.), sample year: December 2000–May 2001, country: Greece[332]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Sheep milk, raw, AFM_1, literature[332], December 2000

incidence: 10/27, sample comp.: milk from goats in Italy, sample origin: dairy farms in Bergamo (province), Lombardy (region), Italy, contamination: natural, conc. range: 4–17 ng/l, sample year: March–October 1996, country: Italy[420]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/7, sample comp.: milk from goats in Italy, sample origin: dairy farms in Brescia (province), Lombardy (region), Italy, contamination: natural, conc. range: 4–37 ng/l, sample year: March–October 1996, country: Italy[420]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/7, sample comp.: milk from goats in Italy, sample origin: dairy farms in Como (province), Lombardy (region), Italy, contamination: no contamination, sample year: March–October 1996, country: Italy[420]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/3, sample comp.: milk from goats in Italy, sample origin: dairy farms in

Lecco (province), Lombardy (region), Italy, contamination: natural, conc.: 12 ng/l, sample year: March–October 1996, country: Italy[420]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/7, sample comp.: milk from goats in Italy, sample origin: dairy farms in Milano (province), Lombardy (region), Italy, contamination: no contamination, sample year: March–October 1996, country: Italy[420]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 0/7, sample comp.: milk from goats in Italy, sample origin: dairy farms in Pavia (province), Lombardy (region), Italy, contamination: no contamination, sample year: March–October 1996, country: Italy[420]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/17, sample comp.: milk from goats in Italy, sample origin: dairy farms in Sondrio (province), Lombardy (region), Italy, contamination: natural, conc. range: 9–14 ng/l, sample year: March–October 1996, country: Italy[420]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/15, sample comp.: milk from goats in Italy, sample origin: dairy farms in Varese (province), Lombardy (region), Italy, contamination: natural, conc. range: 4–8 ng/l, sample year: March–October 1996, country: Italy[420]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/11, sample comp.: milk from cows in Syria, sample origin: north, south, and east of Syria, contamination: natural, conc. range: 8–54 ng/l, Ø conc.: 19 ng/l, sample year: April 2005–April 2006, country: Syria[423]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Sheep milk, raw, AFM_1, literature[423]

incidence: 1/3, sample comp.: milk from cows in Italy, sample origin: different areas on Sicily (island, autonomous region), Italy, contamination: natural, conc.: 3 ng/l, sample year: January–June 2012, country: Italy[447]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Sheep milk, raw, AFM_1, literature[447]

see also **Buffalo milk, raw**, **Cow milk, raw**, **Sheep milk, raw**, and **Sheep/goat milk, raw**

Goat urine may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Zearalanols

incidence: 9/27*, sample comp.: urine from goats in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤0.56 ng/ml**, sample year: May 1992–March 1993, country: New Zealand[311], *export animals, **most probable of *Fusarium* origin
- Co-contamination: 9 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Goat urine, ZEL, literature[311]; Cattle urine, Deer urine, Horse urine, Lamb urine, Sheep urine, ZAL and ZEL, literature[311]

Zearalenols

incidence: 9/27*, sample comp.: urine from cattles in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤19 ng/ml, sample year: May 1992–March 1993, country: New Zealand[311], *export animals
- Co-contamination: 9 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Goat urine, ZAL, literature[311]; Cattle urine, Deer urine, Horse urine, Lamb urine, Sheep urine, ZAL and ZEL, literature[311]

Goose

Goose ingesta may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Deoxynivalenol

incidence: 2/29*, sample comp.: ingesta from goats in USA, sample origin: marsh areas in central Nebraska (state), USA, contamination: natural, conc. range: 0.5–1.5 ppm, Ø conc.: 1.0 ppm, sample year: March/April 1990, country: USA[426], *18 snow (1 af.) and 11 (1 af.) white-fronted geese

- Co-contamination: 1 sa. co-contaminated with DON and ZEN; 1 sa. contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Goose ingesta, ZEN, literature[426]

Zearalenone

incidence: 3/29*, sample comp.: ingesta from goats in USA, sample origin: marsh areas in central Nebraska (state), USA, contamination: natural, conc. range: 1–1.5 ppm, Ø conc.: 1.3 ppm, sample year: March/April 1990, country: USA[426], *18 (3 af.) snow and 11 white-fronted geese

- Co-contamination: 1 sa. co-contaminated with DON and ZEN; 2 sa. contaminated solely with ZEN
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Goose ingesta, DON, literature[426]

Hare

Hare liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: ?/42, sample comp.: hares, Cszechoslovakia, sample origin: free living hares, Cszechoslovakia, contamination: natural, conc. range: 0.232–1.2 µg/kg, sample year: unknown, country: Cszechoslovakia[356]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: ?/12, sample comp.: hares, Cszechoslovakia, sample origin: hares living in boxes, Cszechoslovakia, contamination: natural, conc. range: ≤0.19 µg/kg, sample year: unknown, country: Cszechoslovakia[356]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Hen

Hen serum may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 13/25*, sample comp.: serum from hens in Italy, sample origin: conventional poultry farms in northern Italy, contamination: natural, conc. range: 0.006–0.082 ng/ml*, sample year: 2006, country: Italy[448], *laying hens

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Broiler serum, OTA, literature[448], conventional production

incidence: 19/26*, sample comp.: serum from hens in Italy, sample origin: organic poultry farms in northern Italy, contamination: natural, conc. range: 0.010–0.165 ng/ml*, sample year: 2006, country: Italy[448], *laying hens

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Broiler serum, OTA, literature[448], organic production

see also **Broiler**, **Chicken** and **Poultry**

Hog

see **Pig**

Horse

Horse liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 2/2*, sample comp.: riding mares, USA, sample origin: southern Georgia (state), USA, contamination: natural, conc. range: 9.0–18.0 ppb, Ø conc.: 13.5 ppb, sample year: 1978, country: Thailand/USA[357], *the ingested corn (for horse feed) was heavily contaminated with aflatoxin

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Horse serum may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 1/1, sample comp.: serum from a horse in Japan, sample origin: station in Iida (city), Nagano Prefecture, Japan, contamination: natural, conc.: 0.11 ng/ml*, sample year: November 1985, country: Japan[432], *tested by ELISA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow serum, Pig serum, OTA, literature[432], Lot B

incidence: 30/36*, sample comp.: serum from horses in Italy, sample origin: pregnant mares housed at the "Pegasus" Equine Reproduction Centre in Bari (city), other animals on farms in the Apulia region, Italy, contamination: natural, conc. range: 52.8–705.4 pg/ml, Ø conc.: 169.2 pg/ml, sample year: July–October 2008, country: Italy[440], *serum of 12 stallions, 7 cycling, and 17 pregnant mares, age: 2–18 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 14/17*, sample comp.: serum from horses in Italy, sample origin: "Pegasus" Equine Reproduction Centre in Bari (city), Italy, contamination: natural, conc. range: 69.7–348.3 pg/ml, Ø conc.: 126.2 pg/ml, sample year: July–October 2008, country: Italy[440], *serum of the 17 foaling mares, age: 4–16 years

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 7/17*, sample comp.: serum from foals in Italy, sample origin: "Pegasus" Equine Reproduction Centre in Bari (city), Italy, contamination: natural, conc. range: 69.5–252.6 pg/ml, Ø conc.: 124.8 pg/ml, sample year: July–October 2008, country: Italy[440], *serum of the umbilical cord of the corresponding 17 foals

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Horse urine

may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Zearalanols

incidence: 47/76*, sample comp.: urine from horses in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤18.8 ng/ml**, sample year: May 1992–March 1993, country: New Zealand[311], *export animals, **most probable of *Fusarium* origin

- Co-contamination: 47 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Horse urine, ZEL, literature[311]; Cattle urine, Deer urine, Goat urine, Lamb urine, Sheep urine, ZAL and ZEL, literature[311]

Zearalenols

incidence: 47/76*, sample comp.: urine from horses in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤2,157 ng/ml, sample year: May 1992–March 1993, country: New Zealand[311], *export animals

- Co-contamination: 47 sa. co-contaminated with ZAL and ZEL

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Horse urine, ZAL, literature[311]; Cattle urine, Deer urine, Goat urine, Lamb urine, Sheep urine, ZAL and ZEL, literature[311]

Lamb

Lamb urine may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Zearalanols

incidence: 38/90*, sample comp.: urine from lambs in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤0.77 ng/ml**, sample year: May 1992–March 1993, country: New Zealand[311], *export animals, **most probable of *Fusarium* origin

- Co-contamination: 38 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Lamb urine, ZEL, literature[311]; Cattle urine, Deer urine, Goat urine, Horse urine, Sheep urine, ZAL and ZEL, literature[311]

Zearalenols

incidence: 38/90*, sample comp.: urine from lambs in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤34 ng/ml, sample year: May 1992–March 1993, country: New Zealand[311], *export animals

- Co-contamination: 38 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Lamb urine, ZAL, literature[311]; Cattle urine, Deer urine, Goat urine, Horse urine, Sheep urine, ZAL and ZEL, literature[311]

Meat may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxins

incidence: 6/60*, sample comp.: locally produced beef, meat of goat and sheep, Jordan, sample origin: local markets in Jordan, contamination: natural, conc. range: 0.15–5.10 µg/kg, sample year: January–May 2007, country: Jordan[425], *locally produced beef, sheep's, and goat's meat

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, AFS, literature[425]

incidence: 6/20*, sample comp.: imported beef, Jordan, sample origin: local markets in Jordan, contamination: natural, conc. range: 1.10–8.32 µg/kg, sample year: January–May 2007, country: Jordan[425], *imported beef

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Egg, AFS, literature[425]

Pig

Pig black pudding may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 4/32, sample comp.: pig blood from pigs in UK or imported, sample origin: retail outlets or IMMP of the Working Party on Veterinary Residues in Animal Products, UK, contamination: natural, conc. range: 1.0–5.0 µg/kg (4 sa., maximum: 1.8 µg/kg), sample year: 1990?, country: UK[386]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[386]

Pig blood may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 36/195*, sample comp.: blood from pigs in Poland, sample origin:

slaughterhouse in the central part of Poland, contamination: natural, conc. range: 3–270 ng/ml, sample year: March/April 1983 (spring), country: Poland/Sweden[362], *swine free of any suspicion of mycotoxic porcine nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[362]

incidence: 10*/105**, sample comp.: blood from slaughter pigs in Sweden, sample origin: 2 slaughterhouses in southern Sweden, contamination: natural, conc. range: 2–109 ng/ml, Ø conc.: 28.2 ng/ml, sample year: May–August 1978, country: Sweden[363], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 25*/129**, sample comp.: blood from slaughter pigs in Sweden, sample origin: 4 slaughterhouses in the middle of Sweden, contamination: natural, conc. range: 2–33 ng/ml, Ø conc.: 7.84 ng/ml, sample year: May–August 1978, country: Sweden[363], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12*/45**, sample comp.: blood from slaughter pigs in Sweden, sample origin: 3 slaughterhouses in northern Sweden, contamination: natural, conc. range: 2–187 ng/ml, Ø conc.: 21.8 ng/ml, sample year: May–August 1978, country: Sweden[363], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 1/22, sample comp.: blood from pigs in Sweden, sample origin: slaughterhouse of Kristianstad (city), Sweden, contamination: natural, conc.: 62 ng/ml, sample year: August/September 1983, country: Sweden[367]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/20, sample comp.: blood from pigs in Sweden, sample origin: slaughterhouse of Varberg (city), Sweden, contamination: natural, conc. range: 4 ng/ml, Ø conc.: 4 ng/ml, sample year: August/September 1983, country: Sweden[367]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/20, sample comp.: blood from pigs in Sweden, sample origin: slaughterhouse of Visby (city), Sweden, contamination: natural, conc. range: 2–39 ng/ml, Ø conc.: 6.3 ng/ml, sample year: August/September 1983, country: Sweden[367]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/17, sample comp.: blood from pigs in Sweden, sample origin: slaughterhouse of Linköping (city), Sweden, contamination: natural, conc. range: 2 ng/ml, Ø conc.: 2 ng/ml, sample year: August/September 1983, country: Sweden[367]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/21, sample comp.: blood from pigs in Sweden, sample origin: slaughterhouse of Örebro (city), Sweden, contamination: natural, conc. range: 2–12 ng/ml, Ø conc.: 6.75 ng/ml, sample year: August/September 1983, country: Sweden[367]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/12, sample comp.: blood from pigs in Sweden, sample origin: slaughterhouse of Östersund (city), Sweden, contamination: natural, conc. range: 2–41 ng/ml, Ø conc.: 15.3 ng/ml, sample year: August/September 1983, country: Sweden[367]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/10, sample comp.: blood from pigs in Sweden, sample origin: slaughterhouse of Umeå (city), Sweden, contamination: natural, conc. range: 2–8 ng/ml, Ø conc.: 4 ng/ml, sample year: August/September 1983, country: Sweden[367]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 6/38, sample comp.: blood from pigs in Croatia, sample origin: pigs slaughtered in individual households in the area of endemic nephropathy, Slavonski Brod (city), Croatia, contamination: natural, conc. range: 36–77 µg/l, sample year: unknown, country: Crotia/ Yugoslavia[368]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[368]

Pig follicular fluid may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Zearalenone

incidence: 10/10, sample comp.: follicular fluid from pigs in Japan?, sample origin: ovaries from cross-bred gilts of unknown age collected in a local slaughterhouse, Japan?, contamination: natural, conc range.: 15.2–54.8 pg/ml*, Ø conc.: 38.9 pg/ml*, sample year: unknown, country: Japan/Netherlands[446], *detected with ß-glucuronidase/arylsulfatase treatment

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig follicular fluid, α-ZOL, literature[446]

α-Zearalenol

incidence: 10/10, sample comp.: follicular fluid from pigs in Japan?, sample origin: ovaries from cross-bred gilts of unknown age collected in a local slaughterhouse, Japan?, contamination: natural, conc range.: 10.0–26.4 pg/ml*, Ø conc.: 17.6 pg/ml*, sample year: unknown, country: Japan/Netherlands[446], *detected with ß-glucuronidase/arylsulfatase treatment

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig follicular fluid, ZEN, literature[446]

Pig kidney may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Citrinin

incidence: 9/125, sample comp.: kidneys from sows in UK, sample origin: abbatoir in the south of England (export to the continent), UK, contamination: natural, conc. range: 0.1–<1 µg/kg (1 sa.), 1–<5 µg/kg (4 sa.), 5–<10 µg/kg (2 sa.), >10 µg/kg (2 sa.), sample year: September 19??, country: UK[377]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[377]

Ochratoxin A

incidence: 22/104*, sample comp.: kidneys from pigs in Germany, sample origin: slaughterhouse Munich (city), Germany, contamination: natural, conc. range: 0.1–1.8 µg/kg, Ø conc.: 0.45 µg/kg, sample year: 1982, country: Germany[67], *suspected kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human kidney, Human serum, Pig serum, OTA, literature[67]

incidence: 20/20*, sample comp.: kidneys from pigs in Denmark, sample origin: State Veterinary Laboratory, Ringsted (city), Denmark, contamination: natural, conc. range: 0.2–195.5 µg/kg, Ø conc.:

34.24 µg/kg, sample year: 1983, country: Germany[67], *suspected kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human kidney, Human serum, Pig serum, OTA, literature[67]

incidence: 1/63, sample comp.: kidneys from healthy pigs in Czechoslovakia, sample origin: slaughterhouse, Czechoslovakia, contamination: natural, conc.: 2.8 µg/kg, sample year: unknown, country: Czechoslovakia[361]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, OTA, literature[361]

incidence: 20/96, sample comp.: kidneys with macroscopic lesions from pigs in Czechoslovakia, sample origin: slaughterhouse, Czechoslovakia, contamination: natural, conc. range: 1–5 µg/kg (18 sa.), 5–20 µg/kg (2 sa.), sample year: unknown, country: Czechoslovakia[361]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, OTA, literature[361]

incidence: 27/113*, sample comp.: suspected kidneys from pigs in Poland, sample origin: slaughterhouse in the central part of Poland, contamination: natural, conc. range: >2–23 ng/g, sample year: April–July 1982, August 1982–March 1983, country: Poland/Sweden[362], *pigs exhibited anatomic-pathological abnormalities suggestive of mycotoxic porcine nephropathy
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig blood, OTA, literature[362]

incidence: 35/85, sample comp.: kidneys with macroscopic changes from pigs in Poland, sample origin: Poland, contamination: natural, conc. range: ≤3.1 ng/g, sample year: 1991/1992, country: Poland[365]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, OTA, literature[365]

incidence: 3/38, sample comp.: kidneys from pigs in Croatia, sample origin: pigs slaughtered in individual households in the area of endemic nephropathy, Slavonski Brod (city), Croatia, contamination: natural, conc. range: 26–76 µg/kg, sample year: unknown, country: Croatia/Yugoslavia[368]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig blood, OTA, literature[368]

incidence: 136/378, sample comp.: kidneys from sows in UK, sample origin: abbatoir in the south of England (export to the continent), UK, contamination: natural, conc. range: 0.5–<1 µg/kg (53 sa.), 1–<5 µg/kg (68 sa.), 5–<10 µg/kg (10 sa.), 10–<25 µg/kg (4 sa.), >25 µg/kg (1 sa.), sample year: September 19??, country: UK[377]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, CIT, literature[377]

incidence: 12/36, sample comp.: kidneys from pigs in Switzerland, sample origin: Switzerland, contamination: natural, conc. range: 0.1–0.2 µg/kg (11 sa.), 0.3 µg/kg (1 sa.), sample year: unknown, country: Switzerland[378]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 718/1,561, sample comp.: kidneys from pigs in Denmark, sample origin: Northern Jutland (administrative region) and rest of Denmark, contamination: natural, conc. range: >25 µg/kg (624 sa.), >150 µg/kg (94 sa.), sample year: January–March 1983, country: Denmark[379]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1,526/2,878, sample comp.: kidneys from pigs in Denmark, sample

origin: Northern Jutland (administrative region) and rest of Denmark, contamination: natural, conc. range: >25 µg/kg (1,468 sa.), >150 µg/kg (58 sa.), sample year: April–June 1983, country: Denmark[379]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1,351/2,112, sample comp.: kidneys from pigs in Denmark, sample origin: Northern Jutland (administrative region) and rest of Denmark, contamination: natural, conc. range: >25 µg/kg (1,309 sa.), >150 µg/kg (42 sa.), sample year: July–September 1983, country: Denmark[379]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 903/1,088, sample comp.: kidneys from pigs in Denmark, sample origin: Northern Jutland (administrative region) and rest of Denmark, contamination: natural, conc. range: >25 µg/kg (892 sa.), >150 µg/kg (11 sa.), sample year: October–December 1983, country: Denmark[379]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 21/71*, sample comp.: kidneys from pigs in Czechoslovakia, sample origin: slaughterhouse, Czechoslovakia, contamination: natural, conc. range: 1–5 µg/kg (18 sa.), 5–20 µg/kg (3 sa.), sample year: unknown, country: Czechoslovakia[380], *kidneys with macroscopic lesions
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 52/122*, sample comp.: kidneys from pigs in Poland, sample origin: slaughterhouse in Poznań (city), Poland, contamination: natural, conc. range: $1 \leq x < 2$ ng/g (27 sa.), $2 \leq x < 10$ ng/g (25 sa.), sample year: April 1983–July 1984, country: Poland/Sweden[381], *number of pigs with kidneys exhibiting macroscopic changes
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, OTA, literature[381]

For detailed information please see the article.

incidence: 24/90*, sample comp.: kidneys from pigs in Sweden, sample origin: slaughterhouses in Kalmar, Kil**, Örebro**, Tomelilla, Umeå**, Upsalla** (cities), Sweden, contamination: natural, conc. range: <2–88 µg/kg, sample year: 1978, country: Sweden[382], *nephropathic kidneys, **the cities with contaminated pig kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 284/300*, sample comp.: kidneys from pigs in Denmark, sample origin: 22 slaughterhouses all over Denmark, contamination: natural, conc. range: 0.02–0.06 µg/kg (54 sa.), 0.06–0.09 µg/kg (27 sa.), 0.09–0.50 µg/kg (140 sa.), 0.5–1.00 µg/kg (39 sa.), ≤15 µg/kg (24 sa.), sample year: 1999, country: Denmark[383], *healthy slaughter pigs
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig meat, OTA, literature[383]

incidence: 21/60*, sample comp.: kidneys from pigs in Denmark, sample origin: 7 slaughterhouses in various districts of Denmark, contamination: natural, conc. range: <10 µg/kg (13 sa.), 10–68 µg/kg (8 sa.), sample year: March–May 1975, country: Denmark[384], *kidneys exhibiting MPN lesions
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 15/104, sample comp.: kidneys from pigs in UK or imported, sample origin: retail outlets or IMMP of the Working Party on Veterinary Residues in

Animal Products, UK, contamination: natural, conc. range: 1.0–5.0 µg/kg (12 sa.), 5.1–10 µg/kg (3 sa., maximum: 9.3 µg/kg), sample year: 1990?, country: UK[386]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig black pudding, OTA, literature[386]

incidence: 112/303*, sample comp.: kidneys from pigs in UK, sample origin: adult sows of an abattoir in southern England, contamination: natural, conc. range: 0.5–<1.0 ng/g (51 sa.), 1.0–<2.0 ng/g (39 sa.), 2.0–<5.0 ng/g (14 sa.), 5.0–<10.0 ng/g (6 sa.), ≤12.4 ng/g (2 sa.), sample year: September 19??, country: UK[387], *kidneys rejected as unsuitable for human consumption
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 2/131, sample comp.: kidneys from pigs in Norway, sample origin: Norway, contamination: natural, conc. range: 7–10 µg/kg, Ø conc.: 8.5 µg/kg, sample year: 1977–1982, country: Norway[388]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/12, sample comp.: kidneys from pigs in Denmark, sample origin: Laboratory of Veterinary Research, Ringsted (city), Denmark, contamination: natural, conc. range: 4.0–112.7 ng/g, Ø conc.: 46.05 ng/g, sample year: 19??, country: Belgium/Scotland, UK[389]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 28/95*, sample comp.: kidneys from pigs in Belgium, sample origin: Institute for Animal Pathology of the State University of Ghent (city) and Institute of Animal Disease Prevention at Torhout (city), Belgium, contamination: natural, conc. range: 0.20–0.99 ng/g (6 sa.), 1.00–4.99 ng/g (19 sa.), 5.00–9.99 ng/g (3 sa.), sample year: February 1986–February 1987, country: Belgium[390], *all kidneys exibited macroscopic changes
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, OTA, literature[390]

incidence: 68/385*, sample comp.: kidneys from pigs in Belgium, sample origin: 6 slaughterhouses in various districts of northern Belgium, contamination: natural, conc. range: 0.20–0.99 ng/g (24 sa.), 1.00–4.99 ng/g (35 sa.), 5.00–9.99 ng/g (4 sa.), >10.00 ng/g (5 sa.), sample year: February–June 1987, country: Belgium[390], *slaughtered pigs (all kidneys exibited macroscopic changes)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, OTA, literature[390]

incidence: 6/13, sample comp.: kidneys from piglets in Belgium, sample origin: Belgium, contamination: natural, conc. range: 0.8–1.6 ng/g, Ø conc.: 1.22 ng/g, sample year: beginning of 1986, country: Belgium[390]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, OTA, literature[390]

incidence: 3/4, sample const.: kidneys from piglets in Belgium, sample origin: Belgium, contamination: natural, conc. range: 0.5–1.8 ng/g, Ø conc.: 1.33 ng/g, sample year: May 1986, country: Belgium[390]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, OTA, literature[390]

incidence: 32/129*, sample comp.: kidneys from pigs in Sweden, sample origin: officially controlled slaughterhouses in southern, south-eastern, south-western and northern parts of Sweden, contamination: natural, conc. range: ≥2–<5 ppb (25 sa.), ≥5–<10 ppb (2 sa.), ≥10–≤104 ppb (5 sa.), country: Sweden[391], *normally slaughtered pigs with normal kidneys and kidneys showing histological changes

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 10/193*, sample comp.: kidneys from pigs in Finland, sample origin: slaughterhouses in different parts of Finland, contamination: natural, conc. range: <0.1–5.0 µg/kg, sample year: September 1981–February 1982, country: Finland[392], *33 suspected kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 41/52*, sample comp.: kidneys from pigs in Romania, sample origin: slaughterhouses in Bihor, Mures, and Timis, counties in the central and western part of Romania, contamination: natural, conc. range: ≤3.18 ng/g, Ø conc.: 0.54 ng/g, sample year: August 1998, country: Romania/Germany[393], *slaughtered pigs

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, Pig muscle, Pig serum, OTA, literature[393]; Pig serum, ZEN, literature[393]

incidence: 1/1, sample comp.: kidney from a pig in Italy, sample origin: Italy, contamination: natural, conc.: 1.9 ng/g, sample year: unknown, country: Italy[394]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 42/54*, sample comp.: kidneys from pigs in different countries, sample origin: local slaughterhouses in Belgium, Italy, Germany, and Netherlands, contamination: natural, conc. range: 0.26–3.05 ng/g, sample year: unknown, country: Italy[395], *contaminated sa. from Belgium = 9 sa., Germany = 13 sa., Italy = 9 sa., and Netherlands = 11 sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 16/60, sample comp.: kidneys from pigs in Spain, sample origin: retail outlets in Catalonia (autonomous community), Spain, contamination: natural, conc. range: 0.5–1 ng/g* (12 sa.), 1–≤3 ng/g* (4 sa.), sample year: 1991, country: Spain[396], *after OTA ester confirmation

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 187/250, sample comp.: kidneys from pigs in UK, sample origin: large specialised pig slaughterhouses, at which pigs from farms throughout Great Britain were slaughtered, contamination: natural, conc. range: 0.2–0.5 µg/kg (151 sa.), 0.51–1.0 µg/kg (29 sa.), 1.01–1.5 µg/kg (4 sa.), 1.51–2.0 µg/kg (2 sa.), 2.3 µg/kg (1 sa.), sample year: February 2002, country: UK[397]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 8/30*, sample comp.: serum from pigs in Serbia, sample origin: Vladimirci (region), Serbia, contamination: natural, conc. range: 0.01–1 ng/g (5 sa.), 1–5 ng/g (2 sa.), 6.5 ng/g (1 sa.), sample year: September 2006–February 2007, country: Serbia[439], *healthy pigs

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, Pig serum, OTA, literature[439], Vladimirci

incidence: 11/30*, sample comp.: serum from pigs in Serbia, sample origin: Senta (region), Serbia, contamination: natural, conc. range: 0.01–1 ng/g (5 sa.), 1–5 ng/g (4 sa.), >5 ng/g (2 sa., maximum: 17 ng/g), sample year: September 2006–February 2007, country: Serbia[439], *healthy pigs

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, Pig serum, OTA, literature[439], Senta

incidence: 11?/30*, sample comp.: serum from pigs in Serbia, sample origin: Bogatić (region), Serbia, contamination: natural, conc. range: 0.01–1 ng/g (5 sa.), 1–5 ng/g (4 sa.), 52.5 ng/g (1 sa.), sample year: September 2006–February 2007, country: Serbia[439], *healthy pigs

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, Pig serum, OTA, literature[439], Bogatić

Pig liver may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 3/60*, sample comp.: livers from pigs in USA, sample origin: Iowa and South Carolina (states), USA, contamination: natural, conc. range: 0.05–0.06 ng/g, Ø conc.: 0.053 ng/g, sample year: January 1989, country: USA[374], *livers from hogs (winter pigs) fed corn soon after harvest

- Co-contamination: 2 sa. co-contaminated with AFB_1 and AFM_1 (but 2 AFM_1-ca. not confirmed); 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFM_1, literature[374], January

incidence: 7*/100**, sample comp.: livers from pigs in USA, sample origin: Iowa, Illinois, North and South Carolina, Texas and Virginia (states), USA, contamination: natural, conc. range: 0.01–0.24 ng/g, Ø conc.: 0.08 ng/g, sample year: April 1989, country: USA[374], *2 ca. not confirmed, **livers from hogs (spring pigs) fed corn originally stored and then fed in spring (pig livers from Texas and Virginia not contaminated)

- Co-contamination: 7 sa. co-contaminated with AFB_1 and AFM_1 (but 5 AFM_1-ca. not confirmed)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFM_1, literature[374], April

incidence: 1/43, sample comp.: livers from pigs in Brazil, sample origin: Santa Catarina and Rio Grande do Sul* (states), Brazil, contamination: natural, conc.: 27 ng/g*, sample year: unknown, country: Brazil[376], *contaminated sa.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Poultry kidney, AFM_1, literature[376]

incidence: 1/3, sample comp.: livers from feeder pigs in USA, sample origin: Mississippi (state), USA, contamination: natural, conc.: 0.012 ng/g, sample year: January–February 1977, country: USA[398]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig plasma, AFB_1, literature[398]

incidence: 3/60, sample comp.: livers from hogs in USA, sample origin: medium-sized slaughter plants in Iowa and South Carolina (states), USA, contamination: natural, conc. range: 0.04–0.06 ppb, Ø conc.: 0.05 ppb, sample year: January 1989, country: USA[399]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 4/100, sample comp.: livers from hogs in USA, sample origin: medium-sized slaughter plants in Iowa, North- and South Carolina (states), USA, contamination: natural, conc. range: 0.04–0.24 ppb, Ø conc.: 0.12 ppb, sample year: April 1989, country: USA[399]

- Co-contamination: 3 sa. co-contaminated with AFB_1 and AFM_1; 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFM_1, literature[399]

For detailed information please see the article.

incidence: 3/47, sample comp.: livers from pigs in Italy, sample origin: 2 slaughterhouses in the north of Italy, contamination: natural, conc. range: 0.25–0.42 µg/kg, Ø conc.: 0.32 µg/kg, sample year: May 2004, country: Italy[416]

- Co-contamination: 2 sa. co-contaminated with AFB_1 and AFM_1; 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFM_1, literature[416]

Aflatoxin M_1

incidence: 2/60*, sample comp.: livers from pigs in USA, sample origin: Iowa and South Carolina (states), USA, contamination:

natural, conc. range: 0.04 ng/g, Ø conc.: 0.04 ng/g, sample year: January 1989, country: USA[374], *livers from hogs (winter pigs) fed corn soon after harvest
- Co-contamination: 2 sa. co-contaminated with AFB_1 and AFM_1 (but AFM_1-ca. not confirmed)
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFB_1, literature[374], January

incidence: 9*/100**, sample comp.: livers from pigs in USA, sample origin: Iowa, Illinois, North and South Carolina, Texas and Virginia (states), USA, contamination: natural, conc. range: 0.03–0.44 ng/g, Ø conc.: 0.15 ng/g, sample year: April 1989, country: USA[374], *5 ca. not confirmed, **livers from hogs (spring pigs) fed corn originally stored and then fed in spring (pig livers from Texas and Virginia not contaminated)
- Co-contamination: 7 sa. co-contaminated with AFB_1 and AFM_1 (but 5 AFM_1-ca. not confirmed); 2 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFB_1, literature[374], April

incidence: 4/100, sample comp.: livers from hogs in USA, sample origin: medium-sized slaughter plants in Iowa, North- and South Carolina (states), USA, contamination: natural, conc. range: 0.20–0.44 ppb, Ø conc.: 0.29 ppb, sample year: April 1989, country: USA[399]
- Co-contamination: 3 sa. co-contaminated with AFB_1 and AFM_1; 1 sa. contaminated solely with AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFB_1, literature[399]

For detailed information please see the article.

incidence: 3/47, sample comp.: livers from pigs in Italy, sample origin: 2 slaughterhouses in the north of Italy, contamination: natural, conc. range: 0.10–1.05 µg/kg, Ø conc.: 0.48 µg/kg, sample year: May 2004, country: Italy[416]
- Co-contamination: 2 sa. co-contaminated with AFB_1 and AFM_1; 1 sa. contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFB_1, literature[416]

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 39/52, sample comp.: livers from pigs in Romania, sample origin: slaughterhouses in Bihor, Mures, and Timis, counties in the central and western part of Romania, contamination: natural, conc. range: ≤0.61 ng/g, Ø conc.: 0.16 ng/g, sample year: August 1998, country: Romania/Germany[393]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig muscle, Pig serum, OTA, literature[393]; Pig serum, ZEN, literature[393]

incidence: 11/30*, sample comp.: serum from pigs in Serbia, sample origin: Vladimirci (region), Serbia, contamination: natural, conc. range: 0.01–1 ng/g (5 sa.), 1–5 ng/g (6 sa., maximum: 2.2 ng/g), sample year: September 2006–February 2007, country: Serbia[439], *healthy pigs
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig serum, OTA, literature[439], Vladimirci

incidence: 4/30*, sample comp.: serum from pigs in Serbia, sample origin: Senta (region), Serbia, contamination: natural, conc. range: 0.01–1 ng/g (1 sa.), 1–5 ng/g (2 sa.), 14.5 ng/g (1 sa.), sample year: September 2006–February 2007, country: Serbia[439], *healthy pigs
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig serum, OTA, literature[439], Senta

incidence: 9/30*, sample comp.: serum from pigs in Serbia, sample origin: Bogatić (region), Serbia, contamination: natural, conc. range: 0.01–1 ng/g (2 sa.), 1–5 ng/g (6 sa.), 5.46 ng/g (1 sa.), sample year:

September 2006–February 2007, country: Serbia[439], *healthy pigs
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig serum, OTA, literature[439], Bogatić

Pig meat may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 228/300*, sample comp.: meat from pigs in Denmark, sample origin: 22 slaughterhouses all over Denmark, contamination: natural, conc. range: 0.03–0.06 µg/kg (134 sa.), 0.06–0.09 µg/kg (27 sa.), 0.09–0.50 µg/kg (55 sa.), 0.50–1.00 µg/kg (3 sa.), ≤2.9 µg/kg (9 sa.), sample year: 1999, country: Denmark[383], *healthy slaughter pigs
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[383]

incidence: 5/20, sample comp.: meat from pigs in Portugal, sample origin: region of Porto (city), Portugal, contamination: natural, conc. range: ≤0.578 µg/kg, Ø conc.: 0.405 µg/kg, sample year: unknown, country: Portugal[404]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Pig muscle may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 7/13, sample comp.: muscle meat from pigs in Portugal, sample origin: supermarkets located in Coimbra (city), Portugal, contamination: natural, conc. range: ≤0.12 µg/kg, sample year: October 2002–February 2003, country: Portugal[373]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Chicken muscle, Turkey muscle, OTA, literature[373]

incidence: 9/52, sample comp.: muscles from pigs in Romania, sample origin: slaughterhouses in Bihor, Mures, and Timis, counties in the central and western part of Romania, contamination: natural, conc. range: ≤0.53 ng/g, Ø conc.: 0.15 ng/g, sample year: August 1998, country: Romania/Germany[393]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig liver, Pig serum, OTA, literature[393]; Pig serum, ZEN, literature[393]

incidence: 2/22*, sample comp.: muscles from pigs of Italy, sample origin: industrial plants for ham production, Italy, contamination: natural, conc. range: ≤0.06 µg/kg, Ø conc.: 0.05 µg/kg, sample year: 2001–2002, country: Italy[400], *muscels for ham
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Pig plasma may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 3/9, sample comp.: plasma from feeder pigs in USA, sample origin: Mississippi (state), USA, contamination: natural, conc. range: 5.1–36.7 ng/ml, sample year: January–February 1977, country: USA[398]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFB_1, literature[398]

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 15/25, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Sarpsborg (city), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (14 sa.), ≥1.0 ng/ml (1 sa.), Ø conc.: 0.37 ng/ml, sample year: June 1991, country: Norway[401]
- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17/19, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Dal (village), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (15 sa.), ≥1.0 ng/ml (1 sa.), ≥5.0 ng/ml (1 sa.), Ø conc.: 1.08 ng/ml, sample year: June 1991, country: Norway[401]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 20/20, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Ringsaker (municipality), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (17 sa.), ≥1.0 ng/ml (3 sa.), Ø conc.: 0.67 ng/ml, sample year: June 1991, country: Norway[401]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 19/24, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Tønsberg (city), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (18 sa.), ≥1.0 ng/ml (1 sa.), Ø conc.: 0.35 ng/ml, sample year: June 1991, country: Norway[401]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 30/30, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Jæren (lowland area), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (30 sa.), Ø conc.: 0.28 ng/ml, sample year: June 1991, country: Norway[401]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 23/25, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Forus is an industrial district of Stavanger (city), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (23 sa.), Ø conc.: 0.32 ng/ml, sample year: June 1991, country: Norway[401]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 19/25, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Verdal (municipality), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (17 sa.), ≥1.0 ng/ml (1 sa.), ≥5.0 ng/ml (1 sa.), Ø conc.: 0.83 ng/ml, sample year: June 1991, country: Norway[401]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 19/25, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Steinkjer (city), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (18 sa.), ≥1.0 ng/ml (1 sa.), Ø conc.: 0.29 ng/ml, sample year: June 1991, country: Norway[401]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 11/14, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Mosjøen (city), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (10 sa.), ≥1.0 ng/ml (1 sa.), Ø conc.: 0.44 ng/ml, sample year: June 1991, country: Norway[401]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/9, sample comp.: plasma from pigs of Norway, sample origin: slaughterhouse of Sortland (town and municipality), Norway, contamination: natural, conc. range: ≥0.10 ng/ml (5 sa.), Ø conc.: 0.31 ng/ml, sample year: June 1991, country: Norway[401]

For all slaughterhouses together the highest value was 12.5 ng OTA/ml. Some blood sa. were partly coagulated (plasma and serum). The combination was then analyzed.

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Pig serum may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Citrinin

incidence: 7/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 1.3 µg/l, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, DON, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, DON, OTA, PA, and ZEN, literature[402]

incidence: 8/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 1.6 µg/l, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, OTA, PA, and ZEN, literature[402]

Ochratoxin A

incidence: 65/120, sample comp.: serum from slaughter pigs in Germany, sample origin: slaughterhouse Munich (city), Germany, contamination: natural, conc. range: 0.1–67.3 µg/kg, sample year: June/November 1982, country: Germany[67]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human kidney, Human serum, Pig kidney, OTA, literature[67]

incidence: 30/71, sample comp.: serum from slaughter pigs in Germany, sample origin: slaughterhouse Munich (city), Germany, contamination: natural, conc. range: 0.1–0.4 µg/kg, sample year: January/May/October 1983, country: Germany[67]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Human breast milk, Human kidney, Human serum, Pig kidney, OTA, literature[67]

incidence: 147/255, sample comp.: blood from healthy pigs in Czechoslovakia, sample origin: slaughterhouse, Czechoslovakia, contamination: natural, conc. range: 0.1–1 µg/l (98 sa.), 1–5 µg/l (44 sa.), 5–20 µg/l (5 sa.), Ø conc.: 1.9 µg/l, sample year: unknown, country: Czechoslovakia[361]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[361]

incidence: 26/45, sample comp.: blood from pigs in Poland, sample origin: 5 abattoirs and meat processing plants, southern Wielkopolska region, Poland, contamination: natural, conc. range: 0.3–69.5 ng/ml, sample year: February–May 1999, country: Poland[364]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

incidence: 63/105, sample comp.: blood from pigs in Poland, sample origin: Poland, contamination: natural, conc. range: ≤122 ng/ml, sample year: 1991/1992, country: Poland[365]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[365]

incidence: 97/194, sample comp.: blood from pigs in Canada, sample origin: slaughter house (throughput: 500 pigs daily), western Canada, contamination: natural, conc. range: <10 ng/ml (76 sa.), 10–20 ng/ml (14 sa.), 20–50 ng/ml (4 sa.), 50–100 ng/ml (2 sa.), 100–150 ng/ml (1 sa.),

sample year: Frebruary/March 1986, country: Canada[366]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 893/1,006, sample comp.: blood from pigs in Canada, sample origin: slaughter house (throughput: 500 pigs daily), western Canada, contamination: natural, conc. range: <10 ng/ml (698 sa.), 10–20 ng/ml (73 sa.), 20–50 ng/ml (32 sa.), 50–100 ng/ml (6 sa.), 100–150 ng/ml (1 sa.), 150–200 ng/ml (2 sa.), 229 ng/ml (1 sa.), sample year: May–July 1986, country: Canada[366]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 148/388*, sample comp.: kidneys from pigs in Poland, sample origin: slaughterhouse in Poznań (city), Poland, contamination: natural, conc. range: 1–520 ng/ml, sample year: October 1983–July 1984, country: Poland/Sweden[381], *serum from pigs fed on the 1983 crop
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[381]

For detailed information please see the article.

incidence: 2/4, sample comp.: serum from sows in Belgium, sample origin: Belgium, contamination: natural, conc. range: 3.1–3.7 ng/ml, Ø conc.: 3.4 ng/ml, sample year: beginning of 1986, country: Belgium[390]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[390]

incidence: 4/4, sample comp.: serum from sows in Belgium, sample origin: Belgium, contamination: natural, conc. range: 2.3–3.7 ng/ml, Ø conc.: 2.95 ng/ml, sample year: May 1986, country: Belgium[390]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, OTA, literature[390]

incidence: 51/52, sample comp.: serum from pigs in Romania, sample origin: slaughterhouses in Bihor, Mures, and Timis, counties in the central and western part of Romania, contamination: natural, conc. range: ≤13.4 ng/ml, Ø conc.: 2.43 ng/ml, sample year: August 1998, country: Romania/Germany[393]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig liver, Pig muscle, OTA, literature[393]; Pig serum, ZEN, literature[393]

incidence: 8/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 28.8 µg/l, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, DON, OTA, PA, and ZEN, literature[402]

incidence: 9/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 6.3 µg/l, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, OTA, PA, and ZEN, literature[402]

incidence: 40/300, sample comp.: serum from pigs in France, sample origin: Côtes d´Armor, Finistère, Ile et Vilaine, Morbihan, Maine et Loire, Mayenne, Sarthe, Ain, Drôme, Isère, Loire, Rhône (departments), France, contamination: natural, conc. range: ≤1.4 µg/kg, sample year: 1997, country: France[403]
- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 26/100*, sample comp.: serum from pigs in France, sample origin: France, contamination: natural, conc. range: ≤0.48 µg/kg, sample year: 1997, country: France[403], *nephropathic kidneys showing macroscopic lesions and rejected for human consumption

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 238/710, sample comp.: serum from pigs in France, sample origin: all producing departments, France, contamination: natural, conc. range: tr (184 sa.), 0.5–5 µg/kg (54 sa.), sample year: 1998, country: France[403]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 45/85, sample comp.: serum from pigs in Germany, sample origin: county of Trier-Saarburg (county), Germany, contamination: natural, conc. range: 0.29–17.6 µg/kg, sample year: September 1988–April 1989, country: Germany[405]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 140/369, sample comp.: serum from pigs in Canada, sample origin: slaughterhouses in Winnipeg (city) and Neepawa (town), Manitoba (province), Canada, contamination: natural, Ø conc.: 8.3 ng/ml, sample year: April 1989, country: Canada[406]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 279/429, sample comp.: serum from pigs in Canada, sample origin: slaughterhouses in Winnipeg (city) and Neepawa (town), Manitoba (province), Canada, contamination: natural, Ø conc.: 17.6 ng/ml, sample year: July 1989, country: Canada[406]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 82/389, sample comp.: serum from pigs in Canada, sample origin: slaughterhouses in Winnipeg (city) and Neepawa (town), Manitoba (province), Canada, contamination: natural, Ø conc.: 19.4 ng/ml, sample year: October 1989, country: Canada[406]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 68/401, sample comp.: serum from pigs in Canada, sample origin: slaughterhouses in Winnipeg (city) and Neepawa (town), Manitoba (province), Canada, contamination: natural, Ø conc.: 5.4 ng/ml, sample year: January 1990, country: Canada[406]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/4, sample comp.: serum from pigs in Belgium, sample origin: Belgium, contamination: natural, conc. range: 209.4–363.1 ng/ml, Ø conc.: 285.1 ng/ml, sample year: unknown, country: Belgium[407]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 19/20*, sample comp.: serum from pigs in Japan, sample origin: Meat Inspection Station in Ueda (city), Japan, contamination: natural, conc. range: 0.2–1.5 ng/ml**, sample year: October 1988, country: Japan[432], *Lot A, **tested by ELISA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 104/104*, sample comp.: serum from pigs in Japan, sample origin: station in Iida (city), Nagano Prefecture, Japan, contamination: natural, conc. range: 0.003–2.440 ng/ml**, Ø conc.: 0.362 ng/ml, sample year: November 1985, country: Japan[432], *Lot B (6 months old pigs), **tested by ELISA

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow serum, Horse serum, OTA, literature[432], Lot B

incidence: 8/8*, sample comp.: serum from pigs in Japan, sample origin: station in Iida

(city), Nagano Prefecture, Japan, contamination: natural, conc. range: 0.072–0.425 ng/ml**, Ø conc.: 0.246 ng/ml, sample year: November 1985, country: Japan[432], *Lot B (1 year old pigs), **tested by ELISA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow serum, Horse serum, OTA, literature[432], Lot B

incidence: 7/7*, sample comp.: serum from pigs in Japan, sample origin: station in Iida (city), Nagano Prefecture, Japan, contamination: natural, conc. range: 0.056–0.340 ng/ml**, Ø conc.: 0.174 ng/ml, sample year: November 1985, country: Japan[432], *Lot B (over 1 year old pigs), **tested by ELISA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow serum, Horse serum, OTA, literature[432], Lot B

incidence: 3/4*, sample comp.: serum from pigs in Japan, sample origin: station in Iida (city), Nagano Prefecture, Japan, contamination: natural, conc. range: ≤0.102 ng/ml, sample year: November 1985, country: Japan[432], *Lot B (pigs with malnutrition), **tested by ELISA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow serum, Horse serum, OTA, literature[432], Lot B

incidence: 1/1*, sample comp.: serum from pigs in Japan, sample origin: station in Iida (city), Nagano Prefecture, Japan, contamination: natural, conc.: 0.020 ng/ml, sample year: November 1985, country: Japan[432], *Lot B (pig with multiple tumors), **tested by ELISA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow serum, Horse serum, OTA, literature[432], Lot B

incidence: 17/17*, sample comp.: serum from pigs in Japan, sample origin: Meat Inspection Station in Ueda (city), Japan, contamination: natural, conc. range: 1.930–9.000 ng/ml**, Ø conc.: 5.201 ng/ml, sample year: October 1988, country: Japan[432], *Lot C (6 months old pigs; 5 males (Ø conc.: 2.82 ng/ml) and 3 females (Ø conc.: 6.15 ng/ml), and 9 unknowns in sex), **tested by ELISA
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/30*, sample comp.: serum from pigs in Serbia, sample origin: Vladimirci (region), Serbia, contamination: natural, conc. range: 0.1–1 ng/ml (3 sa.), 1–5 ng/ml (2 sa., maximum: 2.56 ng/ml), sample year: September 2006–February 2007, country: Serbia[439], *healthy pigs
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig liver, OTA, literature[439], Vladimirci

incidence: 13/30*, sample comp.: serum from pigs in Serbia, sample origin: Senta (region), Serbia, contamination: natural, conc. range: 0. 1–1 ng/ml (6 sa.), 1–5 ng/ml (4 sa.), >5 ng/ml (3 sa., maximum: 35.7 ng/ml), sample year: September 2006–February 2007, country: Serbia[439], *healthy pigs
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig liver, OTA, literature[439], Senta

incidence: 10/30*, sample comp.: serum from pigs in Serbia, sample origin: Bogatić (region), Serbia, contamination: natural, conc. range: 0.01–1 ng/ml (5 sa.), 1–5 ng/ml (2 sa.), >5 ng/ml (3 sa., maximum: 221 ng/ml), sample year: September 2006–February 2007, country: Serbia[439], *healthy pigs
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig liver, OTA, literature[439], Bogatić

Penicillic Acid

incidence: 8/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 23.3 µg/l, sample year: 2006, country:

Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PEA, and ZEN, literature[402]; Pig urine, CIT, DON, OTA, and ZEN, literature[402]

incidence: 9/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 22.9 µg/l, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PEA, and ZEN, literature[402]; Pig urine, CIT, OTA, and ZEN, literature[402]

Fusarium Toxins

Deoxynivalenol

incidence: 1/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, conc.: 7.6 µg/l, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, DON, OTA, PA, and ZEN, literature[402]

incidence: 0/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: no contamination, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, OTA, PA, and ZEN, literature[402]

Zearalenone

incidence: 9/52, sample comp.: serum from pigs in Romania, sample origin: slaughterhouses in Bihor, Mures, and Timis, counties in the central and western part of Romania, contamination: natural, conc. range: ≤0.96 ng/ml, Ø conc.: 0.80 ng/ml, sample year: August 1998, country: Romania/Germany[393]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig kidney, Pig liver, Pig muscle, Pig serum, OTA, literature[393]

incidence: 5/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 0.24 µg/l, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PA, and PEA, literature[402]; Pig urine, CIT, DON, OTA, PA, and ZEN, literature[402]

incidence: 5/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 0.33 µg/l, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PA, and PEA, literature[402]; Pig urine, CIT, OTA, PA, and ZEN, literature[402]

Penicillium Toxins

Penitrem A

incidence: 3/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 64.0 µg/l, sample year: 2006, country: Bulgaria/South Africa[402],

*enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PA, and ZEN, literature[402]; Pig urine, CIT, DON, OTA, PA, and ZEN, literature[402]

incidence: 3/10, sample comp.: serum from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: Ø conc.: 45.6 µg/l, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PA, and ZEN, literature[402]; Pig urine, CIT, OTA, PA, and ZEN, literature[402]

Pig urine may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 3/28, sample comp.: urine from pigs in Belgium, sample origin: 3 different animal farms, Belgium, contamination: natural, conc. range: <LOQ–0.33 ng/ml, sample year: unknown, country: Belgium/China[450]
- Co-contamination: 1 sa. co-contaminated with AFB_1, DON, and OTA; 1 sa. co-contaminated with AFB_1 and DON; 1 sa contaminated solely with AFB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, DON, FB_1, and OTA, literature[450]

incidence: 12/15*, sample comp.: urine from pigs in Vietnam, sample origin: 15 different pig farms in the Dongnai province, southern Vietnam, contamination: natural, conc. range: 0.4–1.5 ng/ml, Ø conc.: 0.6 ng/ml, sample year: 2008, country: Vietnam/Sweden[451], *most of the sa. from gilts or sows
- Co-contamination: 3 sa. co-contaminated with AFB_1, AFB_2, and AFM_1; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, DOM-1, and α-ZOL; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and α-ZOL; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, and DON; 1 sa. co-contaminated with AFB_1, AFM_1, DON, DOM-1, and α-ZOL; 1 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and DOM-1; 1 sa. co-contaminated with AFB_1, AFM_1, and DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_2, AFM_1, DON, DOM-1, ZEN, α-ZOL, and ß-ZOL, literature[451]

Aflatoxin B_2

incidence: 10/15*, sample comp.: urine from pigs in Vietnam, sample origin: 15 different pig farms in the Dongnai province, southern Vietnam, contamination: natural, conc. range: 0.3–0.5 ng/ml, Ø conc.: 0.36 ng/ml, sample year: 2008, country: Vietnam/Sweden[451], *most of the sa. from gilts or sows
- Co-contamination: 3 sa. co-contaminated with AFB_1, AFB_2, and AFM_1; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, DOM-1, and α-ZOL; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and α-ZOL; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, and DON; 1 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and DOM-1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, AFM_1, DON, DOM-1, ZEN, α-ZOL, and ß-ZOL, literature[451]

Aflatoxin M_1

incidence: 12/15*, sample comp.: urine from pigs in Vietnam, sample origin: 15 different pig farms in the Dongnai province, southern Vietnam, contamination: natural, conc. range: 0.7–7.8 ng/ml, Ø conc.: 4.11 ng/ml, sample year: 2008, country: Vietnam/Sweden[451], *most of the sa. from gilts or sows
- Co-contamination: 3 sa. co-contaminated with AFB_1, AFB_2, and AFM_1; 2 sa.

co-contaminated with AFB_1, AFB_2, AFM_1, DON, DOM-1, and α-ZOL; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and α-ZOL; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, and DON; 1 sa. co-contaminated with AFB_1, AFM_1, DON, DOM-1, and α-ZOL; 1 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and DOM-1; 1 sa. co-contaminated with AFB_1, AFM_1, and DON;

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, AFB_2, DON, DOM-1, ZEN, α-ZOL, and ß-ZOL, literature[451]

Aspergillus and ***Penicillium*** Toxins

Citrinin

incidence: 10/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 1.7 µg/l, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, DON, OTA, PA, and ZEN, literature[402]

incidence: 10/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 1.8 µg/l, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, OTA, PA, and ZEN, literature[402]

Ochratoxin A

incidence: 1/1*, sample comp.: urine from a pig in Italy, sample origin: slaughterhouse in Conversano (city), Bari province, Italy, contamination: natural, conc.: 0.18 ng/ml, sample year: unknown, country: Italy[282], *detected with enzymatic digestion with ß-glucuronidase/sulfatase

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, DON, DOM-1, α-ZOL, and ß-ZOL, literature[282]

incidence: 10/10, sample comp.: urine from a pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 3.5 µg/l, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, DON, PA, and ZEN, literature[402]

incidence: 10/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 6.2 µg/l, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, PA, and ZEN, literature[402]

incidence: 5/28, sample comp.: urine from pigs in Belgium, sample origin: 3 different animal farms, Belgium, contamination: natural, conc. range: <LOQ–0.32 ng/ml, sample year: unknown, country: Belgium/China[450]

- Co-contamination: 1 sa. co-contaminated with AFB_1, DON, and OTA; 1 sa. co-contaminated with DON and OTA; 1 sa. contaminated with FB_1 and OTA; 2 sa. contaminated solely with OTA

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, DON, and FB_1, literature[450]

Penicillic Acid

incidence: 6/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 1.6 µg/l, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, DON, OTA, and ZEN, literature[402]

incidence: 6/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 1.7 µg/l, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, OTA, and ZEN, literature[402]

Fusarium Toxins

Deoxynivalenol

incidence: 1/1*, sample comp.: urine from a pig in Italy, sample origin: slaughterhouse in Conversano (city), Bari province, Italy, contamination: natural, conc.: 27.03 ng/ml, sample year: unknown, country: Italy[282], *detected with enzymatic digestion with ß-glucuronidase/sulfatase

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, DOM-1, OTA, α-ZOL, and ß-ZOL, literature[282]

incidence: 1/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, conc.: 5.1 µg/l, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, OTA, PA, and ZEN, literature[402]

incidence: 0/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: no contamination, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, OTA, PA, and ZEN, literature[402]

incidence: 14/28, sample comp.: urine from pigs in Belgium, sample origin: 3 different animal farms, Belgium, contamination: natural, conc. range: <LOQ–302 ng/ml, sample year: unknown, country: Belgium/China[450]

- Co-contamination: 1 sa. co-contaminated with AFB_1, DON, and OTA; 1 sa. co-contaminated with AFB_1 and DON; 2 sa. co-contaminated with DON and FB_1; 1 sa. co-contaminated with DON and OTA; 9 sa contaminated solely with DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, FB_1, and OTA, literature[450]

incidence: 9/15*, sample comp.: urine from pigs in Vietnam, sample origin: 15 different pig farms in the Dongnai province, southern Vietnam, contamination: natural, conc. range: 2.4–26.5 ng/ml, Ø conc.: 10.3 ng/ml, sample year: 2008, country: Vietnam/Sweden[451], *most of the sa. from gilts or sows

- Co-contamination: 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, DOM-1, and α-ZOL; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and

α-ZOL; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, and DON; 1 sa. co-contaminated with AFB_1, AFM_1, DON, DOM-1, and α-ZOL; 1 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and DOM-1; 1 sa. co-contaminated with AFB_1, AFM_1, and DON
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, AFB_2, AFM_1, DOM-1, ZEN, α-ZOL, and ß-ZOL, literature[451]

Deepoxydeoxynivalenol

incidence: 1/1*, sample comp.: urine from a pig in Italy, sample origin: slaughterhouse in Conversano (city), Bari province, Italy, contamination: natural, conc.: 6.34 ng/ml, sample year: unknown, country: Italy[282], *detected with enzymatic digestion with ß-glucuronidase/sulfatase
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, DON, OTA, α-ZOL, ß-ZOL, literature[282]

incidence: 6/15*, sample comp.: urine from pigs in Vietnam, sample origin: 15 different pig farms in the Dongnai province, southern Vietnam, contamination: natural, conc. range: 1.7–37.9 ng/ml, Ø conc.: 10.3 ng/ml, sample year: 2008, country: Vietnam/Sweden[451], *most of the sa. from gilts or sows
- Co-contamination: 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, DOM-1, and α-ZOL; 1 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and DOM-1; 1 sa. co-contaminated with AFB_1, AFM_1, DON, DOM-1, and α-ZOL; 1 sa. co-contaminated with DOM-1, ZEN, α-ZOL, and ß-ZOL; 1 sa. co-contaminated with DOM-1 and α-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, AFB_2, AFM_1, DON, ZEN, α-ZOL, and ß-ZOL literature[451]

Fumonisin B_1

incidence: 4/28, sample comp.: urine from pigs in Belgium, sample origin: 3 different animal farms, Belgium, contamination: natural, conc. range: <LOQ–0.74 ng/ml, sample year: unknown, country: Belgium/China[450]
- Co-contamination: 2 sa. co-contaminated with DON and FB_1; 2 sa. contaminated solely with FB_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, DON, and OTA, literature[450]

Zearalenone

incidence: 10/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 9.4 µg/l, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, DON, OTA, and PA, literature[402]

incidence: 10/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: natural, Ø conc.: 13.1 µg/l, sample year: 2007, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, OTA, and PA, literature[402]

incidence: 1/15*, sample comp.: urine from pigs in Vietnam, sample origin: 15 different pig farms in the Dongnai province, southern Vietnam, contamination: natural, conc.: 6.9 ng/ml, sample year: unknown, 2008: Vietnam/Sweden[451], *most of the sa. from gilts or sows
- Co-contamination: 1 sa. co-contaminated with DOM-1, ZEN, α-ZOL, and ß-ZOL

- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, AFB_2, AFM_1, DON, DOM-1, α-ZOL, and ß-ZOL, literature[451]

incidence: 11/11?, sample comp.: urine from pigs in Croatia, sample origin: farms in different regions in Croatia, contamination: natural, conc. range.: ≤241.1 ng/ml, Ø conc.: 40.45 ng/ml, sample year: unknown, country: Croatia[453]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow urine, ZEN, literature[453]

α-Zearalenol

incidence: 1/1*, sample comp.: urine from a pig in Italy, sample origin: slaughterhouse in Conversano (city), Bari province, Italy, contamination: natural, conc.: 1.71 ng/ml, sample year: unknown, country: Italy[282], *detected with enzymatic digestion with ß-glucuronidase/sulfatase

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, DON, DOM-1, OTA, and ß-ZOL, literature[282]

incidence: 7/15*, sample comp.: urine from pigs in Vietnam, sample origin: 15 different pig farms in the Dongnai province, southern Vietnam, contamination: natural, conc. range: 1.2–3.9 ng/ml, Ø conc.: 2.53 ng/ml, sample year: 2008, country: Vietnam/Sweden[451], *most of the sa. from gilts or sows

- Co-contamination: 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, DOM-1, and α-ZOL; 2 sa. co-contaminated with AFB_1, AFB_2, AFM_1, DON, and α-ZOL; 1 sa. co-contaminated with AFB_1, AFM_1, DON, DOM-1, and α-ZOL; 1 sa. co-contaminated with DOM-1, ZEN, α-ZOL, and ß-ZOL; 1 sa. co-contaminated with DOM-1 and α-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, AFB_2, AFM_1, DON, DOM-1, ZEN, and ß-ZOL, literature[451]

ß-Zearalenol

incidence: 1/1*, sample comp.: urine from a pig in Italy, sample origin: slaughterhouse in Conversano (city), Bari province, Italy, contamination: natural, conc.: 0.80 ng/ml, sample year: unknown, country: Italy[282], *detected with enzymatic digestion with ß-glucuronidase/sulfatase

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, DON, DOM-1, OTA, and α-ZOL, literature[282]

incidence: 1/15*, sample comp.: urine from pigs in Vietnam, sample origin: 15 different pig farms in the Dongnai province, southern Vietnam, contamination: natural, conc.: 10.0 ng/ml, sample year: 2008, country: Vietnam/Sweden[451], *most of the sa. from gilts or sows

- Co-contamination: 1 sa. co-contaminated with DOM-1, ZEN, α-ZOL, and ß-ZOL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig urine, AFB_1, AFB_2, AFM_1, DON, DOM-1, ZEN, and α-ZOL, literature[451]

Penicillium Toxins

Penitrem A

incidence: 0/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: no contamination, sample year: 2006, country: Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, DON, OTA, PA, and ZEN, literature[402]

incidence: 0/10, sample comp.: urine from pigs with nephropathy problems* in Bulgaria, sample origin: MPN affected farms in Bulgaria, contamination: no contamination, sample year: 2007, country:

Bulgaria/South Africa[402], *enlarged and mottled or pale appearance of kidneys
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig serum, CIT, DON, OTA, PA, PEA, and ZEN, literature[402]; Pig urine, CIT, OTA, PA, and ZEN, literature[402]

Piglets see **Pigs**

Pork see **Pig meat**

Poultry

Poultry kidney may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin M_1

incidence: 1/43, sample comp.: kidneys from pigs in Brazil, sample origin: Santa Catarina and Rio Grande do Sul (states), Brazil, contamination: natural, conc.: tr., sample year: unknown, country: Brazil[376]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Pig liver, AFB_1, literature[376]

Poultry meat may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 5/14, sample comp.: birds in Denmark, sample origin: poultry slaughterhouse Danpo, Vamdrup (municipality), Jutland (peninsula), Denmark, contamination: natural, conc. range: 4.3–29.2 µg/kg, Ø 13.22 µg/kg, sample year: unknown, country: Denmark[408]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

see also **Broiler**, **Chicken** and **Hen**

Sheep

Sheep milk, raw may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin M_1

incidence: 8/12, sample comp.: milk from sheeps in Greece, sample origin: milk producers all over Greece, contamination: natural, conc. range: 5–10 ng/l (3 sa.), 11–20 ng/l (3 sa.), 21–50 ng/l (2 sa.), sample year: December 1999–May 2000, country: Greece[332]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Goat milk, raw, AFM_1, literature[332], December 1999

incidence: 11/15, sample comp.: milk from sheeps in Greece, sample origin: milk producers all over Greece, contamination: natural, conc. range: 5–10 ng/l (6 sa.), 11–20 ng/l (3 sa.), 21–50 ng/l (1 sa.), sample year: December 2000–May 2001, country: Greece[332]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Goat milk, raw, AFM_1, literature[332], December 2000

incidence: 80/90, sample comp.: milk from ewes in Turkey, sample origin: 2 dairies located in Sanliurfa (province), Turkey, contamination: natural, conc. range: 5–50 ng/l (25 sa.), >50–232 ng/l (55 sa.), sample year: March/April 2006, country: Turkey[375]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 5/23, sample comp.: milk from sheeps in Italy, sample origin: dairy farms in Agrigento (city), Sicily (island, autonomous region), Italy, contamination: natural, conc. range: 5–10 ng/l, sample year: November 2001–June 2002, country: Italy[421]
- Co-contamination: not reported

- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 1/4, sample comp.: milk from sheeps in Italy, sample origin: dairy farms in Caltanissetta (city), Sicily (island, autonomous region), Italy, contamination: natural, conc.: 5 ng/l, sample year: November 2001–June 2002, country: Italy[421]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/7, sample comp.: milk from sheeps in Italy, sample origin: dairy farms in Palermo (city), Sicily (island, autonomous region), Italy, contamination: natural, conc. range: 4–23 ng/l, sample year: November 2001–June 2002, country: Italy[421]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 3/6, sample comp.: milk from sheeps in Italy, sample origin: dairy farms in Trapani (city), Sicily (island, autonomous region), Italy, contamination: natural, conc. range: 6–22 ng/l, sample year: November 2001–June 2002, country: Italy[421]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 13/23, sample comp.: milk from sheeps in Syria, sample origin: north, south, and east of Syria, contamination: natural, conc. range: 6–634 ng/l, Ø conc.: 67 ng/l, sample year: April 2005–April 2006, country: Syria[423]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Goat milk, raw, AFM_1, literature[423]

incidence: 20/34, sample comp.: milk from sheeps in Italy, sample origin: different areas on Sicily (island, autonomous region), Italy, contamination: natural, conc. range: ≤3–5 ng/l (15 sa.), ≤5–10 ng/l (4 sa.), 16 ng/l (1 sa.), sample year: January–June 2012, country: Italy[447]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Cow milk, raw, Goat milk, raw, AFM_1, literature[447]

see also **Buffalo milk, raw**, **Cow milk, raw**, **Goat milk, raw**, and **Sheep/goat milk, raw**

Sheep urine may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Zearalanols

incidence: 39/80*, sample comp.: urine from sheep in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤2.1 ng/ml**, sample year: May 1992–March 1993, country: New Zealand[311], *export animals, **most probable of *Fusarium* origin

- Co-contamination: 39 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Sheep urine, ZEL, literature[311]; Cattle urine, Deer urine, Goat urine, Horse urine, Lamb urine, ZAL and ZEL, literature[311]

Zearalenols

incidence: 39/80*, sample comp.: urine from sheep in New Zealand, sample origin: New Zealand, contamination: natural, conc. range: ≤86 ng/ml, sample year: May 1992–March 1993, country: New Zealand[311], *export animals

- Co-contamination: 39 sa. co-contaminated with ZAL and ZEL
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Sheep urine, ZAL, literature[311]; Cattle urine, Deer urine, Goat urine, Horse urine, Lamb urine, ZAL and ZEL, literature[311]

Sheep/goat

Sheep/goat milk, raw may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin M_1

incidence: 0/1, sample comp.: milk from sheeps/goats in Italy, sample origin: Campania and Calabria (regions), Italy,

contamination: no contamination, sample year: 2002, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, Cow milk, raw, AFM_1, literature[304], 2002

incidence: 4/7, sample comp.: milk from sheeps/goats in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 6–9 ng/kg, sample year: 2003, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, Cow milk, raw, AFM_1, literature[304], 2003

incidence: 2/8, sample comp.: milk from sheeps/goats in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc. range: 9–27 ng/kg, Ø conc.: 18 ng/kg, sample year: 2004, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Buffalo milk, raw, Cow milk, raw, AFM_1, literature[304], 2004

incidence: 1/1, sample comp.: milk from sheeps/goats in Italy, sample origin: Campania and Calabria (regions), Italy, contamination: natural, conc.: 31 ng/kg, sample year: 2005, country: Italy[304]
- Co-contamination: not reported
- Further contamination (organs, fluids, mycotoxins etc.): Buffalo milk, raw, Cow milk, raw, AFM_1, literature[304], 2005

see also **Buffalo milk, raw, Cow milk, raw**, **Goat milk, raw**, and **Sheep milk, raw**

Steer

Steer kidney may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Aflatoxin B_1

incidence: 2/2, sample comp.: kidneys from steers in USA, sample origin: family-owned farm, south central Georgia (state), USA, contamination: natural, conc. range: 0.09 ng/g, sample year: unknown, country: USA[409]
- Co-contamination: 2 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Steer kidney, AFM_1, literature[409]

Aflatoxin M_1

incidence: 2/2, sample comp.: kidneys from steers in USA, sample origin: family-owned farm, south central Georgia (state), USA, contamination: natural, conc. range: 4.8 ng/g, sample year: unknown, country: USA[409]
- Co-contamination: 2 sa. co-contaminated with AFB_1 and AFM_1
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Steer kidney, AFB_1, literature[409]

Swine

Swine blood may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 6*/38**, sample comp.: blood from swines in Sweden, sample origin: slaughterhouse of Kristianstad (city), Sweden, contamination: natural, conc. range: ≥2 ng/ml (6 sa.), Ø conc.: 4.0 ng/ml, sample year: unknown, country: Sweden[369], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 58*/71**, sample comp.: blood from swines in Sweden, sample origin: slaughterhouse of Kävlinge (city), Sweden, contamination: natural, conc. range: ≥2 ng/ml (42 sa.), ≥5 ng/ml (10 sa.), ≥10 ng/ml (6 sa.), Ø conc.: 10.4 ng/ml, sample year: unknown, country: Sweden[369], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 27*/62**, sample comp.: blood from swines in Sweden, sample origin: slaughterhouse of Halmstad (city), Sweden, contamination: natural, conc. range: ≥2 ng/ml (16 sa.), ≥5 ng/ml (8 sa.), ≥10 ng/ml (3 sa.), Ø conc.: 9.6 ng/ml, sample year: unknown, country: Sweden[369], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 12*/49**, sample comp.: blood from swines in Sweden, sample origin: slaughterhouse of Skara (city), Sweden, contamination: natural, conc. range: ≥2 ng/ml (10 sa.), ≥5 ng/ml (1 sa.), ≥10 ng/ml (1 sa.), Ø conc.: 5.9 ng/ml, sample year: only sampled in January–February 1988, country: Sweden[369], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 81?*/72?**, sample comp.: blood from swines in Sweden, sample origin: slaughterhouse of Visby (city), Sweden, contamination: natural, conc. range: ≥2 ng/ml (55 sa.?), ≥5 ng/ml (18 sa.?), ≥10 ng/ml (8 sa.?), Ø conc.: 13.4 ng/ml, sample year: unknown, country: Sweden[369], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 17*/67**, sample comp.: blood from swines in Sweden, sample origin: slaughterhouse of Örebro (city), Sweden, contamination: natural, conc. range: ≥2 ng/ml (11 sa.), ≥5 ng/ml (3 sa.), ≥10 ng/ml (3 sa.), Ø conc.: 6.9 ng/ml, sample year: unknown, country: Sweden[369], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 45*/98**, sample comp.: blood from swines in Sweden, sample origin: slaughterhouse of Kalmar (city), Sweden, contamination: natural, conc. range: ≥2 ng/ml (27 sa.), ≥5 ng/ml (11 sa.), ≥10 ng/ml (7 sa.), Ø conc.: 7.7 ng/ml, sample year: unknown, country: Sweden[369], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 27*/76**, sample comp.: blood from swines in Sweden, sample origin: slaughterhouse of Umeå (city), Sweden, contamination: natural, conc. range: ≥2 ng/ml (20 sa.), ≥5 ng/ml (6 sa.), ≥10 ng/ml (1 sa.), Ø conc.: 4.8 ng/ml, sample year: unknown, country: Sweden[369], *no. of herds with OTA, **total no. of herds
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 179/359*, sample comp.: blood from swines in Sweden, sample origin: 8 slaughterhouses, Sweden, contamination: natural, conc. range: ≥2 ng/ml (136 sa.), ≥5 ng/ml (29 sa.), ≥10 ng/ml (14 sa.), Ø conc.: 8.2 ng/ml, sample year: unknown, country: Sweden[369], *pigs fed with short stored grain (beginning of the storage of the grain crop 1987, January/February)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 94/174*, sample comp.: blood from swines in Sweden, sample origin: 8 slaughterhouses, Sweden, contamination: natural, conc. range: ≥2 ng/ml (49 sa.), ≥5 ng/ml (29 sa.), ≥10 ng/ml (16 sa.), Ø conc.: 13.2 ng/ml, sample year: unknown, country: Sweden[369], *pigs fed with long stored grain (end of the storage of the grain crop 1987, August/September)
- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

For detailed information please see the article.

Swine digesta may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Deoxynivalenol

incidence: 1/1, sample comp.: digesta from a pig of Germany?, sample origin: Germany?, contamination: natural, conc.: 145 ng/g, sample year: unknown, country: Germany[370]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Swine digesta, DOM-1, literature[370]; Swine serum, DON, literature[370]

Deepoxydeoxynivalenol

incidence: 1/1, sample comp.: digesta from a pig of Germany?, sample origin: Germany?, contamination: natural, conc.: 274 ng/g, sample year: unknown, country: Germany[370]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Swine digesta, DON, literature[370]; Swine serum, DON, literature[370]

Swine serum may contain the following mycotoxins and/or their metabolites:

Fusarium Toxins

Deoxynivalenol

incidence: 1/1, sample comp.: digesta from a pig of Germany?, sample origin: Germany?, contamination: natural, conc.: 33 ng/ml, sample year: unknown, country: Germany[370]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Swine digesta, DON and DOM-1, literature[370]

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 205/205*, sample comp.: swines in Italy, sample origin: 11 conventional swine farms in Piedmont (region), northwest Italy, contamination: natural, conc. range: 0.03–0.87 ng/ml, sample year: September 2006–March 2009, country: Italy[442], *conventional production

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

incidence: 80/80*, sample comp.: swines in Italy, sample origin: 4 organic swine farms in Piedmont (region), northwest Italy, contamination: natural, conc. range: 0.15–6.24 ng/ml, sample year: September 2006–March 2009, country: Italy[442], *organical production

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Turkey

Turkey lung may contain the following mycotoxins and/or their metabolites:

Aspergillus Toxins

Gliotoxin

incidence: 5/13, sample comp.: lungs from turkeys in USA, sample origin: processing plant and local turkey farm, USA, contamination: natural, conc. range: 0.4–126.3 µg/g, Ø conc.: 42.16 µg/g, sample year: unknown, country: USA[410]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): not reported

Turkey muscle may contain the following mycotoxins and/or their metabolites:

Aspergillus and ***Penicillium*** Toxins

Ochratoxin A

incidence: 9/13, sample comp.: muscle meat from pigs in Portugal, sample origin: supermarkets located in Coimbra city, Portugal, contamination: natural, conc. range: LOD–0.01 µg/kg, sample year: October 2002–February 2003, country: Portugal[373]

- Co-contamination: not reported
- Further contamination (organs, tissues, fluids, mycotoxins etc.): Chicken muscle, Pig muscle, OTA, literature[373]

Tables

Table 1. ***Aspergillus*** **toxins in humans**

Aflatoxicol
Human blood; human brain; human breast milk; human feces; human kidney; human liver; human lung; human serum; human urine
Aflatoxin B_1
Human amniotic fluid; human bile; human blood; human brain; human breast; human breast milk; human bronchial lavage fluid; human cervix; human colon; human feces; human heart; human intestine; human kidney; human liver; human lung; human pancreas; human placenta; human plasma; human rectum; human serum; human spleen; human stomach; human urine
Aflatoxin B_2
Human blood; human brain; human breast milk; human feces; human heart; human intestine; human kidney; human liver; human lung; human plasma; human serum; human spleen; human stomach; human urine
Aflatoxin B_{2a}
Human serum; human urine
Aflatoxin G_1
Human blood; human brain; human breast milk; human feces; human kidney; human liver; human lung; human plasma; human semen; human serum; human urine
Aflatoxin G_2
Human blood; human brain; human breast milk; human feces; human kidney; human liver; human lung; human plasma; human serum; human urine
Aflatoxin G_{2a}
Human serum; human urine
Aflatoxin M_1
Human blood; human brain; human breast milk; human feces; human kidney; human liver; human lung; human plasma; human semen; human serum; human spleen; human urine
Aflatoxin M_2
Human blood; human brain; human breast milk; human feces; human kidney; human liver; human lung; human semen; human serum; human spleen; human urine
Aflatoxin P_1
Human urine
Aflatoxin P
Human serum; human urine

(continued)

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Table 1. (continued)

Aflatoxin Q_1
Human feces; human serum; human urine
Aflatoxin/s (aflatoxin, aflatoxin B, aflatoxins (B_1 & B_2)*, aflatoxins* (M_1 & M_2)*, and aflatoxins)*
Human blood; human breast milk; human liver; human plasma; human serum; human urine
Gliotoxin
Human serum

Table 2. ***Aspergillus*** **and** ***Penicillium*** **toxins in humans**

Citrinin
Human plasma; human urine
Dihydrocitrinone
Human urine
Ochratoxin A
Human amniotic fluid; human blood; human breast milk; human feces; human funiculum; human kidney; human placenta; human plasma; human plasma/serum; human renal tissue; human serum; human urine
Ochratoxin A methyl ester
Human blood; human breast milk; human serum
4-Hydroxyochratoxin A
Human feces; human urine
Ochratoxin α
Human breast milk; human plasma; human serum; human urine
Ochratoxin α methyl ester
Human serum
Ochratoxin B
Human feces; human serum; human urine
Ochratoxins
Human urine

Table 3. ***Fusarium*** **toxins in humans**

Deoxynivalenol
Human urine
Deepoxydeoxynivalenol
Human urine
3-Acetyldeoxynivalenol
Human urine
Deoxynivalenol-3-O-glucuronide
Human urine
Deoxynivalenol-15-O-glucuronide
Human urine

(continued)

Table 3. (continued)

Enniatin A
Human breast milk
Enniatin A_1
Human breast milk
Enniatin B
Human breast milk
Enniatin B_1
Human breast milk
Fumonisin B_1
Human feces; human hair; human urine
Fumonisin B_2
Human hair; human urine
Fumonisin B_3
Human hair
Fumonisin/s
Human urine
HT-2 toxin
Human breast milk; human urine
Neosolaniol
Human breast milk; human feces
Nivalenol
Human breast milk; human urine
Trichothecene(s)
Human serum; human urine
T-2 triol
Human feces
Zearalanone
Human urine
α-Zearalanol
Human urine
ß-Zearalanol
Human urine
Zearalenone
Human breast milk; human endometrium; human plasma; human serum; human urine
Zearalenone-14-glucuronide
Human urine
α-Zearalenol
Human breast milk; human feces; human plasma; human urine
ß-Zearalenol
Human breast milk; human feces; human urine

Table 4. ***Aspergillus*** **toxins in animals**

Aflatoxin B_1
Beef liver; calf liver; chicken liver; chicken muscle; cow liver; cow milk, raw; dog kidney; dog liver; dog stomach; duck liver; egg; hare liver; horse liver; pig liver; pig plasma; pig urine; steer kidney
Aflatoxin B_2
Pig urine
Aflatoxin G_1
Beef liver; dog stomach
Aflatoxin M_1
Beef liver; buffalo milk, raw; camel milk, raw; cow milk, raw; dog liver; goat milk, raw; pig liver; pig urine; poultry kidney; sheep milk, raw; sheep/goat milk, raw; steer kidney
Aflatoxin M_2
Cow milk, raw
Aflatoxin/s (aflatoxin, aflatoxins (M_1 & M_2)*, and aflatoxins)*
Calf mucosa; camel liver; camel rumen; cow milk, raw; egg; meat
Gliotoxin
Camel fetus; camel intestine; camel rumen; cow udder; turkey lung
Sterigmatocystin
Cattle urine

Table 5. ***Aspergillus*** **and** ***Penicillium*** **toxins in animals**

Citrinin
Pig kidney; pig serum; pig urine
Ochratoxin A
Boar kidney; boar liver; boar muscle; boar urinary bladder; broiler serum; cat kidney; chicken gizzard; chicken kidney; chicken liver; chicken muscle; cow milk, raw; cow serum; dog kidney; hen serum; horse serum; pig black pudding; pig blood; pig kidney; pig liver; pig meat; pig muscle; pig plasma; pig serum; pig urine; poultry meat; swine blood; swine serum; turkey muscle
Penicillic acid
Pig serum; pig urine

Table 6. *Fusarium* toxins in animals

Deoxynivalenol
Egg; goose ingesta; pig serum; pig urine; swine digesta; swine serum
Deepoxydeoxynivalenol
Egg; pig urine; swine digesta
Fumonisin B_1
Cow milk, raw; pig urine
Fumonisin/s
Calf mucosa
α-Zearalanol
Cattle bile
Zearalanols
Cattle urine; deer urine; goat urine; horse urine; lamb urine; sheep urine
Zearalenone
Cow milk, raw; cow urine; egg; gilt bile; goose ingesta; pig follicular fluid; pig serum; pig urine
α-Zearalenol
Cattle bile; cow milk, raw; egg; gilt bile; pig follicular fluid; pig urine
ß-Zearalenol
Cattle bile; egg; pig urine
Zearalenols
Cattle urine; deer urine; goat urine; horse urine; lamb urine; sheep urine

Table 7. *Penicillium* toxins in animals

Penitrem A
Dog brain; dog kidney; dog liver; dog stomach; pig serum; pig urine
Penitrem E
Dog brain; dog kidney; dog liver
Roquefortine C
Dog brain; dog kidney; dog liver; dog stomach
Thomitrem
Dog stomach

Figures

The bar charts (Figs. 1 and 2) are a visual presentation of the contents of the book. The presented columns point out the number of investigations realized in a continent dealing with the natural mycotoxin contamination in humans or animals. They are not showing in detail cases of mycotoxin contamination noted in a continent. In this respect the bar charts (Figs. 1 and 2) give a limited survey of the real continental mycotoxin situation. This limited survey is due to, e.g., not considered studies which contain neither mycotoxin concentration range nor Ø mycotoxin values of the positive samples. Furthermore, not an equal number of mycotoxin investigations have been carried out in each continent.

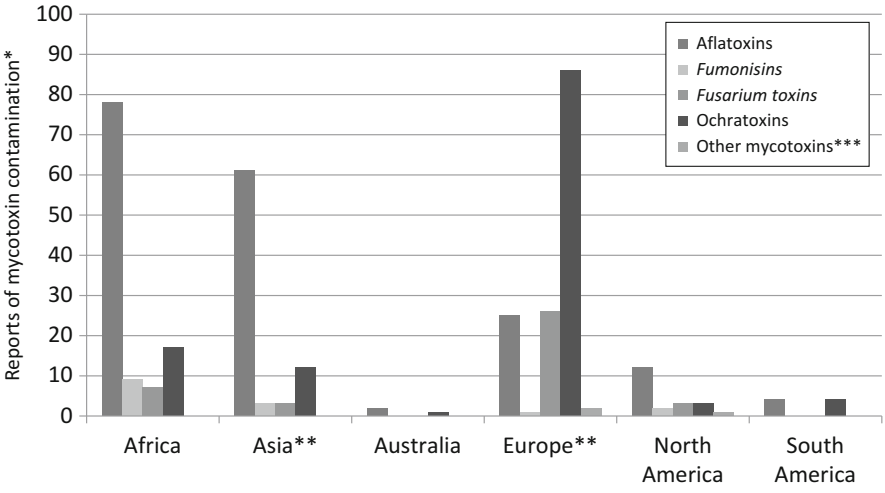

Fig. 1 Reports of mycotoxin contamination in humans in different continents
*Mycotoxin reports published in the present book
**Mycotoxin reports of Turkey are counted for Asia as well as Europe
***Citrinin and gliotoxin
No mycotoxin reports published in the present book in Antarctica

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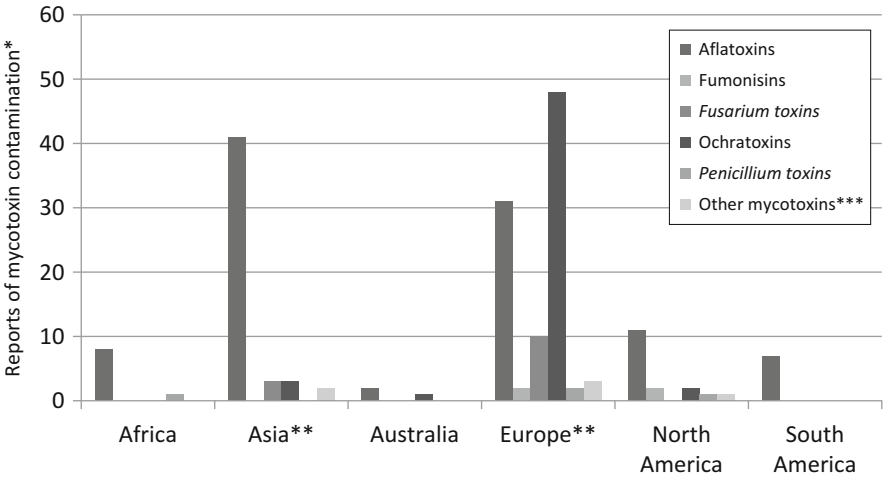

Fig. 2 Reports of mycotoxin contamination in animals in different continents
*Mycotoxin reports published in the present book
**Mycotoxin reports of Turkey are counted for Asia as well as Europe
***Citrinin, gliotoxin, and sterigmatocystin
No mycotoxin reports published in the present book in Antarctica

Literature

Numerical Bibliography

1. Rosner, H., Rohrmann, B., Peiker, G., 2000: 104-107.
2. Shank, R.C., Bourgeois, C.H., Keschamras, N., Chandavimol, P., 1971: Aflatoxins in autopsy specimens from Thai children with an acute disease of unknown aetiology. Food and Cosmetics Toxicology 9, 501-507.
3. Maxwell, S.M., Familusi, J.B., Sodeinde, O., Chan, M.C.K., Hendrickse, R.G., 1994: Detection of naphthols and aflatoxins in Nigerian cord blood. Annals of Tropical Paediatrics 14, 3-5.
4. Maxwell, S.M., Apeagyei, F., de Vries, H.R., Mwanmut, D.D., Hendrickse, R.G., 1989: Aflatoxins in breast milk, neonatal cord blood and sera of pregnant women. Journal of Toxicology – Toxin Reviews 8, 19-29.
5. Ahmed, H., Hendrickse, R.G., Maxwell, S.M., Yakubu, A.M., 1995: Neonatal jaundice with reference to aflatoxins: an aetiological study in Zaria, northern Nigeria. Annals of Tropical Paediatrics 15, 11-20.
6. Jonsyn, F.E., Maxwell, S.M., Hendrickse, R.G., 1995: Human fetal exposure to ochratoxin A and aflatoxins. Annals of Tropical Paediatrics 15, 3-9.
7. Siray, M.Y., Hayes, A.W., Unger, P.D., Hogan, G.R., Ryan, N.J., Wray, B.B., 1981: Analysis of aflatoxin B_1 in human tissues with high-pressure liquid chromatography. Toxicology and Applied Pharmacology 58, 422-430.
8. Ryan, N.J., Hogan, G.R., Hayes, A.W., Unger, P.D., Siraj, M.V., 1979: Aflatoxin B_1: its role in the etiology of Reye's Syndrome. Pediatrics 64, 71-75.
9. Hsieh, L.-L., Hsieh, T.-T., 1993: Detection of aflatoxin B_1-DNA adducts in human placenta and cord blood. Cancer Research 53, 1278-1280.
10. Jiang, Y., Jolly, P.E., Ellis, W.O., Wang, J.-S., Phillips, T.D., Williams, J.H., 2005: Aflatoxin B_1 albumin adduct levels and cellular immune status in Ghanaians. International Immunology 17, 807-814. doi: 10.1093/intimm/dxh262.
11. Chao, T.C., Lo, D., Bloodworth, B., Gunasegaram, R., Koh, T., Ng, H., 1994: Aflatoxin exposure in Singapore: blood aflatoxin levels in normal subjects, hepatitis B virus carriers and primary hepatocellular carcinoma patients. Medicine, Science and the Law 34, 289-298.
12. Jolly, P., Jiang, Y., Ellis, W., Awuah, R., Nnedu, O., Phillips, T., Wang, J.-S., Afriyie-Gyawu, E., Tang, L., Persom, S., Williams, J., Jolly, C., 2006: Determinants of aflatoxin levels in Ghanaians: sociodemographic factors, knowledge of aflatoxin and food handling and consumption practices. International Journal of Hygiene and Environmental Health 209, 345-358. doi: 10.1016/j.ijheh.2006.02.002.

M. Weidenbörner, *Natural Mycotoxin Contamination in Humans and Animals*,
DOI 10.1007/978-3-319-16039-9

13. El-Tras, W.F., El-Kady, N.N., Tayel, A.A., 2011: Infants exposure to aflatoxin M_1 as a novel foodborne zoonosis. Food and Chemical Toxicology 49, 2816-2819. doi: 10.1016/j.fct.2011.08.008.
14. Abdulrazzaq, Y.M., Osman, N., Ibrahim, A., 2002: Fetal exposure to aflatoxins in the United Arab Emirates. Annals of Tropical Paediatrics 22, 3-9.
15. Coulter, J.B.S., Lamplugh, S.M., Suliman, G.I., Omer, I.A., Hendrickse, R.G., 1984: Aflatoxins in human breast milk. Annals of Tropical Paediatrics 4, 61-66.
16. de Vries, H.R., Lamplugh, S.M., 1989: Aflatoxins in liver biopsies from Kenya. Tropical and Geographical Medicine 41, 26-30.
17. El-Sayed, A.M.A.A., Soher, E.A., Neamat-Allah, A.A., 2002: Human exposure to mycotoxins in Egypt. Mycotoxin Research 18, 23-30.
18. Abdulrazzaq, Y.M., Osman, N., Yousif, Z.M., Trad, O., 2004: Morbidity in neonates of mothers who have ingested aflatoxins. Annals of Tropical Paediatrics 24, 145-151. doi: 10.1179/027249304225013420.
19. de Vries, H.R., Lamplugh, S.M., Hendrickse, R.G., 1987: Aflatoxins and kwashiorkor in Kenya: a hospital based study in a rural area of Kenya. Annals of Tropical Paediatrics 7, 249-251.
20. Gong, Y.Y., Cardwell, K., Hounsa, A., Egal, S., Turner, P.C., Hall, A.J., Wild, C.P., 2002: Dietary aflatoxin exposure and impaired growth in young children from Benin and Togo: cross sectional study. British Medical Journal 325, 20-21.
21. Wilkinson, A.P., Denning, D.W., Morgan, M.R.A., 1989: Immunoassay of aflatoxin in food and human tissue. Journal of Toxicology – Toxin Reviews 8, 69-79.
22. Turner, P.C., Collison, A.C., Cheung, Y.B., Gong, Y.Y., Hall, A.J., Prentice, A.M., Wild, C.P., 2007: Aflatoxin exposure *in utero* causes growth faltering in Gambian infants. International Journal of Epidemiology 36, 1119-1125. doi: 10.1093/ije/dym122.
23. Turner, P.C., Sylla, A., Gong, Y.Y., Diallo, M.S., Sutcliffe, A.E., Hall, A.J., Wild, C.P., 2005: Reduction in exposure to carcinogenic aflatoxins by postharvest intervention measures in west Africa: a community-based intervention study. Lancet 365, 1950-1956.
24. Turner, P.C., Sylla, A., Kuang, S.-Y., Marchant, C.L., Diallo, M.S., Hall, A.J., Groopman, J.D., Wild, C.P., 2005: Absence of *TP53* codon 249 mutations in young Guinean children with high aflatoxin exposure. Cancer Epidemiology, Biomarkers & Prevention 14, 2053-2055. doi: 10.1158/1055-9965EPI-04-0923.
25. Hassen, W., Abid, S., Achour, A., Creppy, E., Bacha, H., 2004: Ochratoxin A and $ß_2$-microglobulinuria in healthy individuals and in chronic interstitial nephropathy patients in the centre of Tunisia: a hot spot of ochratoxin A exposure. Toxicology 199, 185-193. doi: 10.1016/j.tox.2004.02.027.
26. Maaroufi, K., Acour, A., Hammami, M., El May, M., Betbeder, A.M., Ellouz, F., Creppy, E.E., Bacha, H., 1995: Ochratoxin A in human blood in relation to nephropathy in Tunisia. Human & Experimental Toxicology 14, 609-615.
27. Kovács, F., Sándor, G., Ványi, A., Domány, S., Zomborszky-Kovács, M., 1995: Detection of ochratoxin A in human blood and colostrum. Acta Veterinaria Hungarica 43, 393-400.
28. Creppy, E.E., Betbeder, A.-M., Godin, M., Fillastre, J.-P., AMG, K.S., Simon, P., Lasseur, C., Combe, C., Aparicio, M., 1995: Ochratoxin A in human blood and chronic interstitial nephropathy: case report in France. Proceedings from 17. Mykotoxin-Workshop in der Bundesforschungsanstalt für Landwirtschaft, Braunschweig-Völkenrode, 56-62.
29. Breitholtz-Emanuelsson, A., Olsen, M., Oskarsson, A., Palminger, I., Hult, K., 1993: Ochratoxin A in cow's milk and in human milk with corresponding human blood samples. Journal of the Association of Official Analytical Chemists International 76, 842-846.
30. Goliński, P., Grabarkiewicz-Szczęsna, J., 1985: The first in Poland cases of detection of ochratoxin A residues in human blood. Roczniki Panstwowego Zakladu Higieny 36, 378-381.
31. Godin, M., Francois, A., le Roy, F., Morin, J.-P., Creppy, E., Hemet, J., Fillastre, J.-P., 1996: Karyomegalic interstitial nephritis. American Journal of Kidney Diseases 27, 166.

32. Maaroufi, K., Achour, A., Betbeder, A.M., Hammami, M., Ellouz, F., Creppy, E.E., Bacha, H., 1995: Foodstuffs and human blood contamination by the mycotoxin ochratoxin A: correlation with chronic interstitial nephropathy in Tunisia. Archives of Toxicology 69, 552-558.
33. Hald, B., 1991: Ochratoxin A in human blood in European countries. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds.). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 159-164 (33).
34. European Commission. Food – science and techniques series. Reports on tasks for scientific cooperation. Report of experts participating in task 3.2.2: assessment of dietary intake of ochratoxin A by the population in EU member states. Report EUR 17523 EN, 48 pp., 1998.
35. Sangare-Tigori, B., Moukha, S., Kouadio, J.H., Dano, D.S., Betbeder, A.-M., Achour, A., Creppy, E.E., 2006: Ochratoxin A in human blood in Abidjan, Côte d'Ivoire. Toxicon 47, 894-900. doi: 10.1016/j.toxicon.2006.03.001.
36. Skaug, M.A., 2003: Levels of ochratoxin A and IGG against conidia of *Penicillium verrucosum* in blood samples from healthy farm workers. Annals of Agricultural and Environmental Medicine 10, 73-77.
37. Postupolski, J., Karlowski, K., Kubik, P., 2006: Ochratoxin A in maternal and foetal blood and in maternal milk. Roczniki Panstwowego Zaklado Higieny 57, 23-30.
38. Muñoz, K., Vega, M., Rios, G., Muñoz, S., Madariaga, R., 2006: Preliminary study of ochratoxin A in human plasma in agricultural zones of Chile and its relation to food consumption. Food and Chemical Toxicology 44, 1884-1889. doi: 10.1016/j.fct.2006.06.008.
39. Thuvander, A., Paulsen, J.E., Axberg, K., Johansson, N., Vidnes, A., Enghardt-Barbieri, H., Trygg, K., Lund-Larsen, K., Jahrl, S., Widenfalk, A., Bosnes, V., Alexander, J., Hult, K., Olsen, M., 2001: Levels of ochratoxin A in blood from Norwegian and Swedish blood donors and their possible correlation with food consumption. Food and Chemical Toxicology 39, 1145-1151 (and personal communication).
40. Aslam, M., Beg, A.E., Blaszkewicz, M., Degen, G.H., Golka, K., 2005: Ochratoxin A blood concentration in healthy subjects and bladder cancer cases from Pakistan. Abstract, 27th Mycotoxin-Workshop, 13.-15. June 2005, Dortmund, Germany.
41. Fuchs, R., Radić, B., Čeović, S., Šoštarić, B., Hult, K., 1991: Human exposure to ochratoxin A. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds.). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 131-135.
42. Petkova-Bocharova, T., Castegnaro, M., 1991: Ochratoxin A in human blood in relation to Balkan endemic nephropathy and urinary tract tumours in Bulgaria. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds.). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 135-137.
43. Gajęcki, M., Przybylowicz, M., Zielonka, L., Zwierzchowski, W., Obremski, K., Skorska-Wyszyńska, E., Gajęcka, M., Polak, M., Jakimiuk, E., 2004: Preliminary results of monitoring research on zearalenone presence in blood of women with neoplastic lesions in reproductive system. Polish Journal of Veterinary Sciences 7, 153-156.
44. Oyelami, O.A., Maxwell, S.M., Adelusola, K.A., Aladekoma, T.A., Oyelese, A.O., 1995: Aflatoxins in the autopsy brain tissue of children in Nigeria. Mycopathologia 132, 35-38.
45. Chao, T.-C., Maxwell, S.M., Wong, S.Y., 1991: An outbreak of aflatoxicosis and boric acid poisoning in Malaysia: a clinicopathological study. Journal of Pathology 164, 225-233.
46. Harrison, J.C., Carvajal, M., Garner, R.C., 1993: Does aflatoxin exposure in the United Kingdom constitute a cancer risk? Environmental Health Perspectives 99, 99-105.
47. Jonsyn, F.E., Maxwell, S.M., Hendrickse, R.G., 1995: Ochratoxin A and aflatoxins in breast milk samples from Sierra Leone. Mycopathologia 131, 121-126.
48. Turconi, G., Guarcello, M., Livieri, C., Comizolli, S., Maccarini, L., Castellazzi, A.M., Pietri, A., Piva, G., Roggi, C., 2004: Evaluation of xenobiotics in human milk and ingestion by the newborn. An epidemiological survey in Lombardy (Northern Italy). European Journal of Nutrition 43, 191-197. doi: 10.1007/s00394-004-0458-2.

49. Gürbay, A., Atasayar Sabuncuonğlu, S., Girgin, G., Şahin, G., Yiğit, Ş., Yurdakök, M., Tekinalp, G., 2010: Exposure of newborns to aflatoxin M_1 and B_1 from mothers' breast milk in Ankara, Turkey. Food and Chemical Toxicology 48, 314-319. doi: 10.1016/j.fct.2009.10.016.
50. Zarba, A., Wild, C.P., Hall, A.J., Montesano, R., Hudson, G.J., Groopman, J.D., 1992: Aflatoxin M_1 in human breast milk from The Gambia, West Africa, quantified by combined monoclonal antibody immunoaffinity chromatography and HPLC. Carcinogenesis 13, 891-894.
51. Abdulrazzaq, Y.M., Osman, N., Yousif, Z.M., Al-Falahi, S., 2003: Aflatoxin M_1 in breast-milk of UAE women. Annals of Tropical Paediatrics 23, 173-179. doi: 10.1179/027249303225007671.
52. El-Nezami, H.S., Nicoletti, G., Neal, G.E., Donohue, D.C., Ahokas, J.T., 1995: Aflatoxin M_1 in human breast milk samples from Victoria, Australia and Thailand. Food and Cosmetics Toxicology 33, 173-179.
53. Keskin, Y., Başkaya, R., Karsli, S., Yurdun, T., Özyaral, O., 2009: Detection of aflatoxin M_1 in human breast milk and raw cow's milk in Istanbul, Turkey. Journal of Food Protection 72, 885-889.
54. Galvano, F., Pietri, A., Bertuzzi, T., Gagliardi, L., Ciotti, S., Luisi, S., Bognanno, M., la Fauci, L., Iacopino, A.M., Nigro, F., Li Volti, G., Vanella, L., Giammanco, G., Tina, G.L., Gazzolo, D., 2008: Maternal dietary habits and mycotoxin occurrence in human mature milk. Molecular Nutrition & Food Research 52, 496-501. doi: 10.1002/mnfr.200700266.
55. Polychronaki, N., Turner, P.C., Mykkänen, H., Gong, Y., Amra, H., Abdel-Wahhab, M., El-Nezami, H., 2006: Determinants of aflatoxin M_1 in breast milk in a selected group of Egyptian mothers. Food Additives and Contaminants 23, 700-708. doi: 10.1080/02652030600627222.
56. Saad, A.M., Abdelgadir, A.M., Moss, M.O., 1989: Aflatoxin in human and camel milk in Abu Dhabi, United Arab Emirates. Mycotoxin Research 5, 57-60.
57. Saad, A.M., Abdelgadir, A.M., Moss, M.O., 1995: Exposure of infants to aflatoxin M_1 from mothers' breast milk in Abu Dhabi, UAE. Food Additives and Contaminants 12, 255-261.
58. Sadeghi, N., Oveisi, M.R., Jannat, B., Hajimahmoodi, M., Bonyani, H., Jannat, F., 2009: Incidence of aflatoxin M_1 in human breast milk in Tehran, Iran. Food Control 20, 75-78. doi: 10.1016/j.foodcont.2008.02.005.
59. El-Sayed, A.M.A.A., Neamat-Allah, A.A., Soher, E.A., 2000: Situation of mycotoxins in milk, dairy products and human milk in Egypt. Mycotoxin Research 16, 91-100.
60. Navas, S.A., Sabino, M., Rodriguez-Amaya, D.B., 2005: Aflatoxin M_1 and ochratoxin A in a human milk bank in the city of São Paulo, Brazil. Food Additives and Contaminants 22, 457-462. doi: 10.1080/02652030500110550.
61. Polychronaki, N., West, R.M., Turner, P.C., Amra, H., Abdel-Wahab, M., Mykkänen, H., El-Nezami, H., 2007: A longitudinal assessment of aflatoxin M_1 excretion in breast milk of selected Egyptian mothers. Food and Chemical Toxicology 45, 1210-1215. doi: 10.1016/j.fct.2007.01.001.
62. Nyathi, C.B., Mutiro, C.F., Hasler, J.A., Chetsanga, C.J., 1989: Human exposure to aflatoxins in Zimbabwe. Central African Journal of Medicine 35, 542-545.
63. Wild, C.P., Pionneau, F.A., Montesano, R., Mutiro, C.F., Chetsanga, C.J., 1987: Aflatoxin detected in human breast milk by immunoassay. International Journal of Cancer 40, 328-333.
64. Micco, C., Ambruzzi, M.A., Miraglia, M., Brera, C., Onori, R., Benelli, L., 1991: Contamination of human milk with ochratoxin A. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds.). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 105-108.
65. Miraglia, M., Brera, C., Cava, E., Calfapietra, F.R., 1998: The evaluation of major sources of ochratoxin A (OA) intake through the analysis of OA in biological fluids in Italy. Revue de Médicine Vétérinaire 149, 711.
66. Apostolou, E., El-Nezami, H.S., Ahokas, J.T., Donohue, D.C., 1998: The evaluation of ochratoxin A in breast milk in Victoria (Australia). Revue de Médicine Vétérinaire 149, 709.
67. Bauer, J., Gareis, M., 1987: Ochratoxin A in the food-chain. Journal of Veterinary Medicine Series B 34, 613-627.

68. Skaug, M.A., Helland, I., Solvoll, K., Saugstad, O.D., 2001: Presence of ochratoxin A in human milk in relation to dietary intake. Food Additives and Contaminants 18, 321-327. doi: 10.1080/02652030010021477.
69. Skaug, M.A., Størmer, F.C., Saugstad, O.D., 1998: Ochratoxin A: a naturally occurring mycotoxin found in human milk samples from Norway. Acta Pædiatrica 87, 1275-1278.
70. Zimmerli, B., Dick, R., 1995: Determination of ochratoxin A at the ppt level in human blood, serum, milk and some foodstuffs by high-performance liquid chromatography with enhanced fluorescence detection and immunoaffinity column cleanup: methodology and Swiss data. Journal of Chromatography B, 666, 85-99.
71. Hassan, A.M., Sheashaa, H.A., Fattah, M.F.A., Ibrahim, A.Z., Gaber, O.A., Sobh, M.A., 2006: Study of ochratoxin A as an environmental risk that causes renal injury in breast-fed Egyptian infants. Pediatric Nephrology 21, 102-105. doi: 10.1007/s00467-005-2033-3.
72. Dostal, A., Jakusova, L., Cajdova, J., Hudeckova, H., 2008: Results of the first studies of occurrence of ochratoxin A in human milk in Slovakia. Bratislavslec Lekarske Listy 109, 276-278.
73. Commission of the European Communities, 2002. Reports on tasks for scientific cooperation. Report of experts participating in task 3.2.7: assessment of dietary intake of ochratoxin A by the population in EU member states.
74. Gürbay, A., Girgin, G., Atasayar Sabuncuoğlu, S., Sahin, G., Yurdakök, M., Yiğit, Ş, Tekinalp, G., 2010: Ochratoxin A: is it present in breast milk samples obtained from mothers from Ankara, Turkey? Journal of Applied Toxicology 30, 329-333. doi: 10.1002/jat.1499.
75. Tomaszewski, J., Mituriski, R., Semezuk, A., Kotarski, J., Jakowicki, J., 1998: Tissue zearalenone concentrations in normal, hyperplastic and neoplastic human endometrium. Ginkologia Polska 69, 363-366.
76. Ankrah, N.A., Rikimaru, T., Ekuban, F.A., 1994: Observations on aflatoxins and the liver status of Ghanaian subjects. East African Medical Journal 71, 739-741.
77. Nyathi, C.B., Mutiro, C.F., Hasler, J.A., Chetsanga, C.J., 1987: A survey of urinary aflatoxin in Zimbabwe. International Journal of Epidemiology 16, 516-519.
78. El-Nezami, H., Mykkänen, H., Kankaanpää, P., Suomalainen, T., Salminen, S., Ahokas, J., 2000: Ability of a mixture of *Lactobacillus* and *Propionibacterium* to influence the faecal aflatoxin content in healthy Egyptian volunteers: a pilot clinical study. Bioscience Microflora 19, 41-45.
79. Chelule, P.K., Gqaleni, N., Chuturgoon, A.A., Dutton, M.F., 2000: The determination of fumonisin B_1 in human faeces: a short term marker for assessment of exposure. Biomarkers 5, 1-8.
80. Sewram, V., Mshicileli, N., Shephard, G.S., Marasas, W.F.O., 2003: Fumonisin mycotoxins in human hair. Biomarkers 8, 110-118. doi: 10.1080/1354750031000081002.
81. Hendrickse, R.G., 1984: The influence of aflatoxins on child health in the tropics with particular reference to kwashiorkor. Transactions of the Royal Society of Tropical Medicine and Hygiene 78, 427-435.
82. Coulter, J.B.S., Suliman, G.I., Lamplugh, S.M., Mukhtar, B.I., Hendrickse, R.G., 1986: Aflatoxins in liver biopsies from Sudanese children. American Journal of Tropical Medicine and Hygiene 35, 360-365.
83. Apeagyei, F., Lamplugh, S.M., Hendrickse, R.G., Affram, K., Lucas, S., 1986: Aflatoxins in the livers of children with kwashiorkor in Ghana. Tropical and Geographical Medicine 38, 273-276.
84. Phillips, D.L., Yourtee, D.M., Searles, S., 1976: Presence of aflatoxin B_1 in human liver in the United States. Toxicology and Applied Pharmacology 36, 403-406.
85. Chaves-Carballo, E., Ellefson, R.D., Gomez, M.R., 1976: An aflatoxin in the liver of a patient with Reye-Johnson Syndrome. Mayo Clinic Proceedings 51, 48-50.
86. Stora, C., Dvorackova, I., Ayraud, N., 1981: Characterization of aflatoxin B_1 (AFB) in human liver cancer. Research Communications in Chemical Pathology and Pharmacology 31, 77-85.
87. Becroft, D.M., Webster, D.R., 1972: Aflatoxins and Reye's disease. British Medical Journal 4, 117.
88. Hsieh, L.-L., Hsu, S.-W., Chen, D.-S., Santella, R.M., 1988: Immunological detection of aflatoxin B_1-DNA adducts formed *in vivo*. Cancer Research 48, 6328-6331.

89. Richir, C., Paccalin, J., Faugeres, R., Moreux, M., Audry, S., N'Diaye, P., 1980: Searching for mycotoxins in human body fluids and viscera. Zentralblatt für Bakteriologie, Mikrobiologie und Hygiene Abt. 1 Orig. A 246 (Suppl. 8), 337-342.
90. Garner, R.C., Dvorackova, I., Tursi, F., 1988: Immunoassay procedures to detect exposure to aflatoxin B_1 and benzo(a)pyrene in animals and man at the DNA level. International Archives of Occupational and Environmental Health 60, 145-150.
91. Onyemelukwe, C.G., Nirodi, C., West, C.E., 1980: Aflatoxin B_1 in hepatocellular carcinoma. Tropical and Geographical Medicine 32, 237-240.
92. Ngindu, A., Kenya, P.R., Ocheng, D.M., Omondi, T.N., Ngare, W., Gatei, D., Johnson, B.K., Ngira, J.A., Nandwa, H., Jansen, A.J., Kaviti, J.N., Arap Siongok, T., 1982: Outbreak of acute hepatitis caused by aflatoxin poisoning in Kenya. Lancet 12, 1346-1348.
93. Chen, C.-J., Zhang, Y.-J., Lu, S.-N., Santella, R.M., 1992: Aflatoxin B_1 DNA adducts in smeared tumor tissue from patients with hepatocellular carcinoma. Hepatology 16, 1150-1155.
94. Rogan, W.J., Yang, G.C., Kimborough, R.D., 1985: Aflatoxin and Reye's Syndrome: a study of livers from deceased cases. Archives of Environmental Health 40, 91-95.
95. Oyelami, O.A., Maxwell, S.M., Adelusola, K.A., Aladekoma, T.A., Oyelese, A.O., 1997: Aflatoxins in the lungs of children with kwashiorkor and children with miscellaneous diseases in Nigeria. Journal of Toxicology and Environmental Health 51, 623-628.
96. Dvořáčková, I., Pichová, V., 1986: Pulmonary interstitial fibrosis with evidence of aflatoxin B_1 in lung tissue. Journal of Toxicology and Environmental Health 18, 153-157.
97. Matsumura, M., Mori, T., 1998: Detection of aflatoxins in autopsied materials from a patient infected with *Aspergillus flavus*. Nippon Ishinkin Gakkai Zasshi 39, 167-171.
98. Mizrak, D., Engin, B., Önder, F.O., Yener, B., Bektaş, M., Biyikili, Z., Idilman, R., Çinar, K., Karayalçin, K., Ersöz, S., Karayalçin, S., Özden, A., Yurdaydin, C., Yazihan, N., Ataoğlu, H., Bozkaya, H., Uzunalimoğlu, Ö., 2009: Aflatoxin exposure in viral hepatitis patients in Turkey. Turkish Journal of Gastroenterology 20, 192-197. doi: 10.4318/tjg.2009.0006.
99. Peraica, M., Domijan, A.-M., Fuchs, R., Lucić, A., Radić, B., 1999: The occurrence of ochratoxin A in blood in general population of Croatia. Toxicology Letters 110, 105-112.
100. Peraica, M., Domijan, A.-M., Matašin, M., Lucić, A., Radić, B., Delaš, F., Horvat, M., Bosanac, I., Balija, M., Grgičević, D., 2001: Variations of ochratoxin A concentration in the blood of healthy populations in some Croatian cities. Archives of Toxicology 75, 410-414. doi: 10.1007/s002040100258.
101. Studer-Rohr, I., Schlatter, J., Dietrich, D.R., 2000: Kinetic parameters and intraindividual fluctuations of ochratoxin A plasma levels in humans. Archives of Toxicology 74, 499-510. doi: 10.1007/s002040000157.
102. Filali, A., Betbeder, A.M., Baudrimont, I., Benyada, A., Soulaymani, R., Creppy, E.E., 2002: Ochratoxin A in human plasma in Morocco: a preliminary survey. Human & Experimental Toxicology 21, 241-245. doi: 10.1191/0960327102ht249oa.
103. Jimenez, A.M., Lopez de Cerain, A., Gonzalez-Peñas, E., Bello, J., Betbeder, A.M., Creppy, E.E., 1998: Exposure to ochratoxin A in Europe: comparison with a region of northern Spain. Journal of Toxicology – Toxin Reviews 17, 479-491.
104. Domijan, A.-M., Peraica, M., Fuchs, R., Lucić, A., Radić, B., Balija, M., Bosanac, I., Grgičević, D., 1999: Ochratoxin A in blood of healthy population in Zagreb. Archives of Industrial Hygiene and Toxicology 3, 263-271.
105. Ueno, Y., Maki, S., Lin, J., Furuya, M., Sugiura, Y., Kawamura, O., 1998: A 4-year study of plasma ochratoxin A in a selected population in Tokyo by immunoassay and immunoaffinity column-linked HPLC. Food and Chemical Toxicology 36, 445-449.
106. Gilbert, J., Brereton, P., MacDonald, S., 2001: Assessment of dietary exposure to ochratoxin A in the UK using a duplicate diet approach and analysis of urine and plasma samples. Food Additives and Contaminants 18, 1088-1093. doi: 10.1080/02652030110070030.
107. Breitholtz, A., Olsen, M., Dahlbäck, Å., Hult, K., 1991: Plasma ochratoxin A levels in three Swedish populations surveyed using an ion-pair HPLC technique. Food Additives and Contaminants 8, 182-192.

108. Scott, P.M., Kanhere, S.R., Lau, B.P.-Y., Lewis, D.A., Hayward, S., Ryan, J.J., Kuiper-Goodman, T., 1998: Survey of Canadian human blood plasma for ochratoxin A. Food Additives and Contaminants 15, 555-562.
109. Assaf, H., Betbeder, A.-M., Creppy, E.E., Pallardy, M., Azouri, H., 2004: Ochratoxin A levels in human plasma and foods in Lebanon. Human & Experimental Toxicology 23, 495-501. doi: 10.1191/0960327104ht481oa.
110. Pacin, A.M., Ciancio Bovier, E.V., Motta, E., Resnik, S.L., Villa, D., Olsen, M., 2008: Survey of Argentinean human plasma for ochratoxin A. Food Additives and Contaminants: Part A 25, 635-641. doi: 10.1080/02652030701613709.
111. Burdaspal, P.A., Legarda, T.M., 1998: Datos sorbe la presencia de ocratoxina A en plasma humano en Espaňa. Alimentaria 292, 103-109.
112. Coronel, M.B., Sanchis, V., Ramos, A.J., Marin, S., 2009: Assessment of the exposure to ochratoxin A in the province of Lleida, Spain. Food and Chemical Toxicology 47, 2847-2852. doi: 10.1016/j.fct.2009.09.005.
113. Wafa, E.W., Yahya, R.S., Sobh, M.A., Eraky, I., El-Baz, M., El-Gayar, H.A.M., Betbeder, A.M., Creppy, E.E., 1998: Human ochratoxicosis and nephropathy in Egypt: a preliminary study. Human & Experimental Toxicology 17, 124-129.
114. Ibeh, I.N., Uraih, N., Ogonar, J.I., 1994: Dietary exposure to aflatoxin in human male infertility in Benin City, Nigeria. International Journal of Fertility and Menopausal Studies 39, 208-214.
115. Hendrickse, R.G., Coulter, J.B.S., Lamplugh, S.M., MacFarlane, S.B.J., Williams, T.E., Omer, M.I.A., Suliman, G.I., 1982: Aflatoxins and kwashiorkor: a study in Sudanese children. British Medical Journal 285, 843-846.
116. Sodeinde, O., Chan, M.C.K., Maxwell, S.M., Familusi, J.B., Hendrickse, R.G., 1995: Neonatal jaundice, aflatoxins and naphthols: report of a study in Ibadan, Nigeria. Annals of Tropical Paediatrics 15, 107-113.
117. Hatem, N.L., Hassab, H.M.A., Abd Al-Rahman, E.M., El-Deeb, S.A., El-Sayed Ahmed, R.L., 2005: Prevalence of aflatoxins in blood and urine of Egyptian infants with protein-energy malnutrition. Food and Nutrition Bulletin 26, 49-56.
118. Jonsyn, F.E., 1999: Intake of aflatoxins and ochratoxins by infants in Sierra Leone: possible effects on the general health of these children. Journal of Nutrition and Environmental Medicine 9, 15-22.
119. Wild, C.P., Yin, F., Turner, P.C., Chemin, I., Chapot, B., Mendy, M., Whittle, H., Kirk, G.D., Hall, A.J., 2000: Environmental and genetic determinants of aflatoxin-albumin adducts in The Gambia. International Journal of Cancer 86, 1-7.
120. Wild, C.P., Jiang, Y.-Z., Allen, S.J., Jansen, L.A.M., Hall, A.J., Montesano, R., 1990: Aflatoxin-albumin adducts in human sera from different regions of the world. Carcinogenesis 11, 2271-2274.
121. Diallo, M.S., Syila, A., Sidibé, K., Sylla, B.S., Trepo, C.R., Wild, C.P., 1995: Prevalence of exposure to aflatoxin and hepatitis B and C virus in Guinea, West Africa. Natural Toxins 3, 6-9.
122. Wray, B.B., Hayes, A.W., 1980: Aflatoxin B_1 in the serum of a patient with primary hepatic carcinoma. Environmental Research 22, 400-403.
123. Tsuboi, S., Nakagawa, T., Tomita, M., Seo, T., Ono, H., Kawamura, K., Iwamura N., 1984: Detection of aflatoxin B_1 in serum samples of male Japanese subjects by radioimmunoassay and high-performance liquid chromatography. Cancer Research 44, 1231-1234.
124. Wang, J.-S., Qian, G.-S., Zarba, A., He, X., Zhu, Y.-R., Zhang B.-C., Jacobson, L., Gange, S.J., Muñoz, A., Kensler, T.W., Groopman, J.D., 1996: Temporal patterns of aflatoxin-albumin adducts in hepatitis B surface antigen-positive and antigen-negative residents of Daxin, Qidong County, People's Republic of China. Cancer Epidemiology, Biomarkers & Prevention 5, 253-261.
125. Wild, C.P., Fortuin, M., Donato, F., Whittle, H.C., Hall, A.J., Wolf, C.R., Montesano, R., 1993: Aflatoxin, liver enzymes, and hepatitis B virus infection in Gambian children. Cancer Epidemiology, Biomarkers & Prevention 2, 555-561.

126. Sheabar, F.Z., Groopman, J.D., Qian, G.-S., Wogan, G.N., 1993: Quantitative analysis of aflatoxin – albumin adducts. Carcinogenesis 14, 1203-1208.
127. Hollstein, M.C., Wild, C.P., Bleicher, F., Chutimataewin, S., Harris, C.C., Srivatanakul, P., Montesano, R., 1993: p53 mutations and aflatoxin B_1 exposure in hepatocellular carcinoma patients from Thailand. International Journal of Cancer 53, 51-55.
128. Soini, Y., Chia, S.C., Bennett, W.P., Groopman, J.D., Wang, J.-S., de Benedetti, V.M.G., Cawley, H., Welsh, J.A., Hansen, C., Bergasa, N.V., Jones, E.A., di Bisceglie, A.M., Trivers, G.E., Sandoval, C.A., Calderon, I.E., Munoz Espinosa, L.E., Harris, C.C., 1996: An aflatoxin-associated mutational hotspot at codon 249 in the *p53* tumor suppressor gene occurs in hepatocellular carcinomas from Mexico. Carcinogenesis 17, 1007-1012.
129. Denning, D.W., Onwubalili, J.K., Wilkinson, A.P., Morgan, M.R.A., 1988: Measurement of aflatoxin in Nigerian sera by enzyme-linked immunosorbent assay. Transactions of the Royal Society of Tropical Medicine and Hygiene 82, 169-171.
130. Onyemelukwe, G.C., Ogbadu, G., 1981: Aflatoxin levels in sera of healthy first time rural blood donors: preliminary report. Transactions of the Royal Society of Tropical Medicine and Hygiene 75, 780-782.
131. Krishnamachari, K.A.V.R., Bhat, R.V., Nagarajan, V., Tilak, T.B.G., 1975: Investigations into an outbreak of hepatitis in parts of western India. Indian Journal of Medical Research 63, 1036-1049.
132. Olubuyide, I.O., Maxwell, S.M., Akinyinka, O.O., Hart, C.A., Neal, G.E., Hendrickse, R.G., 1993: HbsAg and aflatoxins in sera of rural (Igbo-Ora) and urban (Ibadan) populations in Nigeria. African Journal of Medicine and Medical Sciences 22, 77-80.
133. Lopez, C., Ramos, L., Bulacio, L., Ramadan, S., Rodriguez, F., 2002: Aflatoxin B_1 content in patients with hepatic diseases. MEDICINA (Buenos Aires) 62, 313-316.
134. Tang, L., Tang, M., Xu, L., Luo, H., Huang, T., Yu, J., Zhang, L., Gao, W., Cox, S.B., Wang, J.-S., 2008: Modulation of aflatoxin biomarkers in human blood and urine by green tea polyphenols intervention. Carcinogenesis 29, 411-417. doi: 10.1093/carcin/bgn008.
135. Ahsan, H., Wang, L.-Y., Chen, C.-J., Tsai, W.-Y., Santella, R.M., 2001: Variability in aflatoxin-albumin adduct levels and effects of hepatitis B and C Virus infection and glutathione *S*-transferase *M1* and *T1* genotype. Environmental Health Perspectives 109, 833-837.
136. Chen, S.-Y., Chen, C.-J., Chou, S.-R., Hsieh, L.-L., Wang, L.-Y., Tsai, W.-Y., Ahsan, H., Santella, R.M., 2001: Association of aflatoxin B_1-albumin adduct levels with hepatitis B surface antigen status among adolescents in Taiwan. Cancer Epidemiology, Biomarkers & Prevention 10, 1223-1226.
137. Autrup, J.L., Schmidt, J., Seremet, T., Autrup, H., 1991: Determination of exposure to aflatoxins among Danish workers in animal-feed production through the analysis of aflatoxin B_1 adducts to serum albumin. Scandinavian Journal of Work, Environment & Health 17, 436-440.
138. Abdel-Wahab, M., Mostafa, M., Sabry, M., El-Farrash, M., Yousef, T., 2008: Aflatoxins as a risk factor for hepatocellular carcinoma in Egypt, Mansoura Gastroenterology Center Study. Hepato-Gastroenterology 55, 1754-1759.
139. Gan, L.-S., Skipper, P.L., Peng, X., Groopman, J.D., Chen, J.-S., Wogan, G.N., Tannenbaum, S.R., 1988: Serum albumin adducts in the molecular epidemiology of aflatoxin carcinogenesis: correlation with aflatoxin B_1 intake and urinary excretion of aflatoxin M_1. Carcinogenesis 9, 1323-1325.
140. Turner, P.C., Dingley, K.H., Coxhead, J., Russell, S., Garner, C.R., 1998: Detectable levels of serum aflatoxin B_1-albumin adducts in the United Kingdom population: implications for aflatoxin-B_1 exposure in the United Kingdom. Cancer Epidemiology, Biomarkers & Prevention 7, 441-447.
141. Wang, J.-S., Abubaker, S., He, X., Sun, G., Strickland, P.T., Groopman, J.D., 2001: Development of aflatoxin B_1-lysine adduct monoclonal antibody for human exposure studies. Applied and Environmental Microbiology 67, 2712-2717. doi: 10.1128/AEM.67.6.2712-2717.2001.
142. Cusumano, V., 1991: Aflatoxins in sera from patients with lung cancer. Oncology 48, 194-195.

143. Okumura, H., Kawamura, O., Kishimoto, S., Hasegawa, A., Shrestha, S.M., Okuda, K., Obata, H., Okuda, H., Haruki, K., Uchida, T., Ogasawara, Y., Ueno, Y., 1993: Aflatoxin M_1 in Nepalese sera, quantified by combination of monoclonal antibody immunoaffinity chromatography and enzyme-linked immunosorbent assay. Carcinogenesis 14, 1233-1235.
144. Mokhles, M., Abdl El Wahhab, M.A., Tawfik, M., Ezzat, W., Gamil, K., Ibrahim, M., 2007: Detection of aflatoxin among hepatocellular carcinoma patients in Egypt. Pakistan Journal of Biological Science 10, 1422-1429.
145. Turner, P.C., Mendy, M., Whittle, H., Fortuin, M, Hall, A.J., Wild, C.P., 2000: Hepatitis B infection and aflatoxin biomarker levels in Gambian children. Tropical Medicine and International Health 5, 837-841.
146. Allen, S.J., Wild, C.P., Wheeler, J.G., Riley, E.M., Montesano, R., Bennett, S., Whittle, H.C., Hall, A.J., Greenwood, B.M., 1992: Aflatoxin exposure, malaria and hepatitis B infection in rural Gambian children. Transactions of the Royal Society of Tropical Medicine and Hygiene 86, 426-430.
147. Turner, P.C., Moore, S.E., Hall, A.J., Prentice, A.M., Wild, C.P., 2003: Modification of immune function through exposure to dietary aflatoxin in Gambian children. Environmental Health Perspectives 111, 217-220.
148. Nelson, D.B., Kimbrough, R., Landigran, P.S., Hayes, A.W., Yang, G.C., Benanides, J., Morens, D.M., Morse, D., Pollack, M., Powell, K.E., Sullivan-Bolyai, J.Z., 1980: Aflatoxins and Reye's Syndrome: a case control study. Pediatrics 66, 865-869.
149. Wilkinson, A.P., Denning, D.W., Morgan, R.A., 1988: Analysis of UK sera for aflatoxin by enzyme-linked immunosorbent assay. Human Toxicology 7, 353-356.
150. Fukal, L., Reisnerova, H., 1990: Monitoring of aflatoxins and ochratoxin A in Czechoslovak human sera by immunoassay. Bulletin of Environmental Contamination and Toxicology 44, 345-349.
151. Wang, J.-S., Huang, T., Su, J., Liang, F., Wei, Z., Liang, Y., Luo, H., Kuang, S.-Y., Qian, G.-S., Sun, G., He, X., Kensler, T.W., Groopman, J.D., 2001: Hepatocellular carcinoma and aflatoxin exposure in Zhuqing Village, Fusui County, People's Republic of China. Cancer Epidemiology, Biomarkers & Prevention 10, 143-146.
152. McCoy, L.F., Scholl, P.F., Sutcliffe, A.E., Kieszak, S.M., Powers, C.D., Rogers, H.S., Gong, Y.Y., Groopman, J.D., Wild, C.P., Schleicher, R.L., 2008: Human aflatoxin albumin adducts quantitatively compared by ELISA, HPLC with fluorescence detection, and HPLC with isotope dilution mass spectrometry. Cancer Epidemiology, Biomarkers & Prevention 17, 1653-1657.
153. Denning, D.W., Quiepo, S.C., Altman, D.G., Makarananda, K., Neal, G.E., Camallerre, E.L., Morgan, M.R.A., Tupasi, T.E., 1995: Aflatoxin and outcome from acute lower respiratory infection in children in The Philippines. Annals of Tropical Peadiatrics 15, 209-216.
154. Gong, Y., Hounsa, A., Egal, S., Turner, P.C., Sutcliffe, A.E., Hall, A.J., Cardwell, K., Wild, C.P., 2004: Postweaning exposure to aflatoxin results in impaired child growth: a longitudinal study in Benin, West Africa. Environmental Health Perspectives 112, 1334-1338. doi: 10.1289/ehp.6954.
155. Turner, P.C., Loffredo, C., El Kafrawy, S., Ezzat, S., Abdel Latif Eissa, S., El Daly, M., Nada, O., Abdel-Hamid, M., 2008: Pilot survey of aflatoxin-albumin adducts in sera from Egypt. Food Additives and Contaminants: Part A 25, 583-587. doi: 10.1080/02652030701713939.
156. Sylla, A., Diallo, M.S., Castegnaro, J.-J., Wild, C.P., 1999: Interactions between hepatitis B virus infection and exposure to aflatoxins in the development of hepatocellular carcinoma: a molecular epidemiological approach. Mutation Research 428, 187-196.
157. Wild, C.P., Jiang, Y-Z., Sabbioni, G., Chapot, B., Montesano, R., 1990: Evaluation of methods for quantitation of aflatoxin-albumin adducts and their application to human exposure assessment. Cancer Research 50, 245-251.
158. Denning, D.W., Allen, R., Wilkinson, A.P., Morgan, M.R.A., 1990: Transplacental transfer of aflatoxin in humans. Carcinogenesis 11, 1033-1035.
159. Coulter, J.B.S., Hendrickse, R.G., Lamplugh, S.M., MacFarlane, S.B.J., Moody, J.B., Omer, M.I.A., Suliman, G.I., Williams, T.E., 1986: Aflatoxins and kwashiorkor: clinical studies in

Sudanese children. Transactions of the Royal Society of Tropical Medicine and Hygiene 80, 945-951.
160. Lewis, R.E., Wiederhold, N.P., Chi, J., Han, X.Y., Komanduri, K.V., Kontoyiannis, D.P., Prince, R.A., 2005: Detection of gliotoxin in experimental and human aspergillosis. Infection and Immunity 73, 635-637. doi: 10.1128/IAI.73.1.635-637.2005.
161. Radić, B., Fuchs, R., Peraica, M., Lucić, A., 1997: Ochratoxin A in human sera in the area with endemic nephropathy in Croatia. Toxicology Letters 91, 105-109.
162. Breitholtz-Emanuelsson, A., Minervini, F., Hult, K., Visconti, A., 1994: Ochratoxin A in human serum samples collected in southern Italy from healthy individuals and individuals suffering from different kidney disorders. Natural Toxins 2, 366-370.
163. Grosso, F., Saïd, S., Mabrouk, I., Fremy, J.M., Castegnaro, M., Jemmali, M., Dragacci, S., 2003: New data on the occurrence of ochratoxin A in human sera from patients affected or not by renal diseases in Tunisia. Food and Chemical Toxicology 41, 1133-1140. doi: 10.1016/S0278-6915(03)00067-X.
164. Plestina, R., Ceović, S., Gatenbeck, S., Habazin-Novak, V., Hult, K., Hökby, E., Krogh, P., Radić, B., 1990: Human exposure to ochratoxin A in areas of Yugoslavia with endemic nephropathy. Journal of Environmental Pathology, Toxicology, Oncology 10, 145-148.
165. Solti, L., Salamon, F., Barna-Vetró, I., Gyöngyösi, Á., Szabó, E., Wölfling, A., 1997: Ochratoxin A content of human sera determined by a sensitive ELISA. Journal of Analytical Toxicology 21, 44-48.
166. Palli, D., Miraglia, M., Saieva, C., Masala, G., Cava, E., Colatosti, M., Corsi, A.M., Russo, A., Brera, C., 1999: Serum levels of ochratoxin A in healthy adults in Tuscany: correlation with individual characteristics and between repeat measurements. Cancer Epidemiology, Biomarkers & Prevention 8, 265-269.
167. Özçelik, N., Koşar, A., Soysal, D., 2001: Ochratoxin A in human serum samples collected in Isparta-Turkey from healthy individuals and individuals suffering from different urinary disorders. Toxicology Letters 121, 9-13.
168. Ruprich, J., Ostrý, V., 1993: Study of human exposure to ochratoxin A and assessment of possible sources. Central European Journal of Public Health 1, 46-48.
169. Malir, F., Jergeova, Z., Severa, J., Cerna, M., Smid, J., Betbeder, A.M., Baudrimont, I., Creppy, E.E., 1998: The level of ochratoxin A in blood serum of adults in the Czech Republic. Revue de Médicine Vétérinaire 149, 710.
170. Tápai, K., Téren, J., Mesterházy, Á., 1997: Ochratoxin A in the sera of blood donors and ill persons. Cereal Research Communications 25, 307-308.
171. Gareis, M., Rosner, H., Ehrhardt, S., 2000: Blood serum levels of ochratoxin A and nutrition habits. Archiv für Lebensmittelhygiene 51, 108-110.
172. Hult, K., Pleština, R., Habazin-Novak, V., Radíc, B., Čeovíć, S., 1982: Ochratoxin A in human blood and Balkan endemic nephropathy. Archives of Toxicology 51, 313-321.
173. Dinis, A.M.P., Lino, C.M., Pena, A.S., 2007: Ochratoxin A in nephropathic patients from two cities of central zone in Portugal. Pharmaceutical and Biomedical Analysis 44, 553-557. doi: 10.1016/j.jpba.2006.12.001.
174. Iavicoli, I., Brera, C., Carelli, G., Caputi, R., Marinaccio, A., Miraglia, M., 2002: External and internal dose in subjects occupationally exposed to ochratoxin A. International Archives of Occupational and Environmental Health 75, 381-386. doi: 10.1007/s00420-002-0319-3.
175. Lino, C.M., Baeta, M.L., Henri, M., Dinis, A.M.P., Pena, A.S., Silveira, M.I.N., 2008: Levels of ochratoxin A in serum from urban and rural Portuguese populations and estimation of exposure degree. Food and Chemical Toxicology 46, 879-885. doi: 10.1016/j.fct.2007.10.012.
176. Ruprich, J., Ostrý, V., 1993: Health risk assessment of the mycotoxin ochratoxin A to humans: Czech Republic – Brno – 1991/1992. Central European Journal of Public Health 2, 86-93.
177. Petkova-Bocharova, T., Castegnaro, M., Pfohl-Leszkowicz, A., Garren, L., Grosso, F., Nikolov, I., Vrabcheva, T., Dragacci, S., Chernozemsky, I.N., 2003: Analysis of ochratoxin A in serum and urine of inhabitants from an area with Balkan endemic nephropathy: a one month follow up study. Facta Universitas Series: Medicine and Biology 10, 62-68.

178. Brasel, T.L., Campbell, A.W., Demers, R.E., Ferguson, B.S., Fink, J., Vojdani, A., Wilson, S.C., Straus, D.C., 2004: Detection of trichothecene mycotoxins in sera from individuals exposed to *Stachybotrys chartarum* in indoor environments. Archives of Environmental Health 59, 317-323.
179. Szuets, P., Mesterhazy, A., Falkay, GY., Bartok, T., 1997: Early telarche symptoms in children and their relations to zearalenon contamination in foodstuffs. Cereal Research Communications 25, 429-436.
180. de Vries, H.R., Maxwell, S.M., Hendrickse, R.G., 1990: Aflatoxin excretion in children with kwashiorkor or marasmic kwashiorkor – a clinical investigation. Mycopathologia 110, 1-9.
181. Hendrickse, R.G., Maxwell, S.M., Young, R., 1989: Aflatoxins and heroin. British Medical Journal 299, 492-493.
182. Jonsyn-Ellis, F.E., 2000: Seasonal variation in exposure frequency and concentration levels of aflatoxins and ochratoxins in urine samples of boys and girls. Mycopathologia 152, 35-40.
183. Qian, G.-S., Ross, R.K., Yu, M.C., Yuan, J.-M., Gao Y.-T., Henderson, B.E., Wogan, G.N., Groopman, J.D., 1994: A follow-up study of urinary markers of aflatoxin exposure and liver cancer risk in Shanghai, People's Republic of China. Cancer Epidemiology, Biomarkers & Prevention 3, 3-10.
184. Yu, M.-W., Chiang, Y.-C., Lien, J.-P., Chen, C.-J., 1997: Plasma antioxidant vitamins, chronic hepatitis B virus infection and urinary aflatoxin B_1-DNA adducts in healthy males. Carcinogenesis 18, 1189-1194.
185. Autrup, H., Bradley, K.A., Shamsuddin, A.K.M., Wakhisi, J., Wasunna, A., 1983: Detection of putative adduct with fluorescence characteristics identical to 2,3-dihydro-2-(7´-guanyl)-3-hydroxyaflatoxin B_1 in human urine collected in Murang'a district, Kenya. Carcinogenesis 4, 1193-1195.
186. Zhu, J-Q., Zhang, L.-S., Hu, X., Xiao, Y., Chen, J.-S., Xu, Y.-C., Fremy, J., Chu, F.S., 1987: Correlation of dietary aflatoxin B_1 levels with excretion of aflatoxin M_1 in human urine. Cancer Research 47, 1848-1852.
187. Wang, J.-S., Shen, X., He, X., Zhu, Y.-R., Zhang, B.-C., Wang, J.-B., Qian, G.-S., Kuang, S.-Y., Zarba A., Egner, P.A., Jacobson, L.P., Muñoz, A., Helzlsouer, K.J., Groopman, J.D., Kensler, T.W., 1999: Protective alterations in phase 1 and 2 metabolism of aflatoxin B_1 by oltipraz in residents of Qidong, People's Republic of China. Journal of the National Cancer Institute 91, 347-354.
188. Yang, G., Nesheim, S., Benavides, J., Ueno, I., Campbell, A.D., Pohland, A., 1980: Radioimmunoassay detection of aflatoxin B_1 in monkey and human urine. Zentralblatt für Bakteriologie, Mikrobiologie und Hygiene Abt. 1 Orig. A 246 (Suppl. 8), 329-335.
189. Wild, C.P., Umbenhauer, D., Chapot, B., Montesano, R., 1986: Monitoring of individual human exposure to aflatoxins (AF) and N-nitrosamines (NNO) by immunoassays. Journal of Cellular Biochemistry 30, 171-179.
190. Nayak, S., Sashidhar, R.B., Bhat, R.V., 2001: Quantification and validation of enzyme immunoassay for urinary aflatoxin B_1-N^7-guanine adduct for biological monitoring of aflatoxins. Analyst 126, 179-183. doi: 10.1039/b005778i.
191. Egner, P.A., Groopman, J.D., Wang, J.-S., Kensler, T., Friesen, M.D., 2006: Quantification of aflatoxin-B_1-N^7-guanine in human urine by high-performance liquid chromatography and isotope dilution tandem mass spectrometry. Chemical Research in Toxicology 19, 1191-1195. doi: 10.1021/tx060108d.
192. Polychronaki, N., Wild, C.P., Mykkänen, H., Amra, H., Abdel-Wahhab, M., Sylla, A., Diallo, M., El-Nezami, H., Turner, P.C., 2008: Urinary biomarkers of aflatoxin exposure in young children from Egypt and Guinea. Food and Chemical Toxicology 46, 519-526. doi: 10.1016/j.fct.2007.08.034.
193. Guan, R., Oon, C.J., Wild, C., Motesano, R., 1986: A preliminary survey on aflatoxin exposure in Singapore. Annals Academy of Medicine 15, 201-205.
194. Yu, M.-W., Lien, J.-P., Liaw, Y.-F., Chen, C.-J., 1996: Effects of multiple risk factors for hepatocellular carcinoma on formation of aflatoxin B_1-DNA adducts. Cancer Epidemiology, Biomarkers & Prevention 5, 613-619.

195. Bean, T.A., Yourtee, D.M., Akande, B., Ogunlewe, J., 1989: Aflatoxin metabolites in the urine of Nigerians comparison of chromatographic methods. Journal of Toxicology – Toxin Reviews 8, 43-52.
196. Srivatanakul, P., Parkin, D.M., Jiang, Y.-Z., Khlat, M., Kao-Ian, U.-T., Sontipong, S., Wild, C., 1991: The role of infection by *Opisthorchis viverrini*, hepatitis B virus, and aflatoxin exposure in the etiology of liver cancer in Thailand. Cancer 68, 2411-2417.
197. Amla I., Kumari S., Murthy V.S., Jayaraj P., Parpia H.A.P., 1970: Role of aflatoxin in Indian childhood cirrhosis. Indian Pediatrics 7, 262-270.
198. Cheng, Z., Root, M., Pan, W., Chen, J., Campbell, T.C., 1997: Use of an improved method for analysis of urinary aflatoxin M_1 in a survey of mainland China and Taiwan. Cancer Epidemiology, Biomarkers & Prevention 6, 523-529.
199. Sun, Z., Lu, P., Gail, M.H., Pee, D., Zhang, Q., Ming, L., Wang, J., Wu, Y., Liu, G., Wu, Y., Zhu, Y., 1999: Increased risk of hepatocellular carcinoma in male hepatitis B surface antigen carriers with chronic hepatitis who have detectable urinary aflatoxin metabolite M_1. Hepatology 30, 379-383.
200. Liu, Z.-H., Tu, W.-S., Li, D.-R.O, Li, Y.-D., Xie, C.-H., Yang, Y.Z., Qin, B.-B., 1990: A new method for the quantitation of aflatoxin M_1 in urine by high performance liquid chromatography and its application to the etiologic study of hepatoma. Biomedical Chromatography 4, 83-86.
201. Groopman, J.D., Hall, A.J., Whittle, H., Hudson, G.J., Wogan, G.N., Montesano, R., Wild, C.P., 1992: Molecular dosimetry of aflatoxin-N^7-guanine in human urine obtained in The Gambia, West Africa. Cancer Epidemiology, Biomarkers & Prevention 1, 221-227.
202. di Giuseppe, R., Bertuzzi, T., Rossi, F., Rastelli, S., Mulazzi A., Capraro J., de Curtis, A., Iacoviello, L., Pietri, A., 2012: Plasma ochratoxin A levels, food consumption, and risk biomarkers of a representative sample of men and women from the Molise region in Italy. European Journal of Nutrition 51, 851-860. doi: 10.1007/s00394-011-0265-5.
203. Hatch, M.C., Chen, C.-J., Levin, B., Ji, B.-T., Yang, G.-Y., Hsu, S.-W., Wang, L.-W., Hsieh, L.-L., Santella, R.M., 1993: Urinary aflatoxin levels, hepatitis-B virus infection and hepatocellular carcinoma in Taiwan. International Journal of Cancer 54, 931-934.
204. Egner, P.A., Wang, J.-B., Zhu, Y.-R., Zhang, B.-C., Wu, Y., Zhang, Q.-N., Qian, G.-S., Kuang, S.-Y., Gange, S. J., Jacobson, L.P., Helzsouer, K.J., Bailey, G.S., Groopman, J.D., Kensler, T.W., 2001: Chlorophyllin intervention reduces aflatoxin-DNA adducts in individuals at high risk for liver cancer. Proceedings of the National Academy of Science USA 98, 14601-14606. doi: 10.1073/pnas.251536898.
205. Groopman, J.D., Donahue, P.R., Zhu, J., Chen, J., Wogan, G.N., 1985: Aflatoxin metabolism in humans: detection of metabolites and nucleic acid adducts in urine by affinity chromatography. Proceedings of the National Academy of Science USA 82, 6492-6496.
206. Meky, F.A., Turner, P.C., Ashcroft, A.E., Miller, J.D., Qiao, Y.-L., Roth, M.J., Wild, C.P., 2003: Development of a urinary biomarker of human exposure to deoxynivalenol. Food and Chemical Toxicology 41, 265-273.
207. Turner, P.C., Rothwell, J.A., White, K.L.M., Gong, Y.Y., Cade, J.E., Wild, C.P., 2008: Urinary deoxynivalenol is correlated with cereal intake in individuals from the United Kingdom. Environmental Health Perspectives 116, 21-25. doi: 10.1289/ehp.10663.
208. Turner, P.C., Burley, V.J., Rothwell, J.A., White, K.L.M., Cade, J.E., Wild, C.P., 2008: Dietary wheat reduction decreases the level of urinary deoxynivalenol in UK adults. Journal of Exposure Science and Environmental Epidemiology 18, 392-399.
209. Gong, Y.Y., Torres-Sanchez, L., Lopez-Carillo, L., He Peng, J., Sutcliffe, A.E., White, K.L., Humpf, H.-U., Turner, P.C., Wild, C.P., 2008: Association between tortilla consumption and human urinary fumonisin B_1 levels in a Mexican population. Cancer Epidemiology, Biomarkers & Prevention 17, 688-694. doi: 10.1158/1055-9965.EPI-07-2534.
210. Manique, R., Pena, A., Lino, C.M., Moltó, J.C., Mañes, J., 2008: Ochratoxin A in the morning and afternoon portions of urine from Coimbra and Valencian populations. Toxicon 51, 1281-1287. doi: 10.1016/j.toxicon.2008.02.014.

211. Castegnaro, M., Maru, V., Petkova-Bocharova, T., Nikolov, I., Bartsch, H., 1991: Concentrations of ochratoxin A in the urine of endemic nephropathy patients and controls in Bulgaria: lack of detection of 4-hydroxyochratoxin A. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 165-169.
212. Fazekas, B., Tar, A., Kovács, M., 2005: Ochratoxin A content of urine samples of healthy humans in Hungary. Acta Veterinaria Hungarica 53, 35-44.
213. Pena, A., Seifrtová, M., Lino, C., Silveira, I., Solich, P., 2006: Estimation of ochratoxin A in Portuguese population: new data on the occurrence in human urine by high performance liquid chromatography with fluorescence detection. Food and Chemical Toxicology 44, 1449-1454. doi: 10.1016/j.fct.2006.04.017.
214. Pascale, M., Visconti, A., 2000: Rapid method for the determination of ochratoxin A in urine by immunoaffinity column clean-up and high-performance liquid chromatography. Mycopathologia 152, 91-95.
215. Duarte, S.C., Bento, J.M.V., Pena, A., Lino, C.M., 2009: Ochratoxin A exposure assessment of the inhabitants of Lisbon during winter 2007/2008 through bread and urine analysis. Food Additives and Contaminants: Part A 26, 1411-1420. doi: 10.1080/02652030903107914.
216. Duarte, S.C., Bento, J., Pena, A., Lino, C.M., Delerue-Matos, C., Oliva-Teles, T., Morais, S., Correia, M., Oliveira, M.B.P.P., Alves, M.R., Pereira, J.A., 2010: Monitoring of ochratoxin A exposure of the Portuguese population through a nationwide urine survey – winter 2007. Science of the Total Environment 408, 1195-1198. doi:10.1016/jscitotenv.2009.11.048.
217. Domijan, A.-M., Pereica, M., Markov, K., Fuchs, R., 2009: Urine ochratoxin A and sphinganine/sphingosine ratio in residents of the endemic nephropathy area in Croatia. Arhir za Higijena Rada i Toksikologija 60, 387-393. doi: 10.2478/10004-1254-60-2009-1938.
218. Abia, W.A., Warth, B., Sulyock, M., Krska, R., Tchana, A., Njobeh, P.B., Turner, P.C., Kouanfack, C., Eyongetah, M., Dutton, M., Moundipa, P.F., 2013: Bio-monitoring of mycotoxin exposure in Cameroon using a urinary multi-biomarker approach. Food and Chemical Toxicology 62, 927-934. doi: 10.1016/j.fct.2013.10.003.
219. Ahn, J., Kim, D., Kim, H., Jahng, K.-Y., 2010: Quantitative determination of mycotoxins in urine by LC-MS/MS. Food Additives and Contaminants: Part A 27, 1674-1682. doi: 10.1080/19440049.2010.505201.
220. Akdemir, C., Ulker, O.C., Basaran, A., Ozkaya, S., Karakaya, A., 2010: Estimation of ochratoxin A in some Turkish populations: an analysis in urine as a simple, sensitive and reliable biomarker. Food and Chemical Toxicology 48, 877-882. doi: 10.1016/j.fct.2009.12.026.
221. Aslam, M., Rivzi, S.A.H., Beg, A.E., Blaskewicz, M., Golka, K., Degen, G.H., 2012: Analysis of ochratoxin A blood levels in bladder cancer cases and healthy persons from Pakistan. Journal of Toxicology and Environmental Health, Part A 75, 1176-1184. doi: 10.1080/15287394.2012.707602.
222. Bandera, E.V., Chandran, U., Buckley, B., Lin, Y., Isukapalli, S., Marshall, I., King, M., Zarbl, H., 2011: Urinary mycoestrogens, body size and breast development in New Jersey girls. Science of the Total Environment 409, 5221-5227. doi: 10.1016/j.scitotenv.2011.09.029.
223. Biasucci, G., Calabrese, G., di Giuseppe, R., Carrara, G., Colombo, F., Mandelli, B., Maj, M., Bertuzzi, T., Pietri, A., Rossi, F., 2011: The presence of ochratoxin A in cord serum and in human milk and its correspondence with maternal dietary habits. European Journal of Nutrition 50, 211-218. doi: 10.1007/s00394-010-0130-y.
224. Blaskewicz, M., Muñoz, K., Degen, G.H., 2013: Methods for analysis of citrine in human blood and urine. Archives of Toxicology 87, 1087-1094. doi: 10.1007/s00204-013-1010-z.
225. Brewer, J.H., Thrasher, J.D., Straus, D.C., Madison, R.A., Hooper, D., 2013: Detection of mycotoxins in patients with chronic fatigue syndrome. Toxins (Basel) 5, 605-617. doi: 10.3390/toxins5040605.
226. Cao, X., Wu, S., Yue, Y., Wang, S., Wang, Y., Tian, H., 2013: A high-throughput method for the simultaneous determination of multiple mycotoxins in human and laboratory animal biological fluids and tissues by PLE and HPLC-MS/MS. Journal of Chromatography B 942-943, 113-125. doi: 10.1016/j.jchromb.2013.10.017.

227. Carvajal, M., Berumen, J., Guardado-Estrada, M., 2012: The presence of aflatoxin B_1-FAPY adduct and human papilloma virus in cervical smears from cancer patients in Mexico. Food Additives and Contaminants: Part A 29, 258-268. doi: 10.1080/19440049.2011.647098.
228. Andrade, P.D., Gomes da Silva, J.L, Caldas, E.D., 2013: Simultaneous analysis of aflatoxins B_1, B_2, G_1, G_2, M_1 and ochratoxin A in breast milk by high-performance liquid chromatography/fluorescence after liquid-liquid extraction with low temperature purification (LLE-LTP). Journal of Chromatography A 1304, 61-68. doi: 10.1016/j.chroma.2013.06.049.
229. Castegnaro, M., Canadas, D., Vrabcheva, T., Petkova-Bocharova, T., Chernomsky, I.N., Pfohl-Leszkovicz, A., 2006: Balkan endemic nephropathy: role of ochratoxins A through biomarkers. Molecular Nutrition & Food Research 50, 519-529. doi: 10.1002/mnfr.200500182.
230. Chelule, P.K., Gqaleni, N., Dutton, M.F., Chuturgoon, A.A., 2001: Exposure of rural and urban populations in KwaZulu Natal, South Africa, to fumonisin B_1 in maize. Environmental Health Perspectives 109, 253-256.
231. Coronel, M.B., Marin, S., Tarragó, M., Cano-Sancho, G., Ramos, A.J., Sanchis, V., 2011: Ochratoxin A and its metabolite ochratoxin alpha in urine and assessment of the exposure of inhabitants of Lleida, Spain. Food and Chemical Toxicology 49, 1436-1442. doi: 10.1016/j.fct.2011.03.039.
232. Coronel, M.B., Sanchis, V., Ramos, A.J., Marin, S., 2011: Ochratoxin A in adult population of Lleida, Spain: presence in blood plasma and consumption in different regions and seasons. Food and Chemical Toxicology 49, 2697-2705. doi: 10.1016/j.fct.2011.07.045.
233. Cunha, S.C., Fernandes, J.O., 2012: Development and validation of a gas chromatography-mass spectrometry method for determination of deoxynivalenol and its metabolites in human urine. Food and Chemical Toxicology 50, 1019-1026. doi: 10.1016/j.fct.2011.12.028.
234. de Cássia Romero, A., Fereira, T.R.B., dos Santos Dias, C.T., Calori-Domingues, M.A., da Gloria E.M., 2010: Occurrence of AFM_1 in urine samples of a Brazilian population and association with food consumption. Food Control 21, 554-558. doi: 10.1016/j.foodcont.2009.08.004.
235. Degen, G.H., Mayer, S., Blaszkewicz, M., 2007: Biomonitoring of ochratoxin A in grain workers. Mycotoxin Research 23, 88-93.
236. Desalegn, B., Nanayakkara, S., Harada, K.H., Hitomi, T., Chandrajith, R., Karunaratne, U., Abeysekera, T., Koizumi, A., 2011: Mycotoxin detection in urine samples from patients with chronic kidney disease of uncertain etiology in Sri Lanka. Bulletin of Environmental Contamination and Toxicology 87, 6-10. doi: 10.1007/s00128-011-0301-4.
237. Duarte, S.C., Alves, M.R., Pena, A., Lino, C.M., 2012: Determinants of ochratoxin A exposure-A one year follow-up study of urine levels. International Journal of Hygiene and Environmental Health 215, 360-367. doi: 10.1016/j.ijheh.2011.12.001.
238. Dvořáčková, I., Kusák, V., Veselý, D., Veselá, J., Nesnídal, P., 1977: Aflatoxin and encephalopathy with fatty degeneration of viscera (Reye). Annales de la Nutrition et de l'Alimentation 31, 977-990.
239. Dvoráckova, I., Polster, M., 1984: Relation between aflatoxin producing aspergilloma and lung carcinoma. Microbiologie – Aliments – Nutrition 2, 187-192.
240. Erkekoğlu, P., Sabuncuoğlu, S., Aydin, S., Şahin, G., Giray, B., 2010: Determination of seasonal variation in serum ochratoxin A levels in healthy population living in some regions of Turkey by enzyme-linked immunosorbent assay. Toxicon 55, 507-513. doi: 10.1016/j.toxicon.2009.10.002.
241. Ezekiel, C.N., Warth, B., Ogara, I.M., Abia, W.A., Ezekiel, V.C., Atehnkeng, J., Sulyok, M., Turner, P.C., Tayo, G.O., Krska, R., Bandyopadhyay, R., 2014: Mycotoxin exposure in rural residents in northern Nigeria: a pilot study using multi-urinary biomarkers. Environment International 66, 138-145. doi: 10.1016/j.envint.2014.02.003.
242. Fahmy, N., Woo, M., Alameldin, M., MacDonald, K., Goneau, L.W., Cadieux, P., Pautler, S.E., 2014: Ochratoxin A is not detectable in renal and testicular tumours. Canadian Urological Association Journal 8, 40-46. doi: 10.5489/cuaj.1240.
243. Grajewski, J., Jarzemski, P., Twaruzek, M., Kuzminska, K., Trepala, M., 2007: The level of ochratoxin A in patients after nephrectomy. Mycotoxin Research 23, 22-26.

244. Hassen, W., Abid-Essefi, S., Achour, A., Maaroufi, K., Creppy, E., Bacha, H., 2003: Ochratoxin A and human nephropathy in Tunisia: a ten year survey. Annales de Toxilogie Analytique XV, 21-29.
245. Hepworth, S.J., Hardie, L.J., Fraser, L.K., Burley, V.J., Mijal, R.S., Wild, C.P., Azad, R., McKinney, P.A., Turner, P.C., 2012: Deoxynivalenol exposure assessment in a cohort of pregnant women from Bradford, UK. Food Additives and Contaminants: Part A 29, 269-276. doi: 10.1080/19440049.2010.551301.
246. Hmaissia Khlifa, K., Ghali, R., Mezigh, C., Aouni, Z., Ghorbel, H., Harrzallah, K., Machgoul, S., Hedhili, A., 2008: Serum levels of ochratoxin A in healthy subjects and in nephropathic patients in Tunisia. Annales de Biologie Clinique 66, 631-636. doi: 10.1684/abc.2008.0278.
247. Johnson, N.M., Qian, G., Xu, L., Tietze D., Marroqiun-Cardona, A., Robinson, A., Rodriguez, M., Kaufman, L., Cunningham, K., Wittmer, J., Guerra, F., Donnelly, K.C., Williams, J.H., Wang, J.-S., Phillips, T.D., 2010: Aflatoxin and PAH exposure biomarkers in a U.S. population with a high incidence of hepatocellular carcinoma. Science of the Total Environment 408, 6027-6031. doi: 10.1016/j.scitotenv.2010.09.005.
248. Jolly, P.E., Jiang, Y., Ellis, W.O., Awuah, R.T., Appawu, J., Nnedu, O., Stiles, J.K., Wang, J.-S., Adjei, O., Jolly, C.M., Williams, J.H., 2007: Association between aflatoxin exposure and health characteristics, liver function, hepatitis and malaria infections in Ghanaians. Journal of Nutritional & Environmental Medicine 16, 242-257. doi: 10.1080/13590840701703918.
249. Jolly, P.E., Shuaib, F.M., Jiang, Y., Preko, P., Baidoo, J., Stiles, J.K., Wang, J.-S., Phillips, T.D., Williams, J.H., 2011: Association of high viral load and abnormal liver function with high aflatoxin B_1-albumin adduct levels in HIV-positive Ghanaians: preliminary observations. Food Additives and Contaminants: Part A 28, 1224-1234. doi: 10.1080/19440049.2011.581698.
250. Kawamura, O., Lim, J.-M., Okumura, H., Kishimoto, S., Chen, G., Ueno, Y., 1996: Analysis of aflatoxin B_1-human serum albumin adducts by a sandwich enzyme-linked immunosorbent assay. Mycotoxins 43, 43-46.
251. Klapec, T., Šarkanji, B., Banjari, I., Strelec, I., 2012: Urinary ochratoxin A and ochratoxin alpha in pregnant women. Food and Chemical Toxicology 50, 4487-4492. doi: 10.1016/j.fct.2012.09.030.
252. Kuciel-Lisieska, G., Obremski, K., Stelmachów, J., Gajęcka, M., Zielonka, Ł., Jakimiuk, E., Gajęcki, M., 2008: Presence of zearalenone in blood plasma in women with neoplastic lesions in the mammary gland. Bulletin of the Veterinary Institute in Pulawy 523, 671-674.
253. Lamplugh, S.M, Hendrickse, R.G., Apeagyei, F., Mwanmut, D.D., 1988: Aflatoxins in breast milk, neonatal cord blood, and serum of pregnant women. British Medical Journal 296, 968.
254. Lattanzio, V.M.T., Solfrizzo, M., de Girolamo, A., Chulze, S.N., Torres, A.M., Visconti, A., 2011: LC-MS/MS characterization of the urinary excretion profile of the mycotoxin deoxynivalenol in human and rat. Journal of Chromatography B 879, 707-715. doi: 10.1016/j.chromb.2011.01.029.
255. Leong, Y.-H., Rosma, A., Latiff, A.A., Izzah, AN, 2012: Associations of serum aflatoxin B_1-lysine adduct level with socio-demographic factors and aflatoxins intake from nuts and related nut products in Malaysia. International Journal of Hygiene and Environmental Health 215, 368-372, doi: 10.1016/j.ijheh.2011.12.005.
256. Mahdavi, R., Nikniaz, L., Arefhosseini, S.R., Vahed Jabbari M., 2010: Determination of aflatoxin M_1 in breast milk samples in Tabriz-Iran. Maternal and Child Health Journal 14, 141-145. doi: 10.1007/s10995-008-0439-9.
257. Malir, F., Ostry, V., Grosse, Y., Roubal, T., Skarkova, J., Ruprich, J., 2006: Monitoring the mycotoxins in food and their biomarkers in the Czech Republic. Molecular Nutrition & Food Research 50, 513-518. doi: 10.1002/mnfr.200500175.
258. Märtlbauer, E., Usleber, E., Dietrich, R., Schneider, E., 2009: Ochratoxin A in human blood serum – retrospective long-term data. Mycotoxin Research 25, 175-186. doi: 10.1007/s12550-009-0025-z.
259. Medina, Á., Mateo, E.M., Roig, R.J., Blanquer, A., Jiménez, M., 2010: Ochratoxin A levels in the plasma of healthy blood donors from Valencia and estimation of exposure degree: comparison with previous national Spanish data. Food Additives and Contaminants: Part A 27, 1273-1284. doi: 10.1080/19440049.2010.487876.

260. Mohd Redzwan, S., Rosita, J., Mohd Sokhini, A.M., Nurul Aqilah, A.R., 2012: Association between aflatoxin M_1 excreted in human urine samples with the consumption of milk and dairy products. Bulletin of Environmental Contamination and Toxicology 89, 1115-1119. doi: 10.1007/s00128-012-0853-y.
261. Muňoz, K., Blaszkewicz, M., Degen, G.H., 2010: Simultaneous analysis of ochratoxin A and its major metabolite ochratoxin alpha in plasma and urine for an advanced biomonitoring of the mycotoxin. Journal of Chromatography B 878, 2623-2629. doi: 10.1016/j.chromb.2009.11.044.
262. Muňoz, K., Campos, V., Blaszkewicz, M., Vega, M., Alvarez, A., Neira, J., Degen, G.H., 2010: Exposure of neonates to ochratoxin A: first biomonitoring results in human milk (colostrum) from Chile. Mycotoxin Research 26, 59-67. doi: 10.1007/s12550-009-0040-0.
263. Njumbe Ediage, E., di Mavungu, J.D., Song, S., Sioen, I., de Saeger, S., 2013: Multimycotoxin analysis in urines to assess infant exposure: a case study in Cameroon. Environmental International 57-58, 50-59. doi: 10.1016/j.envint.2013.04.002.
264. Njumbe Ediage, E., di Mavungu, J.D., Song, S., Wu, A., van Peteghem, C., de Saeger, S., 2013: A direct assessment of mycotoxin biomarkers in human urine samples by liquid chromatography tandem mass spectrometry. Analytica Chimica Acta 741, 58-69. doi: 10.1016/j.aca.2012.06.038.
265. Obuseh, F.A., Jolly, P.E., Jisng, Y., Shuaib, M.B., Waterbor, J., Ellis, W.O., Piyathilake C.J.; Desmond, R.A., Afriyie-Gyawu, E., Phillips, T.D., 2010: Aflatoxin B_1 albumin adducts in plasma and aflatoxin M_1 in urine are associated with plasma concentrations of vitamins A and E. International Journal for Vitamin and Nutrition Research 80, 355-368. doi: 10.1024/0300-9831/a000021.
266. Omar, S.S., 2012: Incidence of aflatoxin M_1 in human and animal milk in Jordan. Journal of Toxicology and Environmental Health, Part A 75, 1404-1409. doi: 10.1080/15287394.2012.721174.
267. Onyemelukwe, G.C., Ogbadu, G.H., Salifu, A., 1982: Aflatoxins, B_1, B_2, G_1, G_2 in primary liver cell carcinoma. Toxicology Letters 10, 309-312.
268. Ostry, V., Malir, F., Roubai, T., Skarkova, J., Ruprich, J., Cerna, M., Creppy, E.E., 2005: Monitoring of mycotoxin biomarkers in the Czech Republic. Mycotoxin Research 21, 49-52.
269. Ostry, V., Ruprich, J., Cerna, M., 1998: The determination of ultra-trace amounts of aflatoxin M_1 in human urine in The Czech Republic. Revue de Médicine Vétérinaire 149, 712.
270. Oyelami, O.A., Maxwell, S.M., Adelusola, K.A., Aladekoma, T.A., Oyelese, A.O., 1998: Aflatoxins in autopsy kidney specimens from children in Nigeria. Journal of Toxicology and Environmental Health, Part A 55, 317-323.
271. Pérez de Obanos, A., López de Ceraín, A., Jiménez, A.M., Gonzáles Peñas, E., Bello, J., 2001: Ochratoxin A in human plasma: new data of exposition in Spain. Revista de Toxicología 18, 19-23.
272. Pfohl-Leszkowicz, A., Tozlovanu, M., Manderville, R., Peraica, M., Castegnaro, M., Stefanovic, V., 2007: New molecular and field evidence for the implication of mycotoxins but not aristolochic acid in human nephropathy and urinary tract tumor. Molecular Nutrition & Food Research 51, 1131-1146. doi: 10.1012/mnfr.200700045.
273. Piekkola, S., Turner, P.C., Abdel-Hamid, M., Ezzat, S., El-Daly, M., El-Kafrawy, S., Savchenko, E., Poussa, T., Woo, J.C.S., Mykkänen, H., El-Nezami H., 2012: Characterisation of aflatoxin and deoxynivalenol exposure among pregnant Egyptian women. Food Additives and Contaminants: Part A 29, 962-971. doi: 10.1080/19440049.2012.658442.
274. Phoku, J.Z., Dutton, M.F., Njobeh, P.B., Mwanza, M., Egbuta, M.A., Chilaka, C.A., 2012: *Fusarium* infection of maize and maized-based products and exposure of a rural population to fumonisin B_1 in Limpopo Province, South Africa. Food Additives and Contaminants: Part A 29, 1743-1751. doi: 10.1080/19440049.2012.708671.
275. Rubert, J., León, N., Sáez, C., Martins, C.P.B., Godula, M., Yusà, V., Mañes, J., Soriano, J.M., Soler, C., 2014: Evaluation of mycotoxins and their metabolites in human breast milk using liquid chromatography coupled to high resolution mass spectrometry. Analytica Chimica Acta 820, 39-46. doi: 10.1016/j.aca.2014.02.009.

276. Rubert, J., Soriano, J.M., Mañes, J., Soler, C., 2011: Rapid mycotoxin analysis in human urine: a pilot study. Food and Chemical Toxicology 49, 2299-2304. doi: 10.1016/j.fct.2011.06.030.
277. Šarkanj, B., Warth, B., Uhlig, S., Abia, W.A., Sulyok, M., Klapec, T., Krska, R., Banjari, I., 2013: Urinary analysis reveals high deoxynivalenol exposure in pregnant women from Croatia. Food and Chemical Toxicology 62, 231-237. doi: 10.1016/j.fct.2013.08.043.
278. Shephard, G.S., Burger, H.-M., Gambacorta, L., Gong, Y.Y., Krska, R., Rheeder, J.P., Solfrizzo, M., Srey, C., Sulyok, M., Visconti, A., Warth, B., van der Westhuizen, L., 2013: Multiple mycotoxin exposure determined by urinary biomarkers in rural subsistence farmers in the former Transkei, South Africa. Food and Chemical Toxicology 62, 217-225. doi: 10.1016/j.fct.2013.08.04
279. Riley, R.T., Torres, O., Showker, J.L., Zitomer, N.C., Matute, J., Voss, K.A., Gelineau-van Waes, J., Maddox, J.R., Gregory, S.G., Ashley-Koch, A.E., 2012: The kinetics of urinary fumonisin B_1 excretion in humans consuming maize-based diets. Molecular Nutrition & Food Research 56, 1445-1455. doi: 10.1002/mnfr.201200166.
280. Shouman, B.O., El Morsi, D., Shabaan, S., Abdel-Hamid, A.H., Mehrim, A., 2012: Aflatoxin B_1 level in relation to child's feeding and growth. Indian Journal of Pediatrics 79, 56-61. doi: 10.1007/s12098-011-0493-y.
281. Shuaib, F.M.B., Jolly, P.E., Ehiri, J.E., Jiang, Y., Ellis, W.O., Stiles, J.K., Yatich, N.J., Funkhouser, E., Person, S.D., Wilson, C., Williams, J.H., 2010: Association between anemia and aflatoxin B_1 biomarker levels among pregnant women in Kumasi, Ghana. American Journal of Tropical Medicine and Hygiene 83, 1077-1083. doi: 10.4269/atmh.2010.09-0772.
282. Solfrizzo, M., Gambacorta, L., Lattanzio, V.M., Powers, S., Visconti, A., 2011: Simultaneous LC-MS/MS determination of aflatoxin M_1, ochratoxin A, deoxynivalenol, de-epoxydeoxynivalenol, α and ß-zearalenols and fumonisin B_1 in urine as a multibiomarker method to assess exposure to mycotoxins. Analytica Chimica Acta 401, 2831-2841. doi: 10.1007/s00216-011-5354-z.
283. Solfrizzo, M., Gambacorta, L., Visconti, A., 2014: Assessment of multi-mycotoxin exposure in southern Italy by urinary multi-biomarker determination. Toxins (Basel) 6, 523-538. doi: 10.3390/toxins6020523.
284. Tchana, A.N., Moundipa, P.F., Tchouanguep, F.M., 2010: Aflatoxin contamination in food and body fluids in relation to malnutrition and cancer status in Cameroon. International Journal of Environmental Research and Public Health 7, 178-188. doi: 10.3390/ijerph7010178.
285. Turner, P.C., Gong, Y.Y., Pourshams, A., Jafari, E., Routledge, M.N., Malekzadeh, R., Wild, C.P., Boffetta, P., Islami, F., 2012: A pilot survey for *Fusarium* mycotoxin biomarkers in women from Golestan, northern Iran. World Mycotoxin Journal 5, 195-199. doi: 10.3920/WMJ2011.1337.
286. Turner, P.C., Hopton, R.P., Lecluse, Y., White K.L.M., Fisher, J., Lebailly, P., 2010: Determinants of urinary deoxynivalenol and de-epoxy-deoxynivalenol in male farmers from Normandy, France. Journal of Agricultural and Food Chemistry 58, 5206-5212. doi: 10.1021/jf100892v.
287. Turner, P.C., Hopton, R.P., White K.L.M., Fisher, J., Cade, J.E., Wild, C.P., 2011: Assessment of deoxynivalenol metabolite profiles in UK adults. Food and Chemical Toxicology 49, 132-135. doi: 10.1016/j.fct.2010.10.007.
288. Turner, P.C., Ji, B.T., Shu, X.O., Zheng, W., Chow, W.H., Gao, Y.T., Hardie, L.J., 2011: A biomarker survey of urinary deoxynivalenol in China: the Shanghai Women's Health Study. Food Additives and Contaminants: Part A 28, 1220-1223. doi: 10.1080/19440049.2011.584070.
289. Turner, P.C., White, K.L.M., Burley, V.J., Hopton, R.P., Rajendram, A., Fisher, J., Cade, J.E., Wild, C.P., 2010: A comparison of deoxynivalenol intake and urinary deoxynivalenol in UK adults. Biomarkers 15, 553-562. doi: 10.3109/1354750X.2010.495787.
290. van der Westhuizen, L., Shephard, G.S., Burger, H.M., Rheeder, J.P., Gelderblom, W.C.A., Wild, C.P., Gong, Y.Y., 2011: Fumonisin B_1 as a urinary biomarker of exposure in a maize intervention study among South African subsistence farmers. Cancer Epidemiology, Biomarkers & Prevention 20, 483-489. doi: 10.1158/1055-9965.EPI-10-1002.
291. Vinitketkumnuen, U., Chewonarin, T., Kongtawelert, P., Lertjanyarak, A., Peerakhom, S., Wild, C.P., 1997: Aflatoxin exposure is higher in vegetarians than in nonvegetarians in Thailand. Natural Toxins 5, 168-171.

292. Wallin, S., Hardie, L.J., Kotova, N., Warensjö Lemming, E., Nälsén, C., Ridefelt, P., Turner, P.C., White, K.L.M., Olsen, M., 2013: Biomonitoring study of deoxynivalenol exposure and association with typical cereal consumption in Swedish adults. World Mycotoxin Journal 6, 439-448. doi: 10.3920/WMJ2013.1581.
293. Warth, B., Sulyok, M., Berthiller, F., Schuhmacher, R., Fruhmann, P., Hametner, C., Adam, G., Fröhlich, J., Krska, R., 2011: Direct quantification of deoxynivalenol glucuronide in human urine as biomarker of exposure to the *Fusarium* mycotoxin deoxynivalenol. Analytical and Bioanalytical Chemistry 401, 195-200. doi: 10.1007/s00216-011-5095-z.
294. Warth, B., Sulyok, M., Berthiller, F., Schuhmacher, R., Krska, R., 2013: New insights into the human metabolism of the *Fusarium* mycotoxins deoxynivalenol and zearalenone. Toxicology Letters 220, 88-94. doi: 10.1016/j.toxlet.2013.04.012.
295. Warth, B., Sulyok, M., Fruhmann, P., Berthiller, F., Schuhmacher, R., Hametner, C., Adam, G., Fröhlivh, J., Krska, R., 2012: Assessment of human deoxynivalenol exposure using an LC-MS/MS based biomarker method. Toxicology Letters 211, 85-90. doi: 10.1016/j.toxlet.2012.02.023.
296. Xu, L., Cai, Q., Tang, L., Wang, S., Hu, X., Su, J., Sun, G., Wang, J.-S., 2010: Evaluation of fumonisin biomarkers in a cross-sectional study with two high-risk populations in China. Food Additives and Contaminants: Part A 27, 1161-1169. doi: 10.1080/19440049.2010.481638.
297. Xu, L., Qian, G., Tang, L., Su, J., Wang, J.-S., 2010: Genetic variations of hepatitis B virus and serum aflatoxin-lysine adduct on high risk of hepatocellular carcinoma in southern Guangxi, China. Journal of Hepatology 53, 671-676 (and personal communication).
298. Yard, E.E., Daniel, J.H., Lewis, L.S., Ryback, M.E., Paliakov, E.M., Kim, A.A., Montgomery, M., Bunnell, R., Abudo, M.U., Akhwale, W., Breiman, R.E., Sharif, S.K., 2013: Human aflatoxin exposure in Kenya, 2007: a cross-sectional study. Food Additives and Contaminants: Part A 30, 1322-1331. doi: 10.1080/19440049.2013.789558.
299. Zaied, C., Bouaziz, C., Azizi, I., Bensassi, F., Chour, A., Bacha, H., Abid, S., 2011: Presence of ochratoxin A in Tunisian blood nephropathy patients. Exposure level to OTA. Experimental and Toxicologic Pathology 63, 613-618. doi: 10.1016/j.etp.2010.05.001.
300. Zlăvog, A.V., Cuciureanu, M., Şchiriac, E., Popa (Morariu), I., Diaconu, C., Cuciureanu, R., 2013: Estimation of ochratoxin A in the human blood of Romanian population. Medical Surgical Journal of the Society of Physicians and Naturalists, Jasi 117, 1009-1013.
301. Gregory III, J.F., Manley, D., 1981: High performance liquid chromatographic determination of aflatoxins in animal tissues and products. Journal of the Association of Official Analytical Chemists. 64, 144-151.
302. Tangni, E.K., Waegeneers, N., van Overmeire, I., Goeyens, L., Pussemier, L., 2009: Mycotoxin analyses in some home produced eggs in Belgium reveal small contribution to the total intake. Science of the Total Environment 407, 4411-4418. doi: 10.1016/j.scitotenv.2008.10.060.
303. Choudhary, P.L., Sharma, R.S., Borkhatriya, V.N., Murthi, T.N., Wadodkar, U.R., 1997: Survey on the levels of aflatoxin M_1 in raw and market milk in and around Anand Town. Indian Journal of Dairy Science 50, 156-158.
304. Gallo, P., Salzillo, A., Rossini, C., Urbani, V., Serpe, L., 2006: Aflatoxin M_1 determination in milk: method validation and contamination levels in samples from southern Italy. Italian Journal of Food Science 18, 251-259.
305. Thirumala-Devi, K., Mayo, M.A., Hall, A.J., Craufurd, P.Q., Wheeler, T.R., Waliyar, F., Subrahmanyam, A., Reddy, D.V.R., 2002: Development and application of an indirect competitive enzyme-linked immunoassay for aflatoxin M_1 in milk and milk-based confectionery. Journal of Agricultural and Food Chemistry 50, 933-937. doi: 10.1021/jf011139b.
306. McKenzie, R.A., Blaney, B.J., Connole, M.D., Fitzpatrick, L.A., 1981: Acute aflatoxicosis in calves fed peanut hay. Australian Veterinary Journal 57, 284-286.
307. Gareis, M., Wernery, U., 1984: Determination of gliotoxin in samples associated with cases of intoxication in camels. Mycotoxin Research 10, 2-8.
308. Razzazi, E., Böhm, J., Grajewski, J., Szczepaniak, K., Kübber-Heiss, A.J., Iben, C.H., 2001: Residues of ochratoxin A in pet foods, canine and feline kidneys. Journal of Animal Physiology and Animal Nutrition 85, 212-216.

309. Kennedy, D.G., McEvoy, J.D.G., Blanchflower, W.J., Hewitt, S.A., Cannavan, A., McCaughey, W.J., Elliott, C.T., 1995: Possible naturally occurring zeranol in bovine bile in Northern Ireland. Journal of Veterinary Medicine Series B 42, 509-512.
310. Bauer, J., Gareis, M., Bott, A., Gedek, B., 1989: Isolation of a mycotoxin (gliotoxin) from a bovine udder infected with *Aspergillus fumigatus*. Journal of Medical and Veterinary Mycology 27, 45-50.
311. Erasmuson, A.F., Scahill, B.C., West, D.M., 1994: Natural zeranol (α-zearalanol) in the urine of pasture-fed animals. Journal of Agricultural and Food Chemistry 42, 2721-2725.
312. Bintvihok, A., Davitiyananda, D., Kositcharoenkul, S., Panichkriangkrai, W., Jamratchai, O., 1998: Residues of aflatoxins and their metabolites in chicken tissues in Thailand. Journal of Toxicological Science 23 (Suppl. II), 389.
313. Ray, A.C., Abitt, B., Cotter, S.R., Murphy, M.J., Reagor, J.C., Robinson, R.M., West, J.E., Whitford, H.W., 1986: Bovine abortion and death associated with consumption of aflatoxin-contaminated peanuts. Journal of American Veterinary Medical Association 188, 1187-1188.
314. Sefidgar, S.A.A., Azizi, G., Khosravi, A.R., Roudbar-Mohammadi, S., 2008: Presence of aflatoxin M_1 in raw milk at cattle farms in Babol, Iran. Pakistan Journal of Biological Science 11, 484-486.
315. Amra H.A., 1998: Survey of aflatoxin M_1 in Egyptian raw milk by enzyme-linked immunosorbent assay. Revue de Médicine Vétérinaire 149, 695.
316. Domagala, J., Kisza, J., Blüthgen, A., Heeschen, W., 1997: Contamination of milk with aflatoxin M_1 in Poland. Milchwissenschaft 52, 631-633.
317. Dragacci, S., Fremy, J.-M., 1993: Occurrence of aflatoxin M_1 in milk. Fifteen years of sanitary control. Sciences des Aliments 13, 711-722.
318. Corbett, W.T., Brownie, C.F., Hagler, S.B., Hagler, W.M., 1988: An epidemiological investigation associating aflatoxin M_1 with milk production in dairy cattle. Veterinary and Human Toxicology 30, 5-8.
319. Fukal, L., Březina, P., 1991: Determination of the aflatoxin M_1-level in milk for the production of milk baby foods using immunoassay. Nahrung 35, 745-748.
320. Fukal, L., Březina, P., Marek, M., 1990: Immunochemical monitoring of aflatoxin M_1 occurrence in milk produced in Czechoslovakia. Deutsche Lebensmittel-Rundschau 86, 289-291.
321. Gajek, O., 1982: Aflatoxins in protein food for animals and milk. Roczniki Panstwowego Zaklado Higieny XXXIII, 415-420.
322. Gilbert, J., Shepherd, M.J., Wallwork, M.A., Knowles, M.E., 1984: A survey of the occurrence of aflatoxin M_1 in UK-produced milk for the period 1981-1983. Food Additives and Contaminants 1, 23-28.
323. Ioannou-Kakouri, E., Aletari, M., Christou, E., Hadjioannou, A., Koliou, A., Akkelidou, D., 1999: Surveillance and control of aflatoxins B_1, B_2, G_1, G_2, and M_1 in foodstuffs in the Republic of Cyprus: 1992-1996. Journal of the Association of Official Analytical Chemists International 82, 883-892.
324. Karaioannoglou, P., Mantis, A., Koufidis, D., Koidis, P., Triantafillou, J., 1989: Occurrence of aflatoxin M_1 in raw and pasteurized milk and in Feta and Telme cheese samples. Milchwissenschaft 44, 746-748.
325. Pietri, A., Bertuzzi, T., Moschini, M., Piva, G., 2003: Aflatoxin M_1 occurrence in milk samples destined for Parmigiano Reggiano cheese production. Italian Journal of Food Science 15, 301-306.
326. Ghidini, S., Zanardi, E., Battaglia, A., Varisco, G., Ferretti, E., Campanini, G., Chizzolini, R., 2005: Comparison of contaminant and residue levels in organic and conventional milk and meat products from northern Italy. Food Additives and Contaminants 22, 9-14.
327. Bagni, A., Castagnetti, G.B., Chiavari, C., Ferri, G., Losi, G., Montanari, G., 1993: A study about aflatoxin M_1 and M_2 in dairy cow milk samples collected in the province of Reggio Emilia. L'industria del latte XXIX, 55-66.
328. López, C.E., Ramos, L.L., Ramadán, S.S., Bulacio, L.C., 2003: Presence of aflatoxin M_1 in milk for human consumption in Argentina. Food Control 14, 31-34.

329. MAFF – UK, 1996: Survey of aflatoxin M_1 in farm gate milk. Food-Surveillance-Information-Sheet No. 78.
330. Martins, M.L., Martins, H.M., 2000: Aflatoxin M_1 in raw and ultra high temperature-treated milk commercialized in Portugal. Food Additives and Contaminants 17, 871-874.
331. Oruç, H.H., Sonal, S., 2001: Determination of aflatoxin M_1 levels in cheese and milk consumed in Bursa, Turkey. Veterinary and Human Toxicology 43, 292-293.
332. Roussi, V., Govaris, A., Varagouli, A., Botsoglou, N.A., 2002: Occurrence of aflatoxin M_1 in raw and market milk commercialized in Greece. Food Additives and Contaminants 19, 863-868. doi: 10.1080/02652030210146864.
333. Sabino, M., Purchio, A., Zorzetto, M.A.P., 1989: Variations in the levels of aflatoxin in cows milk consumed in the city of São Paulo, Brazil. Food Additives and Contaminants 6, 321-326.
334. Saitanu, K., 1997: Incidence of aflatoxin M_1 in Thai milk products. Journal of Food Protection 60, 1010-1012.
335. Salem, D.A., 2002: Natural occurrence of aflatoxins in feedstuffs and milk of dairy farms in Assiut Province, Egypt. Wiener Tierärztliche Monatsschrift 89, 86-91.
336. Sassahara, M., Pontes Netto, D., Yanaka, E.K., 2005: Aflatoxin occurrence in foodstuff supplied to dairy cattle and aflatoxin M_1 in raw milk in the north of Paraná State. Food and Chemical Toxicology 43, 981-984. doi: 10.1016/j.fct.2005.02.003.
337. Schuddeboom, L.J., 1983: Development of legislation concerning mycotoxins in dairy products in The Netherlands. Microbiologie – Aliments – Nutrition 1, 179-185.
338. Srivastava, V.P., Bu-Abbas, A., Alaa-Basuny, Al-Johar, W., Al-Mufti, S., Siddiqui, M.K.J., 2001: Aflatoxin M_1 contamination in commercial samples of milk and dairy products in Kuwait. Food Additives and Contaminants 18, 993-997. doi: 10.1080/02652030110050357.
339. Suzangar, M., Emami, A., Barnett, R., 1976: Aflatoxin contamination of village milk in Isfahan, Iran. Tropical Science 18, 155-159.
340. Visconti, A., Bottalico, A., Solfrizzo, M., 1985: Aflatoxin M_1 in milk, in southern Italy. Mycotoxin Research 1, 71-75.
341. Tajik, H., Rohani, S.M.R., Moradi, M., 2007: Detection of aflatoxin M_1 in raw and commercial pasteurized milk in Urmia, Iran. Pakistan Journal of Biological Sciences 10, 4103-4107.
342. Shundo, L., Sabino, M., 2006: Aflatoxin M_1 in milk by immunoaffinity column cleanup with TLC/HPLC determination. Brazilian Journal of Microbiology 37, 164-167. doi: 10.1590/S1517-83822006000200013.
343. Boudra, H., Barnouin, J., Dragacci, S., Morgavi, D.P., 2007: Aflatoxin M_1 and ochratoxin A in raw bulk milk from French dairy herds. Journal of Dairy Science 90, 3197-3201. doi: 10.3168/jds.2006-565.
344. Tajkarimi, M., Shojaee Aliabadi, F., Salah Nejad, M., Pursoltani, H., Motallebi, A.A., Mahdavi, H., 2007: Seasonal study of aflatoxin M_1 contamination in milk in five regions in Iran. International Journal of Food Microbiology 116, 346-349. doi: 10.1016/j.ijfoodmicro.2007.02.008.
345. Elgerbi, A.M., Aidoo, K.E., Candlish, A.A.G., Tester, R.F., 2004: Occurrence of aflatoxin M_1 in randomly selected north African milk and cheese samples. Food Additives and Contaminants 21, 592-597. doi: 10.1080/02652030410001687690.
346. Kamkar, A., 2005: A study on the occurrence of aflatoxin M_1 in raw milk produced in Sarab City of Iran. Food Control 16, 593-599. doi: 10.1016/j.foodcont.2004.06.021.
347. Rodriguez Velasco, M.L., Calonge Delso, M.M., Ordónez Escudero, D., 2003: ELISA and HPLC determination of the occurrence of aflatoxin M_1 in raw cow's milk. Food Additives and Contaminants 20, 276-280. doi: 10/1080/0265203021000045208.
348. Hussain, I., Anwar, J., 2008: A study on contamination of aflatoxin M_1 in raw milk in the Punjab province of Pakistan. Food Control 19, 393-395. doi: 10.1016/j.foodcont.2007.04.019.
349. Alonso, V.A., Monge, M.P., Larriestra, A., Dalcero, A.M., Cavaglieri, L.R., Chiacchiera, S.M., 2010: Naturally occurring aflatoxin M_1 in raw bulk milk from farm cooling tanks in Argentina. Food Additives and Contaminants: Part A 27, 373-379. doi: 10.1080/19440040903403362.

350. Ferguson-Foos, J., Warren, J.D., 1984: Improved cleanup for liquid chromatographic analysis and fluorescence detection of aflatoxins M_1 and M_2 in fluid milk products. Journal of the Association of Official Analytical Chemists 67, 1111-1114.
351. Maragos, C.M., Richard, J.L., 1994: Quantitation and stability of fumonisins B_1 and B_2 in milk. Journal of the Association of Official Analytical Chemists International 77, 1162-1167.
352. Eriksen, G.S., Hultin Jäderlund, K., Moldes-Anaya, A., Schönheit, J., Bernhoft, A., Jæger, G., Rundberget, T., Skaar, I., 2010: Poisoning of dogs with tremorgenic *Penicillium* toxins. Medical Mycology 48, 188-196. doi: 10.3109/13693780903225821.
353. Naudé, T.W., O'Brien, O.M., Rundberget, T., Mc Gregor, A.D.G., Roux, C., Flåøyen, A., 2002: Tremorgenic neuromycotoxicosis in 2 dogs ascribed to the ingestion of penitrem A and possibly roquefortine in rice contaminated with *Penicillium crustosum*. Journal of the South African Veterinary Association 73, 211-215.
354. Newman, S.J., Smith, J.R., Stenske, K.A., Newman, L.B., Dunlap, J.R., Imerman, P.M., Kirk, C.A., 2007: Aflatoxicosis in nine dogs after exposure to contaminated commercial dog food. Journal of Veterinary Diagnostic Investigation 19, 168-175.
355. Cova, L., Mehrotra, R., Wild, C.P., Chutimataewin, S., Cao, S.F., Duflot, A., Prave, M., Yu, S.Z., Montesano, R., Trepo, C., 1994: Duck hepatitis B virus infection, aflatoxin B_1 and liver cancer in domestic Chinese ducks. British Journal of Cancer 69, 104-109.
356. Bukovjan, K., Prošek, J., Bukovjanová, E., 1990: Preliminary results of the aflatoxin B_1 content in liver tissue in the hare (*Lepus europaeus*). Československá Hygiena 35, 13-18.
357. Angsubhakorn, S., Poomvises, P., Romruen, K., Newberne, P.M., 1981: Aflatoxicosis in horses. Journal of American Veterinary Association 178, 274-278.
358. Abbas, T.A., Ali, B.H., 2001: Retinol values in the plasma of the Arabian camel (*Camelus dromedarius*) and the influence of aflatoxicosis. Veterinary Research Communications 25, 517-522.
359. Meyer, K., Usleber, E., Märtlbauer, E., Bauer, J., 1997: Analysis of zearalenone-metabolites in bile of gilts with reproductive problems. Berliner und Münchener Tierärztliche Wochenschrift 110, 281-283.
360. Tang, L., Xu, L., Afriyie-Gyawu, E., Liu, W., Wang, P., Tang, Y., Wang, Z., Huebner, H.J., Ankrah, N.-A., Ofori-Adjei, D., Williams, J.H., Wang, J.-S., Phillips, T.D., 2009: Aflatoxin-albumin adducts and correlation with decreased serum levels of vitamins A and E in an adult Ghanaian population. Food Additives and Contaminants: Part A 26, 108-118. doi: 10.1080/02652030802308472.
361. Fukal, L., 1991: Spontaneous occurrence of ochratoxin A residues in Czechoslovak slaughter pigs determined by immunoassay. Deutsche Lebensmittel-Rundschau 87, 316-319.
362. Goliński, P., Hult, K., Grabarkiewicz-Szczęsna, J., Chelkowski, J., Kneblewski, P., Szebiotko, K., 1984: Mycotoxic porcine nephropathy and spontaneous occurrence of ochratoxin A residues in kidneys and blood of Polish swine. Applied and Environmental Microbiology 47, 1210-1212.
363. Hult, K., Hökby, E., Gatenbeck, S., Rutqvist, L., 1980: Ochratoxin A in blood from slaughter pigs in Sweden: use in evaluation of toxin content of consumed feed. Applied and Environmental Microbiology 39, 828-830.
364. Kotowski, K., Grabarkiewicz-Szczęsna, J., Waskiewicz, A., Kostecki, M., Golinski, P., 2000: Ochratoxin A in porcine blood and in consumed feed samples. Mycotoxin Research 16, 66-72.
365. Kotowski, K., Kostecki, M., Grabarkiewicz-Szczęsna, J., Golinski, P., 1993: Ochratoxin A residue in kidneys and blood of pigs. Medycyna Weterynaryjna 49, 554-556.
366. Marquardt, R.R., Frohlich, A.A., Sreemannarayana, O., Abramson, D., Bernatsky, A., 1988: Ochratoxin A in blood from slaughter pigs in western Canada. Canadian Journal of Veterinary Research 52, 186-190.
367. Hult, K., Rutquist, L., Holmberg, T., Thafvelin, B., Gatenbeck, S., 1984: Ochratoxin A in blood of slaughter pigs. Nordisk Veterinaermedicin 36, 314-316.

368. Pepeljnjak, S., Blaževic, N., Čuljak, K., 1982: Histopathological changes and findings of ochratoxin A in organs of pigs, in the area of endemic nephropathy in Yugoslavia. In: Proceedings of the V. International IUPAC Symposium on Mycotoxins and Phycotoxins, September 1-3, 1982, Austria, Vienna, Technical University, Austria, pp. 346-348.
369. Holmberg, T., Breitholz, A., Bengtsson, A., Hult, K., 1990: Ochratoxin A in swine blood in relation to moisture content in feeding barley at harvest. Acta Agriculturæ Scandinavica 40, 201-204.
370. Valenta, H., Dänicke, S., Döll, S., 2003: Analysis of deoxynivalenol and de-epoxy-deoxynivalenol in animal tissues by liquid chromatography after clean-up with an immunoaffinity column. Mycotoxin Research 19, 51-55.
371. Belhassen, H., Jiménez-Díaz, I., Ghali, R., Ghorbel, H., Molina-Molina, J.M., Olea, N., Hedili, A., 2014: Validation of a UHPLC-MS/MS method for quantification of zearalenone, α-zearalenol, ß-zearalenol, α-zearalanol, ß-zearalanol and zearalanone in human urine. Journal of Chromatography B 962, 68-74. doi: 10.1016/j.jchromb.2014.05.019.
372. Domijan, A.-M., Peraica, M., Miletić-Medved, M., Lucić, A., Fuchs, R., 2003: Two different clean-up procedures for liquid chromatographic determination of ochratoxin A in urine. Journal of Chromatography B 798, 317-322. doi: 10.1016/j.jchromb.2003.10.003.
373. Moreno Guillamont, E., Lino, C.N., Baeta, M.L., Pena, A.S., Silveira, M.I.N., Mañes Vinuesa, J., 2005: A comparative study of extraction apparatus in HPLC analysis of ochratoxin A in muscle. Analytical and Bioanalytical Chemistry 383, 570-575. doi: 10.1007/s00216-005-0051-4.
374. Stubblefield, R.D., Honstead, J.P., Shotwell, O.L., 1991: An analytical survey of aflatoxins in tissues from swine grown in regions reporting 1988 aflatoxin-contaminated corn. Journal of the Association of Official Analytical Chemists 74, 897-899.
375. Ardic, M., 2009: Occurrence of aflatoxin M_1 in raw ewe's milk produced in Sanliurfa, Turkey. Asian Journal of Chemistry 21, 1966-1970.
376. Sabino, M., Purchio, A., Milanez, T.V., 1996: Survey of aflatoxins B_1, M_1 and aflatoxicol in poultry and swine tissues from farms located in the states of Rio Grande Do Sul and Santa Catarina, Brazil. Revista de Microbiologia 27, 189-191.
377. Anderson, P.H., Wells, G.A.H., Jackman, R., Morgan, M.R.A., 1984: Ochratoxicosis and ochratoxin residues in adult pig's kidneys – a pilot study. In: Moss, M.O., Frank, M. (eds). Proceedings of the 5th Meeting on Mycotoxins in Animal and Human Health, Meeting, pp. 23-29. University of Edinburgh, Surrey Press, Guildford, UK.
378. Baumann, U., Zimmerli, B., 1988: A simple determination of ochratoxin A in foods. Mitteilungen aus dem Gebiete der Lebensmitteluntersuchung und Hygiene 79, 151-158.
379. Büchmann, N.B., Hald, B., 1985: Analysis, occurrence and control of ochratoxin A residues in Danish pig kidneys. Food Additives and Contaminants 2, 193-199.
380. Fukal, L., 1990: A survey of cereals, cereal products, feedstuffs and porcine kidneys for ochratoxin A by radioimmunoassay. Food Additives and Contaminants 7, 253-258.
381. Goliński, P., Hult, K., Grabarkiewicz-Szczęsna, J., Chelkowski, J., Szebiotko, K., 1985: Spontaneous occurrence of ochratoxin A residues in porcine kidney and serum samples in Poland. Applied and Environmental Microbiology 49, 1014-1015.
382. Josefsson, A.E., 1979: Study of ochratoxin A in pig kidneys. Vår Föda 31, 415-420.
383. Jørgensen, K., Petersen, A., 2002: Content of ochratoxin A in paired kidney and meat samples from healthy Danish slaughter pigs. Food Additives and Contaminants 19, 562-567. doi: 10.1080/02652030110113807.
384. Krogh, P., 1977: Ochratoxin A residues in tissues of slaughter pigs with nephropathy. Nordic Veterinary Medicine A 29, 402-405.
385. Scaglioni, P.T., Becker-Algeri, T., Drunkler, D., Badiale-Furlong, E., 2014: Aflatoxin B_1 and M_1 in milk. Analytica Chimica Acta 829, 68-74. doi: 10.1016/j.aca.2014.04.036 (and personal communication).
386. MAFF - UK, 1993: Mycotoxins: Third report: 36th report of the steering group on chemical aspects of food surveillance (London: HSMO) pp. 39-44.

387. Morgan, M.R.A., McNerney, R., Chan, H.W.-S., Anderson, P.H., 1986: Ochratoxin A in pig kidney determined by enzyme-linked immunosorbent assay (ELISA). Journal of the Science of Food and Agriculture 37, 475-480.
388. Olberg, I.H., Yndestad, M., 1982: A Norwegian survey of ochratoxin A in cereals and animal tissue. Nordisk Jordbruksforskning 64, 296.
389. Rousseau, D.M., Candlish, A.A.G., Slegers, G.A., van Peteghem, C.H., Stimson, W.H., Smith, J.E., 1987: Detection of ochratoxin A in porcine kidneys by a monoclonal antibody-based radioimmunoassay. Applied and Environmental Microbiology 53, 514-518.
390. Rousseau, D.M., van Peteghem, C.H., 1989: Spontaneous occurrence of ochratoxin A residues in porcine kidneys in Belgium. Bulletin of Environmental Contamination and Toxicology 42, 181-186.
391. Rutqvist, L., Björklund, N.-E., Hult, K., Gatenbeck, S., 1977: Spontaneous occurrence of ochratoxin residues in kidneys of fattening pigs. Zentralblatt für Veterinär Medizin A 24, 402-408.
392. Tyllinen, H., Hintikka, E.-L., 1982: Occurrence of ochratoxin A in swine kidneys and feed in Finland. Nordisk Jordbruksforskning 64, 298-299.
393. Curtui, V.G., Gareis, M., Usleber, E., Märtlbauer, E., 2001: Survey of Romanian slaughtered pigs for the occurrence of mycotoxins ochratoxins A and B, and zearalenone. Food Additives and Contaminants 18, 730-738. doi: 10.1080/02652030110035101.
394. Losito, I., Monaci, L., Palmisano, F., Tantillo, G., 2004: Determination of ochratoxin A in meat products by high-performance liquid chromatography coupled to electrospray ionisation sequential mass spectrometry. Rapid Communications in Mass Spectrometry 18, 1965-1971. doi: 10.1002/rcm.1577.
395. Monaci, L., Tantillo, G., Palmisano, F., 2004: Determination of ochratoxin A in pig tissues by liquid-liquid extraction and clean-up and high-performance liquid chromatography. Analytical and Bioanalytical Chemistry 378, 1777-1782. doi: 10.1007/s00216-004-2497-1.
396. Canela, R., Viladrich, R., Velazquez, C.A., Sanchis, V., 1994: A survey of porcine kidneys and chicken liver for ochratoxin A in Spain. Mycopathologia 125, 29-32.
397. Gresham, A., Done, S., Livesey, C., MacDonald, S., Chan, D., Sayers, R., Clark, C., Kemp, P., 2006: Survey of pigs' kidneys with lesions consistent with PMWS and PDNS and ochratoxicosis. Part 1: concentrations and prevalence of ochratoxin A. Veterinary Record 159, 737-742.
398. Hayes, A.W., King, R.E., Unger, P.D., Phillips, T.D., Hatkin, J., Bowen, J.H., 1978: Aflatoxicosis in swine. Journal of the American Veterinary Medical Association 172, 1295-1297.
399. Honstead, J.P., Dreesen, D.W., Stubblefield, R.D., Shotwell, O.L., 1992: Aflatoxins in swine tissues during drought conditions: an epidemiologic study. Journal of Food Protection 55, 182-186.
400. Pietri, A., Bertuzzi, T., Gualla, A., Piva, G., 2006: Occurrence of ochratoxin A in raw ham muscles and in pork products from northern Italy. Italian Journal of Food Science 18, 99-106.
401. Langseth, W., Nymoen, U., Bergsjø, B., 1993: Ochratoxin A in plasma of Norwegian swine determined by an HPLC column-switching method. Natural Toxins 1, 216-221.
402. Stoev, S.D., Dutton, M.F., Njobeh, P.B., Mosonik, J.S., Steenkamp, P.A., 2010: Mycotoxic nephropathy in Bulgarian pigs and chickens: complex aetiology and similarity to Balkan Endemic Nephropathy. Food Additives and Contaminants: Part A 27, 72-88. doi: 10.1080/02652030903207227.
403. Dragacci, S., Grosso, F., Bire, R., Fremy, J.M., Coulon, S., 1999: A French monitoring programme for determining ochratoxin A occurrence in pig kidneys. Natural Toxins 7, 167-173.
404. Duarte, S.C., Lino, C.M., Pena, A., 2013: Novel IAC-LC-ESI-MS^2 analytical set-up for ochratoxin A determination in pork. Food Chemistry 138, 1055-1061. doi: 10.1016/j.foodchem.2012.11.071.
405. Majerus, P., Otteneder, H., Hower, C., 1989: Beitrag zum Vorkommen von Ochratoxin A in Schweineblutserum. Deutsche Lebensmittel-Rundschau 85, 307-313.

406. Ominski, K.H., Frohlich, A.A., Marquardt, R.R., Crow, G.H., Abramson, D., 1996: The incidence and distribution of ochratoxin A in western Canadian swine. Food Additives and Contaminants 13, 185-198.
407. Rousseau, D.M., Slegers, G.A., van Peteghem, C.H., 1986: Solid-phase radioimmunoassay of ochratoxin A in serum. Journal of Agricultural and Food Chemistry 34, 862-865.
408. Elling, F., Hald, B., Lacobsen, Chr., Krogh, P., 1975: Spontaneous toxic nephropathy in poultry associated with ochratoxin A. Pathologica et Microbiologica Scandinavica Section A 83, 739-741.
409. Colvin, B.M., Harrison, L.R., Gosser, H.S., Hall, R.F., 1984: Aflatoxicosis in feeder cattle. Journal of the American Veterinary Medical Association 184, 956-958.
410. Richard, J.L., Dvorak, T.J., Ross, P.F., 1996: Natural occurrence of gliotoxin in turkeys infected with *Aspergillus fumigatus*, Fresenius. Mycopathologia 134, 167-170.
411. Assem, E., Mohamad, A., Oula, E.A., 2011: A survey on the occurrence of aflatoxin M_1 in raw and processed milk samples marketed in Lebanon. Food Control 22, 1856-1858. doi: 10.1016/j.foodcont.2011.04.026.
412. Baines, D., Sumarah, M., Kuldau, G., Juba, J., Mazza, A., Masson, L., 2013: Aflatoxin, fumonisin and Shiga toxin-producing *Escherichia coli* infections in calves and the effectiveness of Celmanax®/Dairyman's Choice™ applications to eliminate morbidity and mortality losses. Toxins (Basel) 5, 1872-1895. doi: 10.3390/toxins5101872.
413. Balata, M.A., Bahout, A.A., 1996: Aflatoxin M_1 in camel's milk. Veterinary Medical Journal Giza 44, 109-111.
414. Bozzo, G., Ceci, E., Bonerba, E., di Pinto, A., Tantillo, G., de Giglio E., 2012: Occurrence of ochratoxin A in the wild boar (*Sus scrofa*): chemical and histological analysis. Toxins 4, 1440-1450. doi: 10.3390/toxins4121440.
415. Braselton, W.E., Rumler, P.C., 1996: MS/MS screen for the tremorgenic mycotoxins roquefortine and penitrem A. Journal of Veterinary Diagnostic Investigation 8, 515-518. doi: 10.1177/104063879600800427.
416. Chiavaro, E., Cacchioli, C., Berni, E., Spotti, E., 2005: Immunoaffinity clean-up and direct fluorescence measurement of aflatoxins B_1 and M_1 in pig liver: comparison with high-performance liquid chromatography determination. Food Additives and Contaminants 22, 1154-1161. doi: 10.1080/02652030500307115.
417. Davoudi, Y., Garedaghi, Y., Nazeri, M., 2011: Survey on contaminated raw milks with aflatoxin M_1 in the Sarab region, Iran. Australian Journal of Basic and Applied Sciences 5, 97-100.
418. El Marnissi, B., Belkhou, R., Morgavi, D.P., Bennani, L., Boudra, H., 2012: Occurrence of aflatoxin M_1 in raw milk collected from traditional dairies in Morocco. Food and Chemical Toxicology 50, 2819-2821. doi: 10.1016/j.fct.2012.05.031.
419. Elzupir, A.O., Elhussein, A.M., 2010: Determination of aflatoxin M_1 in dairy cattle milk in Karthoum State, Sudan. Food Control 21, 945-946. doi: 10.1016/j.foodcont.2009.11.013.
420. Finoli, C., Vecchio, A., 1997: Aflatoxin M_1 in goat dairy products. Microbiologie – Aliments – Nutrition 15, 47-52.
421. Finoli, C., Vecchio, A., 2003: Occurrence of aflatoxins in feedstuff, sheep milk and dairy products in western Sicily. Italian Journal of Animal Science 2, 191-196.
422. Gazotti, T., Lugoboni, B., Zironi, E., Barbarossa, A., Serraino, A., Pagliuca, G., 2009: Determination of fumonisin B_1 in bovine milk by LC-MS/MS. Food Control 20, 1171-1174. doi: 10.1016/j.foodcont.2009.02.009.
423. Ghanem, I., Orfi, O., 2009: Aflatoxin M_1 in raw, pasteurized and powdered milk available in the Syrian market. Food Control 20, 603-605 doi: 10.1016/j.foodcont.2008.08.018.
424. Ghiasian, S.A., Maghshood, A.H., Neyestani, T.R., Mirhendi, S.H., 2007: Occurrence of aflatoxin M_1 in raw during the summer and winter seasons in Hamedan, Iran. Journal of Food Safety 27, 188-198.

425. Herzallah, S.M., 2009: Determination of aflatoxins in eggs, milk, meat and meat products using HPLC fluorescent and UV detectors. Food Chemistry 114, 1141-1146. doi: 10.1016/j.foodchem.2008.10.077.
426. Higgins, K.F., Barta, R.M., Neiger, R.D., Rottinghaus, G.E., Sterry, R.I., 1992: Mycotoxin occurrence in waste field corn and ingesta of wild geese in the northern Great Plains. Prairie Naturalist 24, 31-37.
427. Huang, L.C., Zheng, N., Zheng, B.Q., Wen, F., Cheng, J.B., Han, R.W., Xu, X.M., Li, S.L., Wang, J.Q., 2014: Simultaneous determination of aflatoxin M_1, ochratoxin A, zearalenone and α-zearalenol in milk by UHPLC-MS/MS. Food Chemistry 146, 242-249. doi: 10.1016/j.foodchem.2013.09.047.
428. Iqbal, S.Z., Asi, M.R., 2013: Assessment of aflatoxin M_1 in milk and milk products from Punjab, Pakistan. Food Control 30, 235-239. doi: 10.1016/j.foodcont.2012.06.026.
429. Iqbal, S.Z., Asi, M.R., Ariño, A., 2011: Aflatoxin M_1 contamination in cow and buffalo milk samples from the North West Frontier Province (NWFP) and Punjab provinces of Pakistan. Food Additives and Contaminants: Part B 4, 282-288. doi: 10.1080/19393210.2011.637237.
430. Kamkar, A., Yazdankhah, S., Nafchi, A.M., Nejad, A.S.M., 2014: Aflatoxin M_1 in raw cow and buffalo milk in Sush city of Iran. Food Additives and Contaminants: Part B 7, 21-24. doi: 10.1080/19393210.2013.830277.
431. Kara, R., Ince, S., 2014: Aflatoxin M_1 in buffalo and cow milk in Afyonkarahisar, Turkey. Food Additives and Contaminants: Part B 7, 7-10. doi: 10.1080/19393210.2013.825646.
432. Kawamura, O., Sato, S., Nagura, M., Kishimoto, S., Ueno, I., Sato, S., Uda, T., Ito, Y., Ueno, Y., 1990: Enzyme-linked immunosorbent assay for detection and survey of ochratoxin A in livestock sera and mixed feeds. Food and Agricultural Immunology 2, 135-143.
433. Ketterer, P.J., Williams, E.S., Blaney, B.J., Connole, M.D., 1975: Canine aflatoxicosis. Australian Veterinary Journal 51, 355-357.
434. Kim, H.J., Lee, J.E., Kwak, B.-M, Ahn, J.-H., Jeong, S.H., 2010: Occurrence of aflatoxin M_1 in raw milk from South Korea winter seasons using an immunoaffinity column and high performance liquid chromatography. Journal of Food Safety 30, 804-813.
435. Lee, J.E., Kwak, B.-M., Ahn, J.-H., Jeon, T.-H., 2009: Occurrence of aflatoxin M_1 in raw milk in South Korea using an immunoaffinity column and liquid chromatography. Food Control 20, 136-138 doi: 10.1016/j.foodcont.2008.03.002.
436. Liggett, A.D., Colvin, B.M., Beaver, R.W., Wilson, D.M., 1986: Canine aflatoxicosis: a continuing problem. Veterinary and Human Toxicology 28, 428-430.
437. Liman, B.C., Şebeck, N., 2001: Quantitative analysis of aflatoxin M_1 in raw milk contaminated at low levels. Toxicology Letters 123, 42.
438. Milićević, D., Jovanović, M., Matekalo-Sverak, V., Radičević, T., Petrović, M., Lilić, S., 2011: A survey of spontaneous occurrence of ochratoxin A residues in chicken tissues and concurrence with histopathological changes in liver and kidneys. Journal of Environmental Science and Health, Part C 29, 159-175. doi: 10.1080/10590501.2011.577687.
439. Milićević, D., Jurić, V., Stefanović, S., Jovanović, M., Janković, S., 2008: Survey of slaughtered pigs for occurrence of ochratoxin A and porcine nephropathy in Serbia. International Journal of Molecular Sciences 9, 2169-2183. doi: 10.3390/ijms9112169.
440. Minervini, F., Giannoccaro, A., Nicassio, M., Panzarini, G., Lacalandra, G.M., 2013: First evidence of placental transfer of ochratoxin A in horses. Toxins (Basel) 5, 84-92. doi: 10.3390/toxins5010084.
441. Nuryono, N., Agus, A., Wedhastri, S., Maryudani, Y.B., Sigit Setyabudi, F.M.C., Böhm, J., Razzazi-Fazeli, E., 2009: A limited survey of aflatoxin M_1 in milk from Indonesia by ELISA. Food Control 20, 721-724. doi: 10.1016/j.foodcont.2008.09.005.
442. Pozzo, L., Cavallarin, L., Nucera, D., Antoniazzi, S., Schiavone, A., 2010: A survey of ochratoxin A contamination in feeds and sera from organic and standard swine farms in northwest Italy. Journal of the Science and Food of Agriculture 90, 1467-1472. doi: 10.1002/jsfa.3965.

443. Rahimi, E., Shakerian, A., Jafariyan, M., Ebrahimi, M., Riahi, M., 2009: Occurrence of aflatoxin M_1 in raw, pasteurized and UHT milk commercialized in Esfahan and Shahr-e Kord, Iran. Food Security 1, 317-320. doi: 10.1007/s12571-009-0028-9.
444. Rohani, F.G., Aminaee, M.M., Kianfar, M., 2011: Survey of aflatoxin M_1 in cow's milk for human consumption in Kerman Province of Iran. Food Additives and Contaminants: Part B 4, 191-194. doi: 10.1080/19393210.2011.599866.
445. Ruangwises, N., Ruangwises, S., 2010: Aflatoxin M_1 contamination in raw milk within the central region of Thailand. Bulletin of Environmental Contamination and Toxicology 85, 195-198. doi: 10.1007/s00128-010-0056-3.
446. Sambuu, R., Takagi, M., Shiga, S., Uno, S., Kokushi, E., Namula, Z., Otoi, T., Miyamoto, A., Deguchi, E., Fink-Gremmels, J., 2011: Detection of zearalenone and its metabolites in naturally contaminated porcine follicular fluid by using liquid chromatography-tandem mass spectrometry. Journal of Reproduction and Development 57, 303-306.
447. Santini, A., Raiola, A., Ferrantelli, V., Giangrosso, G., Macaluso, A., Bognanno, M., Galvano, F., Ritieni, A., 2013: Aflatoxin M_1 in raw, UHT milk and dairy products in Sicily (Italy). Food Additives and Contaminants: Part B 6, 181-186. doi: 10.1080/19393210.2013.780186.
448. Schiavone, A., Cavallero, C., Girotto, L., Pozzo, L., Antoniazzi, S., Cavallarin, L., 2008: A survey on the occurrence of ochratoxin A in feeds and sera collected in conventional and organic poultry farms in northern Italy. Italian Journal of Animal Science 7, 495-503.
449. Siddappa, V., Nanjegowda, K. D., Viswanath, P., 2012: Occurrence of aflatoxin M_1 in some samples of UHT, raw & pasteurized milk from Indian states of Karnataka and Tamilnadu. Food and Chemical Toxicology 50, 4158-4162. doi: 10.1016/j.fct.2012.08.034.
450. Song, S., Njumbe Ediage, E., Wu, A., de Saeger, S., 2013: Development and application of salting-out assisted liquid/liquid extraction for multi-mycotoxin biomarkers analysis in pig urine with high performance liquid chromatography/tandem mass spectrometry. Journal of Chromatography A 1292, 111-120. doi: 10.1016/j.chroma.2012.10.071.
451. Thieu, N.Q., Pettersson, H., 2009: Zearalenone, deoxynivalenol and aflatoxin B_1 and their metabolites in pig urine as biomarkers for mycotoxin exposure. Mycotoxin Research 25, 59-66. doi: 10.1007/s12550-009-0009-z.
452. Viegas, S., Veiga, L., Malta-Vacas, J., Sabino, R., Figueredo, P., Almeida, A., Viegas, C., Carolino, E., 2012: Occupational exposure to aflatoxin (AFB_1) in poultry production. Journal of Toxicology and Environmental Health, Part A 75, 1330-1334. doi: 10.1080/15287394.2012.721164.
453. Vulic, A., Pleadin, J., Perši, N., Mitak, M., 2012: Analysis of naturally occurring zearalenone in feeding stuffs and urine of farm animals in Croatia. Journal of Immunoassay and Immunochemistry 33, 369-376. doi: 10.1080/15321819.2012.655821.
454. Zheng, N., Wang, J.-Q., Han, R.-W., Zhen, Y.-P., Xu, X.-M., Sun, P., 2013: Survey of aflatoxin M_1 in raw milk in the five provinces of China. Food Additives and Contaminants: Part B 6, 110-115. doi: 10.1080/19393210.2012.763191.
455. Ali, M.A.I., El Zubeir, I.E.M., Fadel Elseed, A.M.A., 2014: Aflatoxin M_1 in raw and imported powdered milk sold in Khartoum state, Sudan. Food Additives and Contaminants: Part B 7, 208-212. doi: 10.1080/19393210.2014.887149.
456. Rafiei, H., Dehghan, P., Pakshir, K., Pour, M.C., Akbari, M., 2014: The concentration of aflatoxin M_1 in the mothers' milk in Khorrambid City, Fars, Iran. Advanced Biomedical Research 3, 152. doi: 10.4103/2277-9175.137859.
457. Wang, P., Afriyie-Gyawu, E., Tang, Y., Johnson, N.M., Xu, L., Tang, L., Huebner, H.J., Ankrah, N.-A., Ofori-Adjei, D., Ellis, W., Jolly, P.E., Williams, J.H., Wang, J.-S., Phillips, T.D., 2008: NovaSil clay intervention in Ghanaians at high risk for aflatoxicosis: II. Reduction in biomarkers of aflatoxin exposure in blood and urine. Food Additives and Contaminants: Part A 25, 622-634. doi: 10.1080/02652030701598694.
458. Kart, A., Elmali, M., Yapar, K., Yaman, H., 2009: Occurrence of aflatoxin M_1 determined by ELISA in UHT (sterilized) and raw milk samples produced in Turkey. Asian Journal of Chemistry 21, 2047-2051.

459. Amer, A.A., Ibrahim, M.A.E., 2010: Determination of aflatoxin M_1 in raw milk and traditional cheeses retailed in Egyptian markets. Journal of Toxicology and Environmental Health Sciences 2, 50-53.
460. Fushimi, Y., Takagi, M., Uno, S., Kokushi, E., Nakamura, M., Hasunuma, H., Shinya, U., Deguchi, E., Fink-Gremmels, J., 2014: Measurement of sterigmatocystin concentrations in urine for monitoring the contamination of cattle feed. Toxins (Basel) 6, 3117-3128. doi: 10.3390/toxins6113117.
461. Dehghan, P., Pakshir, K, Rafiei, H., Chadeganipour, M., Akbari, M., 2014: Prevalence of ochratoxin A in human milk in the Khorrambid town, Fars Province, south of Iran. Jundishapur Journal of Microbiology Jul 2014 7 (7):e11220. doi: 10.5812/jjm.11220.
462. Gratz, S.W., Richardson, A.J., Duncan, G., Holtrop, G., 2014: Annual variation of dietary deoxynivalenol exposure during years of different *Fusarium* prevalence: a pilot biomonitoring study. Food Additives and Contaminants: Part A 31, 1579-1585. doi: 10.1080/19440049.2014.937772.
463. Rodríguez-Carrasco, Y., Moltó, J.C., Mañes, J., Berrada, H., 2014: Exposure assessment approach through mycotoxin/creatinine ratio evaluation in urine by GC-MS/MS. Food and Chemical Toxicology 72, 69-75. doi: 10.1016/j.fct.2014.07.014.
464. Rodríguez-Carrasco, Y., Moltó, J.C., Mañes, J., Berrada, H., 2014: Development of a GC-MS/MS strategy to determine 15 mycotoxins and metabolites in human urine. Talanta 128, 125-131. doi: 10.1016/j.talanta.2014.04.072.
465. Srey, C.S., Kimanya, M., Routledge, M.N., Shirima, C.P., Gong, Y.Y., 2014: Deoxynivalenol exposure assessment in young children in Tanzania. Molecular Nutrition & Food Research 58, 1574-1580. doi: 10.1002/mnfr.201400012.

Alphabetical Bibliography

Abbas, T.A., Ali, B.H., 2001: Retinol values in the plasma of the Arabian camel (*Camelus dromedarius*) and the influence of aflatoxicosis. Veterinary Research Communications 25, 517-522 (358).

Abdel-Wahab, M., Mostafa, M., Sabry, M., El-Farrash, M., Yousef, T., 2008: Aflatoxins as a risk factor for hepatocellular carcinoma in Egypt, Mansoura Gastroenterology Center Study. Hepato-Gastroenterology 55, 1754-1759 (138).

Abdulrazzaq, Y.M., Osman, N., Ibrahim, A., 2002: Fetal exposure to aflatoxins in the United Arab Emirates. Annals of Tropical Paediatrics 22, 3-9 (14).

Abdulrazzaq, Y.M., Osman, N., Yousif, Z.M., Al-Falahi, S., 2003: Aflatoxin M_1 in breast-milk of UAE women. Annals of Tropical Paediatrics 23, 173-179. doi: 10.1179/027249303225007671 (51).

Abdulrazzaq, Y.M., Osman, N., Yousif, Z.M., Trad, O., 2004: Morbidity in neonates of mothers who have ingested aflatoxins. Annals of Tropical Paediatrics 24, 145-151. doi: 10.1179/027249304225013420 (18).

Abia, W.A., Warth, B., Sulyock, M., Krska, R., Tchana, A., Njobeh, P.B., Turner, P.C., Kouanfack, C., Eyongetah, M., Dutton, M., Moundipa, P.F., 2013: Bio-monitoring of mycotoxin exposure in Cameroon using a urinary multi-biomarker approach. Food and Chemical Toxicology 62, 927-934. doi: 10.1016/j.fct.2013.10.003 (218).

Ahmed, H., Hendrickse, R.G., Maxwell, S.M., Yakubu, A.M., 1995: Neonatal jaundice with reference to aflatoxins: an aetiological study in Zaria, northern Nigeria. Annals of Tropical Paediatrics 15, 11-20 (5).

Ahn, J., Kim, D., Kim, H., Jahng, K.-Y., 2010: Quantitative determination of mycotoxins in urine by LC-MS/MS. Food Additives and Contaminants: Part A 27, 1674-1682. doi: 10.1080/19440049.2010.505201 (219).

Ahsan, H., Wang, L.-Y., Chen, C.-J., Tsai, W.-Y., Santella, R.M., 2001: Variability in aflatoxin-albumin adduct levels and effects of hepatitis B and C Virus infection and glutathione *S*-transferase *M1* and *T1* genotype. Environmental Health Perspectives 109, 833-837 (135).

Akdemir, C., Ulker, O.C., Basaran, A., Ozkaya, S., Karakaya, A., 2010: Estimation of ochratoxin A in some Turkish populations: an analysis in urine as a simple, sensitive and reliable biomarker. Food and Chemical Toxicology 48, 877-882. doi: 10.1016/j.fct.2009.12.026 (220).

Ali, M.A.I., El Zubeir, I.E.M., Fadel Elseed, A.M.A., 2014: Aflatoxin M_1 in raw and imported powdered milk sold in Khartoum state, Sudan. Food Additives and Contaminants: Part B 7, 208-212. doi: 10.1080/19393210.2014.887149 (455).

Allen, S.J., Wild, C.P., Wheeler, J.G., Riley, E.M., Montesano, R., Bennett, S., Whittle, H.C., Hall, A.J., Greenwood, B.M., 1992: Aflatoxin exposure, malaria and hepatitis B infection in rural Gambian children. Transactions of the Royal Society of Tropical Medicine and Hygiene 86, 426-430 (146).

Alonso, V.A., Monge, M.P., Larriestra, A., Dalcero, A.M., Cavaglieri, L.R., Chiacchiera, S.M., 2010: Naturally occurring aflatoxin M_1 in raw bulk milk from farm cooling tanks in Argentina. Food Additives and Contaminants: Part A 27, 373-379. doi: 10.1080/19440040903403362 (349).

Amer, A.A., Ibrahim, M.A.E., 2010: Determination of aflatoxin M_1 in raw milk and traditional cheeses retailed in Egyptian markets. Journal of Toxicology and Environmental Health Sciences 2, 50-53 (459).

Amla I., Kumari S., Murthy V.S., Jayaraj P., Parpia H.A.P., 1970: Role of aflatoxin in Indian childhood cirrhosis. Indian Pediatrics 7, 262-270 (197).

Amra H.A., 1998: Survey of aflatoxin M_1 in Egyptian raw milk by enzyme-linked immunosorbent assay. Revue de Médicine Vétérinaire 149, 695 (315).

Anderson, P.H., Wells, G.A.H., Jackman, R., Morgan, M.R.A., 1984: Ochratoxicosis and ochratoxin residues in adult pig's kidneys – a pilot study. In: Moss, M.O., Frank, M. (eds). Proceedings of the 5th Meeting on Mycotoxins in Animal and Human Health, Meeting, pp. 23-29. University of Edinburgh, Surrey Press, Guildford, UK (377).

Andrade, P.D., Gomes da Silva, J.L, Caldas, E.D., 2013: Simultaneous analysis of aflatoxins B_1, B_2, G_1, G_2, M_1 and ochratoxin A in breast milk by high-performance liquid chromatography/fluorescence after liquid-liquid extraction with low temperature purification (LLE-LTP). Journal of Chromatography A 1304, 61-68. doi: 10.1016/j.chroma.2013.06.049 (228).

Angsubhakorn, S., Poomvises, P., Romruen, K., Newberne, P.M., 1981: Aflatoxicosis in horses. Journal of American Veterinary Association 178, 274-278 (357).
Ankrah, N.A., Rikimaru, T., Ekuban, F.A., 1994: Observations on aflatoxins and the liver status of Ghanaian subjects. East African Medical Journal 71, 739-741 (76).
Apeagyei, F., Lamplugh, S.M., Hendrickse, R.G., Affram, K., Lucas, S., 1986: Aflatoxins in the livers of children with kwashiorkor in Ghana. Tropical and Geographical Medicine 38, 273-276 (83).
Apostolou, E., El-Nezami, H.S., Ahokas, J.T., Donohue, D.C., 1998: The evaluation of ochratoxin A in breast milk in Victoria (Australia). Revue de Médicine Vétérinaire 149, 709 (66).
Ardic, M., 2009: Occurrence of aflatoxin M_1 in raw ewe's milk produced in Sanliurfa, Turkey. Asian Journal of Chemistry 21, 1966-1970 (375).
Aslam, M., Beg, A.E., Blaszkewicz, M., Degen, G.H., Golka, K., 2005: Ochratoxin A blood concentration in healthy subjects and bladder cancer cases from Pakistan. Abstract, 27th Mycotoxin-Workshop, 13.-15. June 2005, Dortmund, Germany (40).
Aslam, M., Rivzi, S.A.H., Beg, A.E., Blaskewicz, M., Golka, K., Degen, G.H., 2012: Analysis of ochratoxin A blood levels in bladder cancer cases and healthy persons from Pakistan. Journal of Toxicology and Environmental Health, Part A 75, 1176-1184. doi: 10.1080/15287394.2012.707602 (221).
Assaf, H., Betbeder, A.-M., Creppy, E.E., Pallardy, M., Azouri, H., 2004: Ochratoxin A levels in human plasma and foods in Lebanon. Human & Experimental Toxicology 23, 495-501. doi: 10.1191/0960327104ht481oa (109).
Assem, E., Mohamad, A., Oula, E.A., 2011: A survey on the occurrence of aflatoxin M_1 in raw and processed milk samples marketed in Lebanon. Food Control 22, 1856-1858. doi: 10.1016/j.foodcont.2011.04.026 (411).
Autrup, H., Bradley, K.A., Shamsuddin, A.K.M., Wakhisi, J., Wasunna, A., 1983: Detection of putative adduct with fluorescence characteristics identical to 2,3-dihydro-2-(7′-guanyl)-3-hydroxyaflatoxin B_1 in human urine collected in Murang'a district, Kenya. Carcinogenesis 4, 1193-1195 (185).
Autrup, J.L., Schmidt, J., Seremet, T., Autrup, H., 1991: Determination of exposure to aflatoxins among Danish workers in animal-feed production through the analysis of aflatoxin B_1 adducts to serum albumin. Scandinavian Journal of Work, Environment & Health 17, 436-440 (137).
Bagni, A., Castagnetti, G.B., Chiavari, C., Ferri, G., Losi, G., Montanari, G., 1993: A study about aflatoxin M_1 and M_2 in dairy cow milk samples collected in the province of Reggio Emilia. L'industria del latte XXIX, 55-66 (327).
Baines, D., Sumarah, M., Kuldau, G., Juba, J., Mazza, A., Masson, L., 2013: Aflatoxin, fumonisin and Shiga toxin-producing *Escherichia coli* infections in calves and the effectiveness of Celmanax®/Dairyman's Choice™ applications to eliminate morbidity and mortality losses. Toxins (Basel) 5, 1872-1895. doi: 10.3390/toxins5101872 (412).
Balata, M.A., Bahout, A.A., 1996: Aflatoxin M_1 in camel's milk. Veterinary Medical Journal Giza 44, 109-111 (413).
Bandera, E.V., Chandran, U., Buckley, B., Lin, Y., Isukapalli, S., Marshall, I., King, M., Zarbl, H., 2011: Urinary mycoestrogens, body size and breast development in New Jersey girls. Science of the Total Environment 409, 5221-5227. doi: 10.1016/j.scitotenv.2011.09.029 (222).
Bauer, J., Gareis, M., 1987: Ochratoxin A in the food-chain. Journal of Veterinary Medicine Series B 34, 613-627 (67).
Bauer, J., Gareis, M., Bott, A., Gedek, B., 1989: Isolation of a mycotoxin (gliotoxin) from a bovine udder infected with *Aspergillus fumigatus*. Journal of Medical and Veterinary Mycology 27, 45-50 (310).
Baumann, U., Zimmerli, B., 1988: A simple determination of ochratoxin A in foods. Mitteilungen aus dem Gebiete der Lebensmitteluntersuchung und Hygiene 79, 151-158 (378).
Bean, T.A., Yourtee, D.M., Akande, B., Ogunlewe, J., 1989: Aflatoxin metabolites in the urine of Nigerians comparison of chromatographic methods. Journal of Toxicology – Toxin Reviews 8, 43-52 (195).
Becroft, D.M., Webster, D.R., 1972: Aflatoxins and Reye's disease. British Medical Journal 4, 117 (87).
Belhassen, H., Jiménez-Díaz, I., Ghali, R., Ghorbel, H., Molina-Molina, J.M., Olea, N., Hedili, A., 2014: Validation of a UHPLC-MS/MS method for quantification of zearalenone, α-zearalenol,

ß-zearalenol, α-zearalanol, ß-zearalanol and zearalanone in human urine. Journal of Chromatography B 962, 68-74. doi: 10.1016/j.jchromb.2014.05.019 (371).
Biasucci, G., Calabrese, G., di Giuseppe, R., Carrara, G., Colombo, F., Mandelli, B., Maj, M., Bertuzzi, T., Pietri, A., Rossi, F., 2011: The presence of ochratoxin A in cord serum and in human milk and its correspondence with maternal dietary habits. European Journal of Nutrition 50, 211-218. doi: 10.1007/s00394-010-0130-y (223).
Bintvihok, A., Davitiyananda, D., Kositcharoenkul, S., Panichkriangkrai, W., Jamratchai, O., 1998: Residues of aflatoxins and their metabolites in chicken tissues in Thailand. Journal of Toxicological Science 23 (Suppl. II), 389 (312).
Blaskewicz, M., Muñoz, K., Degen, G.H., 2013: Methods for analysis of citrine in human blood and urine. Archives of Toxicology 87, 1087-1094. doi: 10.1007/s00204-013-1010-z (224).
Boudra, H., Barnouin, J., Dragacci, S., Morgavi, D.P., 2007: Aflatoxin M_1 and ochratoxin A in raw bulk milk from French dairy herds. Journal of Dairy Science 90, 3197-3201. doi: 10.3168/jds.2006-565 (343).
Bozzo, G., Ceci, E., Bonerba, E., di Pinto, A., Tantillo, G., de Giglio E., 2012: Occurrence of ochratoxin A in the wild boar (*Sus scrofa*): chemical and histological analysis. Toxins 4, 1440-1450. doi: 10.3390/toxins4121440 (414).
Brasel, T.L., Campbell, A.W., Demers, R.E., Ferguson, B.S., Fink, J., Vojdani, A., Wilson, S.C., Straus, D.C., 2004: Detection of trichothecene mycotoxins in sera from individuals exposed to *Stachybotrys chartarum* in indoor environments. Archives of Environmental Health 59, 317-323 (178).
Braselton, W.E., Rumler, P.C., 1996: MS/MS screen for the tremorgenic mycotoxins roquefortine and penitrem A. Journal of Veterinary Diagnostic Investigation 8, 515-518. doi: 10.1177/10406387960080042 (415).
Breitholtz, A., Olsen, M., Dahlbäck, Å., Hult, K., 1991: Plasma ochratoxin A levels in three Swedish populations surveyed using an ion-pair HPLC technique. Food Additives and Contaminants 8, 182-192 (107).
Breitholtz-Emanuelsson, A., Minervini, F., Hult, K., Visconti, A., 1994: Ochratoxin A in human serum samples collected in southern Italy from healthy individuals and individuals suffering from different kidney disorders. Natural Toxins 2, 366-370 (162).
Breitholtz-Emanuelsson, A., Olsen, M., Oskarsson, A., Palminger, I., Hult, K., 1993: Ochratoxin A in cow's milk and in human milk with corresponding human blood samples. Journal of the Association of Official Analytical Chemists International 76, 842-846 (29).
Brewer, J.H., Thrasher, J.D., Straus, D.C., Madison, R.A., Hooper, D., 2013: Detection of mycotoxins in patients with chronic fatigue syndrome. Toxins (Basel) 5, 605-617. doi: 10.3390/toxins5040605 (225).
Büchmann, N.B., Hald, B., 1985: Analysis, occurrence and control of ochratoxin A residues in Danish pig kidneys. Food Additives and Contaminants 2, 193-199 (379).
Bukovjan, K., Prošek, J., Bukovjanová, E., 1990: Preliminary results of the aflatoxin B_1 content in liver tissue in the hare (*Lepus europaeus*). Československá Hygiena 35, 13-18 (356).
Burdaspal, P.A., Legarda, T.M., 1998: Datos sorbe la presencia de ocratoxina A en plasma humano en España. Alimentaria 292, 103-109 (111).
Canela, R., Viladrich, R., Velazquez, C.A., Sanchis, V., 1994: A survey of porcine kidneys and chicken liver for ochratoxin A in Spain. Mycopathologia 125, 29-32 (396).
Cao, X., Wu, S., Yue, Y., Wang, S., Wang, Y., Tian, H., 2013: A high-throughput method for the simultaneous determination of multiple mycotoxins in human and laboratory animal biological fluids and tissues by PLE and HPLC-MS/MS. Journal of Chromatography B 942-943, 113-125. doi: 10.1016/j.jchromb.2013.10.017 (226).
Carvajal, M., Berumen, J., Guardado-Estrada, M., 2012: The presence of aflatoxin B_1-FAPY adduct and human papilloma virus in cervical smears from cancer patients in Mexico. Food Additives and Contaminants: Part A 29, 258-268. doi: 10.1080/19440049.2011.647098 (227).
Castegnaro, M., Canadas, D., Vrabcheva, T., Petkova-Bocharova, T., Chernomsky, I.N., Pfohl-Leszkovicz, A., 2006: Balkan endemic nephropathy: role of ochratoxins A through biomarkers. Molecular Nutrition & Food Research 50, 519-529. doi: 10.1002/mnfr.200500182 (229).

Castegnaro, M., Maru, V., Petkova-Bocharova, T., Nikolov, I., Bartsch, H., 1991: Concentrations of ochratoxin A in the urine of endemic nephropathy patients and controls in Bulgaria: lack of detection of 4-hydroxyochratoxin A. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 165-169 (211).

Chao, T.C., Lo, D., Bloodworth, B., Gunasegaram, R., Koh, T., Ng, H., 1994: Aflatoxin exposure in Singapore: blood aflatoxin levels in normal subjects, hepatitis B virus carriers and primary hepatocellular carcinoma patients. Medicine, Science and the Law 34, 289-298 (11).

Chao, T.-C., Maxwell, S.M., Wong, S.Y., 1991: An outbreak of aflatoxicosis and boric acid poisoning in Malaysia: a clinicopathological study. Journal of Pathology 164, 225-233 (45).

Chaves-Carballo, E., Ellefson, R.D., Gomez, M.R., 1976: An aflatoxin in the liver of a patient with Reye-Johnson Syndrome. Mayo Clinic Proceedings 51, 48-50 (85).

Chelule, P.K., Gqaleni, N., Chuturgoon, A.A., Dutton, M.F., 2000: The determination of fumonisin B_1 in human faeces: a short term marker for assessment of exposure. Biomarkers 5, 1-8 (79).

Chelule, P.K., Gqaleni, N., Dutton, M.F., Chuturgoon, A.A., 2001: Exposure of rural and urban populations in KwaZulu Natal, South Africa, to fumonisin B_1 in maize. Environmental Health Perspectives 109, 253-256 (230).

Chen, C.-J., Zhang, Y.-J., Lu, S.-N., Santella, R.M., 1992: Aflatoxin B_1 DNA adducts in smeared tumor tissue from patients with hepatocellular carcinoma. Hepatology 16, 1150-1155 (93).

Chen, S.-Y., Chen, C.-J., Chou, S.-R., Hsieh, L.-L., Wang, L.-Y., Tsai, W.-Y., Ahsan, H., Santella, R.M., 2001: Association of aflatoxin B_1-albumin adduct levels with hepatitis B surface antigen status among adolescents in Taiwan. Cancer Epidemiology, Biomarkers & Prevention 10, 1223-1226 (136).

Cheng, Z., Root, M., Pan, W., Chen, J., Campbell, T.C., 1997: Use of an improved method for analysis of urinary aflatoxin M_1 in a survey of mainland China and Taiwan. Cancer Epidemiology, Biomarkers & Prevention 6, 523-529 (198).

Chiavaro, E., Cacchioli, C., Berni, E., Spotti, E., 2005: Immunoaffinity clean-up and direct fluorescence measurement of aflatoxins B_1 and M_1 in pig liver: comparison with high-performance liquid chromatography determination. Food Additives and Contaminants 22, 1154-1161. doi: 10.1080/02652030500307115 (416).

Choudhary, P.L., Sharma, R.S., Borkhatriya, V.N., Murthi, T.N., Wadodkar, U.R., 1997: Survey on the levels of aflatoxin M_1 in raw and market milk in and around Anand Town. Indian Journal of Dairy Science 50, 156-158 (303).

Colvin, B.M., Harrison, L.R., Gosser, H.S., Hall, R.F., 1984: Aflatoxicosis in feeder cattle. Journal of the American Veterinary Medical Association 184, 956-958 (409).

Commission of the European Communities, 2002. Reports on tasks for scientific cooperation. Report of experts participating in task 3.2.7: assessment of dietary intake of ochratoxin A by the population in EU member states (73).

Corbett, W.T., Brownie, C.F., Hagler, S.B., Hagler, W.M., 1988: An epidemiological investigation associating aflatoxin M_1 with milk production in dairy cattle. Veterinary and Human Toxicology 30, 5-8 (318).

Coronel, M.B., Marin, S., Tarragó, M., Cano-Sancho, G., Ramos, A.J., Sanchis, V., 2011: Ochratoxin A and its metabolite ochratoxin alpha in urine and assessment of the exposure of inhabitants of Lleida, Spain. Food and Chemical Toxicology 49, 1436-1442. doi: 10.1016/j.fct.2011.03.039 (231).

Coronel, M.B., Sanchis, V., Ramos, A.J., Marin, S., 2009: Assessment of the exposure to ochratoxin A in the province of Lleida, Spain. Food and Chemical Toxicology 47, 2847-2852. doi: 10.1016/j.fct.2009.09.005 (112).

Coronel, M.B., Sanchis, V., Ramos, A.J., Marin, S., 2011: Ochratoxin A in adult population of Lleida, Spain: presence in blood plasma and consumption in different regions and seasons. Food and Chemical Toxicology 49, 2697-2705. doi: 10.1016/j.fct.2011.07.045 (232).

Coulter, J.B.S., Hendrickse, R.G., Lamplugh, S.M., MacFarlane, S.B.J., Moody, J.B., Omer, M.I.A., Suliman, G.I., Williams, T.E., 1986: Aflatoxins and kwashiorkor: clinical studies in Sudanese children. Transactions of the Royal Society of Tropical Medicine and Hygiene 80, 945-951 (159).

Coulter, J.B.S., Lamplugh, S.M., Suliman, G.I., Omer, I.A., Hendrickse, R.G., 1984: Aflatoxins in human breast milk. Annals of Tropical Paediatrics 4, 61-66 (15).

Coulter, J.B.S., Suliman, G.I., Lamplugh, S.M., Mukhtar, B.I., Hendrickse, R.G., 1986: Aflatoxins in liver biopsies from Sudanese children. American Journal of Tropical Medicine and Hygiene 35, 360-365 (82).

Cova, L., Mehrotra, R., Wild, C.P., Chutimataewin, S., Cao, S.F., Duflot, A., Prave, M., Yu, S.Z., Montesano, R., Trepo, C., 1994: Duck hepatitis B virus infection, aflatoxin B_1 and liver cancer in domestic Chinese ducks. British Journal of Cancer 69, 104-109 (355).

Creppy, E.E., Betbeder, A.-M., Godin, M., Fillastre, J.-P., AMG, K.S., Simon, P., Lasseur, C., Combe, C., Aparicio, M., 1995: Ochratoxin A in human blood and chronic interstitial nephropathy: case report in France. Proceedings from 17. Mykotoxin-Workshop in der Bundesforschungsanstalt für Landwirtschaft, Braunschweig-Völkenrode, 56-62 (28).

Cunha, S.C., Fernandes, J.O., 2012: Development and validation of a gas chromatography-mass spectrometry method for determination of deoxynivalenol and its metabolites in human urine. Food and Chemical Toxicology 50, 1019-1026. doi: 10.1016/j.fct.2011.12.028 (233).

Curtui, V.G., Gareis, M., Usleber, E., Märtlbauer, E., 2001: Survey of Romanian slaughtered pigs for the occurrence of mycotoxins ochratoxins A and B, and zearalenone. Food Additives and Contaminants 18, 730-738. doi: 10.1080/02652030110035101 (393).

Cusumano, V., 1991: Aflatoxins in sera from patients with lung cancer. Oncology 48, 194-195 (142).

Davoudi, Y., Garedaghi, Y., Nazeri, M., 2011: Survey on contaminated raw milks with aflatoxin M_1 in the Sarab region, Iran. Australian Journal of Basic and Applied Sciences 5, 97-100 (417).

de Cássia Romero, A., Fereira, T.R.B., dos Santos Dias, C.T., Calori-Domingues, M.A., da Gloria E.M., 2010: Occurrence of AFM_1 in urine samples of a Brazilian population and association with food consumption. Food Control 21, 554-558. doi: 10.1016/j.foodcont.2009.08.004 (234).

de Vries, H.R., Lamplugh, S.M., 1989: Aflatoxins in liver biopsies from Kenya. Tropical and Geographical Medicine 41, 26-30 (16).

de Vries, H.R., Lamplugh, S.M., Hendrickse, R.G., 1987: Aflatoxins and kwashiorkor in Kenya: a hospital based study in a rural area of Kenya. Annals of Tropical Paediatrics 7, 249-251 (19).

de Vries, H.R., Maxwell, S.M., Hendrickse, R.G., 1990: Aflatoxin excretion in children with kwashiorkor or marasmic kwashiorkor – a clinical investigation. Mycopathologia 110, 1-9 (180).

Degen, G.H., Mayer, S., Blaszkewicz, M., 2007: Biomonitoring of ochratoxin A in grain workers. Mycotoxin Research 23, 88-93 (235).

Dehghan, P., Pakshir, K, Rafiei, H., Chadeganipour, M., Akbari, M., 2014: Prevalence of ochratoxin A in human milk in the Khorrambid town, Fars Province, south of Iran. Jundishapur Journal of Microbiology Jul 2014 7 (7):e11220. doi: 10.5812/jjm.11220 (461).

Denning, D.W., Allen, R., Wilkinson, A.P., Morgan, M.R.A., 1990: Transplacental transfer of aflatoxin in humans. Carcinogenesis 11, 1033-1035 (158).

Denning, D.W., Onwubalili, J.K., Wilkinson, A.P., Morgan, M.R.A., 1988: Measurement of aflatoxin in Nigerian sera by enzyme-linked immunosorbent assay. Transactions of the Royal Society of Tropical Medicine and Hygiene 82, 169-171 (129).

Denning, D.W., Quiepo, S.C., Altman, D.G., Makarananda, K., Neal, G.E., Camallerre, E.L., Morgan, M.R.A., Tupasi, T.E., 1995: Aflatoxin and outcome from acute lower respiratory infection in children in The Philippines. Annals of Tropical Paediatrics 15, 209-216 (153).

Desalegn, B., Nanayakkara, S., Harada, K.H., Hitomi, T., Chandrajith, R., Karunaratne, U., Abeysekera, T., Koizumi, A., 2011: Mycotoxin detection in urine samples from patients with chronic kidney disease of uncertain etiology in Sri Lanka. Bulletin of Environmental Contamination and Toxicology 87, 6-10. doi: 10.1007/s00128-011-0301-4 (236).

di Giuseppe, R., Bertuzzi, T., Rossi, F., Rastelli, S., Mulazzi A., Capraro J., de Curtis, A., Iacoviello, L., Pietri, A., 2012: Plasma ochratoxin A levels, food consumption, and risk biomarkers of a representative sample of men and women from the Molise region in Italy. European Journal of Nutrition 51, 851-860. doi: 10.1007/s00394-011-0265-5 (202).

Diallo, M.S., Syila, A., Sidibé, K., Sylla, B.S., Trepo, C.R., Wild, C.P., 1995: Prevalence of exposure to aflatoxin and hepatitis B and C virus in Guinea, West Africa. Natural Toxins 3, 6-9 (121).

Dinis, A.M.P., Lino, C.M., Pena, A.S., 2007: Ochratoxin A in nephropathic patients from two cities of central zone in Portugal. Pharmaceutical and Biomedical Analysis 44, 553-557. doi: 10.1016/j.jpba.2006.12.001 (173).

Domagala, J., Kisza, J., Blüthgen, A., Heeschen, W., 1997: Contamination of milk with aflatoxin M_1 in Poland. Milchwissenschaft 52, 631-633 (316).
Domijan, A.-M., Peraica, M., Fuchs, R., Lucić, A., Radić, B., Balija, M., Bosanac, I., Grgičević, D., 1999: Ochratoxin A in blood of healthy population in Zagreb. Archives of Industrial Hygiene and Toxicology 3, 263-271 (104).
Domijan, A.-M., Pereica, M., Markov, K., Fuchs, R., 2009: Urine ochratoxin A and sphinganine/sphingosine ratio in residents of the endemic nephropathy area in Croatia. Arhir za Higijena Rada i Toksikologija 60, 387-393. doi: 10.2478/10004-1254-60-2009-1938 (217).
Domijan, A.-M., Peraica, M., Miletić-Medved, M., Lucić, A., Fuchs, R., 2003: Two different clean-up procedures for liquid chromatographic determination of ochratoxin A in urine. Journal of Chromatography B 798, 317-322. doi: 10.1016/j.jchromb.2003.10.003 (372).
Dostal, A., Jakusova, L., Cajdova, J., Hudeckova, H., 2008: Results of the first studies of occurrence of ochratoxin A in human milk in Slovakia. Bratislavslec Lekarske Listy 109, 276-278 (72).
Dragacci, S., Fremy, J.-M., 1993: Occurrence of aflatoxin M_1 in milk. Fifteen years of sanitary control. Sciences des Aliments 13, 711-722 (317).
Dragacci, S., Grosso, F., Bire, R., Fremy, J.M., Coulon, S., 1999: A French monitoring programme for determining ochratoxin A occurrence in pig kidneys. Natural Toxins 7, 167-173 (403).
Duarte, S.C., Alves, M.R., Pena, A., Lino, C.M., 2012: Determinants of ochratoxin A exposure-A one year follow-up study of urine levels. International Journal of Hygiene and Environmental Health 215, 360-367. doi: 10.1016/j.ijheh.2011.12.001 (237).
Duarte, S.C., Bento, J., Pena, A., Lino, C.M., Delerue-Matos, C., Oliva-Teles, T., Morais, S., Correia, M., Oliveira, M.B.P.P., Alves, M.R., Pereira, J.A., 2010: Monitoring of ochratoxin A exposure of the Portuguese population through a nationwide urine survey – winter 2007. Science of the Total Environment 408, 1195-1198. doi:10.1016/jscitotenv.2009.11.048 (216).
Duarte, S.C., Bento, J.M.V., Pena, A., Lino, C.M., 2009: Ochratoxin A exposure assessment of the inhabitants of Lisbon during winter 2007/2008 through bread and urine analysis. Food Additives and Contaminants: Part A 26, 1411-1420. doi: 10.1080/02652030903107914 (215).
Duarte, S.C., Lino, C.M., Pena, A., 2013: Novel IAC-LC-ESI-MS^2 analytical set-up for ochratoxin A determination in pork. Food Chemistry 138, 1055-1061. doi: 10.1016/j.foodchem.2012.11.071 (404).
Dvořáčková, I., Kusák, V., Veselý, D., Veselá, J., Nesnídal, P., 1977: Aflatoxin and encephalopathy with fatty degeneration of viscera (Reye). Annales de la Nutrition et de l'Alimentation 31, 977-990 (238).
Dvořáčková, I., Pichová, V., 1986: Pulmonary interstitial fibrosis with evidence of aflatoxin B_1 in lung tissue. Journal of Toxicology and Environmental Health 18, 153-157 (96).
Dvoráckova, I., Polster, M., 1984: Relation between aflatoxin producing aspergilloma and lung carcinoma. Microbiologie – Aliments – Nutrition 2, 187-192 (239).
Egner, P.A., Groopman, J.D., Wang, J.-S., Kensler, T., Friesen, M.D., 2006: Quantification of aflatoxin-B_1-N^7-guanine in human urine by high-performance liquid chromatography and isotope dilution tandem mass spectrometry. Chemical Research in Toxicology 19, 1191-1195. doi: 10.1021/tx060108d (191).
Egner, P.A., Wang, J.-B., Zhu, Y.-R., Zhang, B.-C., Wu, Y., Zhang, Q.-N., Qian, G.-S., Kuang, S.-Y., Gange, S. J., Jacobson, L.P., Helzsouer, K.J., Bailey, G.S., Groopman, J.D., Kensler, T.W., 2001: Chlorophyllin intervention reduces aflatoxin-DNA adducts in individuals at high risk for liver cancer. Proceedings of the National Academy of Science USA 98, 14601-14606. doi: 10.1073/pnas.251536898 (204).
El Marnissi, B., Belkhou, R., Morgavi, D.P., Bennani, L., Boudra, H., 2012: Occurrence of aflatoxin M_1 in raw milk collected from traditional dairies in Morocco. Food and Chemical Toxicology 50, 2819-2821. doi: 10.1016/j.fct.2012.05.031 (418).
Elgerbi, A.M., Aidoo, K.E., Candlish, A.A.G., Tester, R.F., 2004: Occurrence of aflatoxin M_1 in randomly selected North African milk and cheese samples. Food Additives and Contaminants 21, 592-597. doi: 10.1080/02652030410001687690 (345).
Elling, F., Hald, B., Jacobsen, C., Krogh, P., 1975: Spontaneous toxic nephropathy in poultry associated with ochratoxin A. Pathologica et Microbiologica Scandinavica Section A 83, 739-741 (408).

El-Nezami, H., Mykkänen, H., Kankaanpää, P., Suomalainen, T., Salminen, S., Ahokas, J., 2000: Ability of a mixture of *Lactobacillus* and *Propionibacterium* to influence the faecal aflatoxin content in healthy Egyptian volunteers: a pilot clinical study. Bioscience Microflora 19, 41-45 (78).

El-Nezami, H.S., Nicoletti, G., Neal, G.E., Donohue, D.C., Ahokas, J.T., 1995: Aflatoxin M_1 in human breast milk samples from Victoria, Australia and Thailand. Food and Cosmetics Toxicology 33, 173-179 (52).

El-Sayed, A.M.A.A., Neamat-Allah, A.A., Soher, E.A., 2000: Situation of mycotoxins in milk, dairy products and human milk in Egypt. Mycotoxin Research 16, 91-100 (59).

El-Sayed, A.M.A.A., Soher, E.A., Neamat-Allah, A.A., 2002: Human exposure to mycotoxins in Egypt. Mycotoxin Research 18, 23-30 (17).

El-Tras, W.F., El-Kady, N.N., Tayel, A.A., 2011: Infants exposure to aflatoxin M_1 as a novel foodborne zoonosis. Food and Chemical Toxicology 49, 2816-2819. doi: 10.1016/j.fct.2011.08.008 (13).

Elzupir, A.O., Elhussein, A.M., 2010: Determination of aflatoxin M_1 in dairy cattle milk in Karthoum State, Sudan. Food Control 21, 945-946. doi: 10.1016/j.foodcont.2009.11.013 (419).

Erasmuson, A.F., Scahill, B.C., West, D.M., 1994: Natural zeranol (α-zearalanol) in the urine of pasture-fed animals. Journal of Agricultural and Food Chemistry 42, 2721-2725 (311).

Eriksen, G.S., Hultin Jäderlund, K., Moldes-Anaya, A., Schönheit, J., Bernhoft, A., Jæger, G., Rundberget, T., Skaar, I., 2010: Poisoning of dogs with tremorgenic *Penicillium* toxins. Medical Mycology 48, 188-196. doi: 10.3109/13693780903225821 (352).

Erkekoğlu, P., Sabuncuoğlu, S., Aydin, S., Şahin, G., Giray, B., 2010: Determination of seasonal variation in serum ochratoxin A levels in healthy population living in some regions of Turkey by enzyme-linked immunosorbent assay. Toxicon 55, 507-513. doi: 10.1016/j.toxicon.2009.10.002 (240).

European Commission. Food – science and techniques series. Reports on tasks for scientific cooperation. Report of experts participating in task 3.2.2: assessment of dietary intake of ochratoxin A by the population in EU member states. Report EUR 17523 EN, 48 pp., 1998 (34).

Ezekiel, C.N., Warth, B., Ogara, I.M., Abia, W.A., Ezekiel, V.C., Atehnkeng, J., Sulyok, M., Turner, P.C., Tayo, G.O., Krska, R., Bandyopadhyay, R., 2014: Mycotoxin exposure in rural residents in northern Nigeria: a pilot study using multi-urinary biomarkers. Environment International 66, 138-145. doi: 10.1016/j.envint.2014.02.003 (241).

Fahmy, N., Woo, M., Alameldin, M., MacDonald, K., Goneau, L.W., Cadieux, P., Pautler, S.E., 2014: Ochratoxin A is not detectable in renal and testicular tumours. Canadian Urological Association Journal 8, 40-46. doi: 10.5489/cuaj.1240 (242).

Fazekas, B., Tar, A., Kovács, M., 2005: Ochratoxin A content of urine samples of healthy humans in Hungary. Acta Veterinaria Hungarica 53, 35-44 (212).

Ferguson-Foos, J., Warren, J.D., 1984: Improved cleanup for liquid chromatographic analysis and fluorescence detection of aflatoxins M_1 and M_2 in fluid milk products. Journal of the Association of Official Analytical Chemists 67, 1111-1114 (350).

Filali, A., Betbeder, A.M., Baudrimont, I., Benyada, A., Soulaymani, R., Creppy, E.E., 2002: Ochratoxin A in human plasma in Morocco: a preliminary survey. Human & Experimental Toxicology 21, 241-245. doi: 10.1191/0960327102ht249oa (102).

Finoli, C., Vecchio, A., 1997: Aflatoxin M_1 in goat dairy products. Microbiologie – Aliments – Nutrition 15, 47-52 (420).

Finoli, C., Vecchio, A., 2003: Occurrence of aflatoxins in feedstuff, sheep milk and dairy products in western Sicily. Italian Journal of Animal Science 2, 191-196 (421).

Fuchs, R., Radić, B., Čeović, S., Šoštarić, B., Hult, K., 1991: Human exposure to ochratoxin A. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds.). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 131-135 (41).

Fukal, L., 1990: A survey of cereals, cereal products, feedstuffs and porcine kidneys for ochratoxin A by radioimmunoassay. Food Additives and Contaminants 7, 253-258 (380).

Fukal, L., 1991: Spontaneous occurrence of ochratoxin A residues in Czechoslovak slaughter pigs determined by immunoassay. Deutsche Lebensmittel-Rundschau 87, 316-319 (361).

Fukal, L., Březina, P., 1991: Determination of the aflatoxin M_1-level in milk for the production of milk baby foods using immunoassay. Nahrung 35, 745-748 (319).

Fukal, L., Březina, P., Marek, M., 1990: Immunochemical monitoring of aflatoxin M_1 occurrence in milk produced in Czechoslovakia. Deutsche Lebensmittel-Rundschau 86, 289-291 (320).
Fukal, L., Reisnerova, H., 1990: Monitoring of aflatoxins and ochratoxin A in Czechoslovak human sera by immunoassay. Bulletin of Environmental Contamination and Toxicology 44, 345-349 (150).
Fushimi, Y., Takagi, M., Uno, S., Kokushi, E., Nakamura, M., Hasunuma, H., Shinya, U., Deguchi, E., Fink-Gremmels, J., 2014: Measurement of sterigmatocystin concentrations in urine for monitoring the contamination of cattle feed. Toxins (Basel) 6, 3117-3128. doi: 10.3390/toxins6113117 (460).
Gajęcki, M., Przybylowicz, M., Zielonka, L., Zwierzchowski, W., Obremski, K., Skorska-Wyszyńska, E., Gajęcka, M., Polak, M., Jakimiuk, E., 2004: Preliminary results of monitoring research on zearalenone presence in blood of women with neoplastic lesions in reproductive system. Polish Journal of Veterinary Sciences 7, 153-156 (43).
Gajek, O., 1982: Aflatoxins in protein food for animals and milk. Roczniki Panstwowego Zaklado Higieny XXXIII, 415-420 (321).
Galvano, F., Pietri, A., Bertuzzi, T., Gagliardi, L., Ciotti, S., Luisi, S., Bognanno, M., la Fauci, L., Iacopino, A.M., Nigro, F., Li Volti, G., Vanella, L., Giammanco, G., Tina, G.L., Gazzolo, D., 2008: Maternal dietary habits and mycotoxin occurrence in human mature milk. Molecular Nutrition & Food Research 52, 496-501. doi: 10.1002/mnfr.200700266 (54).
Gallo, P., Salzillo, A., Rossini, C., Urbani, V., Serpe, L., 2006: Aflatoxin M_1 determination in milk: method validation and contamination levels in samples from southern Italy. Italian Journal of Food Science 18, 251-259 (304).
Gan, L.-S., Skipper, P.L., Peng, X., Groopman, J.D., Chen, J.-S., Wogan, G.N., Tannenbaum, S.R., 1988: Serum albumin adducts in the molecular epidemiology of aflatoxin carcinogenesis: correlation with aflatoxin B_1 intake and urinary excretion of aflatoxin M_1. Carcinogenesis 9, 1323-1325 (139).
Gareis, M., Rosner, H., Ehrhardt, S., 2000: Blood serum levels of ochratoxin A and nutrition habits. Archiv für Lebensmittelhygiene 51, 108-110 (171).
Gareis, M., Wernery, U., 1984: Determination of gliotoxin in samples associated with cases of intoxication in camels. Mycotoxin Research 10, 2-8 (307).
Garner, R.C., Dvorackova, I., Tursi, F., 1988: Immunoassay procedures to detect exposure to aflatoxin B_1 and benzo(a)pyrene in animals and man at the DNA level. International Archives of Occupational and Environmental Health 60, 145-150 (90).
Gazotti, T., Lugoboni, B., Zironi, E., Barbarossa, A., Serraino, A., Pagliuca, G., 2009: Determination of fumonisin B_1 in bovine milk by LC-MS/MS. Food Control 20, 1171-1174. doi: 10.1016/j.foodcont.2009.02.009 (422).
Ghanem, I., Orfi, O., 2009: Aflatoxin M_1 in raw, pasteurized and powdered milk available in the Syrian market. Food Control 20, 603-605 doi: 10.1016/j.foodcont.2008.08.018 (423).
Ghiasian, S.A., Maghshood, A.H., Neyestani, T.R., Mirhendi, S.H., 2007: Occurrence of aflatoxin M_1 in raw during the summer and winter seasons in Hamedan, Iran. Journal of Food Safety 27, 188-198 (424).
Ghidini, S., Zanardi, E., Battaglia, A., Varisco, G., Ferretti, E., Campanini, G., Chizzolini, R., 2005: Comparison of contaminant and residue levels in organic and conventional milk and meat products from northern Italy. Food Additives and Contaminants 22, 9-14 (326).
Gilbert, J., Brereton, P., MacDonald, S., 2001: Assessment of dietary exposure to ochratoxin A in the UK using a duplicate diet approach and analysis of urine and plasma samples. Food Additives and Contaminants 18, 1088-1093. doi: 10.1080/02652030110070030 (106).
Gilbert, J., Shepherd, M.J., Wallwork, M.A., Knowles, M.E., 1984: A survey of the occurrence of aflatoxin M_1 in UK-produced milk for the period 1981-1983. Food Additives and Contaminants 1, 23-28 (322).
Godin, M., Francois, A., le Roy, F., Morin, J.-P., Creppy, E., Hemet, J., Fillastre, J.-P., 1996: Karyomegalic interstitial nephritis. American Journal of Kidney Diseases 27, 166 (31).
Goliński, P., Grabarkiewicz-Szczęsna, J., 1985: The first in Poland cases of detection of ochratoxin A residues in human blood. Roczniki Panstwowego Zakladu Higieny 36, 378-381 (30).

Goliński, P., Hult, K., Grabarkiewicz-Szczęsna, J., Chelkowski, J., Kneblewski, P., Szebiotko, K., 1984: Mycotoxic porcine nephropathy and spontaneous occurrence of ochratoxin A residues in kidneys and blood of Polish swine. Applied and Environmental Microbiology 47, 1210-1212 (362).

Goliński, P., Hult, K., Grabarkiewicz-Szczęsna, J., Chelkowski, J., Szebiotko, K., 1985: Spontaneous occurrence of ochratoxin A residues in porcine kidney and serum samples in Poland. Applied and Environmental Microbiology 49, 1014-1015 (381).

Gong, Y.Y., Cardwell, K., Hounsa, A., Egal, S., Turner, P.C., Hall, A.J., Wild, C.P., 2002: Dietary aflatoxin exposure and impaired growth in young children from Benin and Togo: cross sectional study. British Medical Journal 325, 20-21 (20).

Gong, Y., Hounsa, A., Egal, S., Turner, P.C., Sutcliffe, A.E., Hall, A.J., Cardwell, K., Wild, C.P., 2004: Postweaning exposure to aflatoxin results in impaired child growth: a longitudinal study in Benin, West Africa. Environmental Health Perspectives 112, 1334-1338. doi: 10.1289/ehp.6954 (154).

Gong, Y.Y., Torres-Sanchez, L., Lopez-Carillo, L., He Peng, J., Sutcliffe, A.E., White, K.L., Humpf, H.-U., Turner, P.C., Wild, C.P., 2008: Association between tortilla consumption and human urinary fumonisin B_1 levels in a Mexican population. Cancer Epidemiology, Biomarkers & Prevention 17, 688-694. doi: 10.1158/1055-9965.EPI-07-2534 (209).

Grajewski, J., Jarzemski, P., Twaruzek, M., Kuzminska, K., Trepala, M., 2007: The level of ochratoxin A in patients after nephrectomy. Mycotoxin Research 23, 22-26 (243).

Gratz, S.W., Richardson, A.J., Duncan, G., Holtrop, G., 2014: Annual variation of dietary deoxynivalenol exposure during years of different *Fusarium* prevalence: a pilot biomonitoring study. Food Additives and Contaminants: Part A 31, 1579-1585. doi: 10.1080/19440049.2014.937772 (462).

Gregory III, J.F., Manley, D., 1981: High performance liquid chromatographic determination of aflatoxins in animal tissues and products. Journal of the Association of Official Analytical Chemists. 64, 144-151 (301).

Gresham, A., Done, S., Livesey, C., MacDonald, S., Chan, D., Sayers, R., Clark, C., Kemp, P., 2006: Survey of pigs' kidneys with lesions consistent with PMWS and PDNS and ochratoxicosis. Part 1: concentrations and prevalence of ochratoxin A. Veterinary Record 159, 737-742 (397).

Groopman, J.D., Donahue, P.R., Zhu, J., Chen, J., Wogan, G.N., 1985: Aflatoxin metabolism in humans: detection of metabolites and nucleic acid adducts in urine by affinity chromatography. Proceedings of the National Academy of Science USA 82, 6492-6496 (205).

Groopman, J.D., Hall, A.J., Whittle, H., Hudson, G.J., Wogan, G.N., Montesano, R., Wild, C.P., 1992: Molecular dosimetry of aflatoxin-N^7-guanine in human urine obtained in The Gambia, West Africa. Cancer Epidemiology, Biomarkers & Prevention 1, 221-227 (201).

Grosso, F., Saïd, S., Mabrouk, I., Fremy, J.M., Castegnaro, M., Jemmali, M., Dragacci, S., 2003: New data on the occurrence of ochratoxin A in human sera from patients affected or not by renal diseases in Tunisia. Food and Chemical Toxicology 41, 1133-1140. doi: 10.1016/S0278-6915(03)00067-X (163).

Guan, R., Oon, C.J., Wild, C., Motesano, R., 1986: A preliminary survey on aflatoxin exposure in Singapore. Annals Academy of Medicine 15, 201-205 (193).

Gürbay, A., Atasayar Sabuncuonğlu, S., Girgin, G., Şahin, G., Yiğit, Ş., Yurdakök, M., Tekinalp, G., 2010: Exposure of newborns to aflatoxin M_1 and B_1 from mothers' breast milk in Ankara, Turkey. Food and Chemical Toxicology 48, 314-319. doi: 10.1016/j.fct.2009.10.016 (49).

Gürbay, A., Girgin, G., Atasayar Sabuncuoğlu, S., Sahin, G., Yurdakök, M., Yiğit, Ş, Tekinalp, G., 2010: Ochratoxin A: is it present in breast milk samples obtained from mothers from Ankara, Turkey? Journal of Applied Toxicology 30, 329-333. doi: 10.1002/jat.1499 (74).

Hald, B., 1991: Ochratoxin A in human blood in European countries. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds.). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 159-164 (33).

Harrison, J.C., Carvajal, M., Garner, R.C., 1993: Does aflatoxin exposure in the United Kingdom constitute a cancer risk? Environmental Health Perspectives 99, 99-105 (46).

Hassan, A.M., Sheashaa, H.A., Fattah, M.F.A., Ibrahim, A.Z., Gaber, O.A., Sobh, M.A., 2006: Study of ochratoxin A as an environmental risk that causes renal injury in breast-fed Egyptian infants. Pediatric Nephrology 21, 102-105 doi: 10.1007/s00467-005-2033-3 (71).

Hassen, W., Abid, S., Achour, A., Creppy, E., Bacha, H., 2004: Ochratoxin A and ß$_2$-microglobulinuria in healthy individuals and in chronic interstitial nephropathy patients in the centre of Tunisia: a hot spot of ochratoxin A exposure. Toxicology 199, 185-193. doi: 10.1016/j.tox.2004.02.027 (25).

Hassen, W., Abid-Essefi, S., Achour, A., Maaroufi, K., Creppy, E., Bacha, H., 2003: Ochratoxin A and human nephropathy in Tunisia: a ten year survey. Annales de Toxilogie Analytique XV, 21-29 (244).

Hatch, M.C., Chen, C.-J., Levin, B., Ji, B.-T., Yang, G.-Y., Hsu, S.-W., Wang, L.-W., Hsieh, L.-L., Santella, R.M., 1993: Urinary aflatoxin levels, hepatitis-B virus infection and hepatocellular carcinoma in Taiwan. International Journal of Cancer 54, 931-934 (203).

Hatem, N.L., Hassab, H.M.A., Abd Al-Rahman, E.M., El-Deeb, S.A., El-Sayed Ahmed, R.L., 2005: Prevalence of aflatoxins in blood and urine of Egyptian infants with protein-energy malnutrition. Food and Nutrition Bulletin 26, 49-56 (117).

Hayes, A.W., King, R.E., Unger, P.D., Phillips, T.D., Hatkin, J., Bowen, J.H., 1978: Aflatoxicosis in swine. Journal of the American Veterinary Medical Association 172, 1295-1297 (398).

Hendrickse, R.G., 1984: The influence of aflatoxins on child health in the tropics with particular reference to kwashiorkor. Transactions of the Royal Society of Tropical Medicine and Hygiene 78, 427-435 (81).

Hendrickse, R.G., Coulter, J.B.S., Lamplugh, S.M., MacFarlane, S.B.J., Williams, T.E., Omer, M.I.A., Suliman, G.I., 1982: Aflatoxins and kwashiorkor: a study in Sudanese children. British Medical Journal 285, 843-846 (115).

Hendrickse, R.G., Maxwell, S.M., Young, R., 1989: Aflatoxins and heroin. British Medical Journal 299, 492-493 (181).

Hepworth, S.J., Hardie, L.J., Fraser, L.K., Burley, V.J., Mijal, R.S., Wild, C.P., Azad, R., McKinney, P.A., Turner, P.C., 2012: Deoxynivalenol exposure assessment in a cohort of pregnant women from Bradford, UK. Food Additives and Contaminants: Part A 29, 269-276. doi: 10.1080/19440049.2010.551301 (245).

Herzallah, S.M., 2009: Determination of aflatoxins in eggs, milk, meat and meat products using HPLC fluorescent and UV detectors. Food Chemistry 114, 1141-1146. doi: 10.1016/j.foodchem.2008.10.077 (425).

Higgins, K.F., Barta, R.M., Neiger, R.D., Rottinghaus, G.E., Sterry, R.I., 1992: Mycotoxin occurrence in waste field corn and ingesta of wild geese in the northern Great Plains. Prairie Naturalist 24, 31-37 (426).

Hmaissia Khlifa, K., Ghali, R., Mezigh, C., Aouni, Z., Ghorbel, H., Harrzallah, K., Machgoul, S., Hedhili, A., 2008: Serum levels of ochratoxin A in healthy subjects and in nephropathic patients in Tunisia. Annales de Biologie Clinique 66, 631-636. doi: 10.1684/abc.2008.0278 (246).

Hollstein, M.C., Wild, C.P., Bleicher, F., Chutimataewin, S., Harris, C.C., Srivatanakul, P., Montesano, R., 1993: p53 mutations and aflatoxin B_1 exposure in hepatocellular carcinoma patients from Thailand. International Journal of Cancer 53, 51-55 (127).

Holmberg, T., Breitholz, A., Bengtsson, A., Hult, K., 1990: Ochratoxin A in swine blood in relation to moisture content in feeding barley at harvest. Acta Agriculturæ Scandinavica 40, 201-204 (369).

Honstead, J.P., Dreesen, D.W., Stubblefield, R.D., Shotwell, O.L., 1992: Aflatoxins in swine tissues during drought conditions: an epidemiologic study. Journal of Food Protection 55, 182-186 (399).

Hsieh, L.-L., Hsieh, T.-T., 1993: Detection of aflatoxin B_1-DNA adducts in human placenta and cord blood. Cancer Research 53, 1278-1280 (9).

Hsieh, L.-L., Hsu, S.-W., Chen, D.-S., Santella, R.M., 1988: Immunological detection of aflatoxin B_1-DNA adducts formed *in vivo*. Cancer Research 48, 6328-6331 (88).

Huang, L.C., Zheng, N., Zheng, B.Q., Wen, F., Cheng, J.B., Han, R.W., Xu, X.M., Li, S.L., Wang, J.Q., 2014: Simultaneous determination of aflatoxin M_1, ochratoxin A, zearalenone and α-zearalenol in milk by UHPLC-MS/MS. Food Chemistry 146, 242-249. doi: 10.1016/j.foodchem.2013.09.047 (427).

Hult, K., Hökby, E., Gatenbeck, S., Rutqvist, L., 1980: Ochratoxin A in blood from slaughter pigs in Sweden: use in evaluation of toxin content of consumed feed. Applied and Environmental Microbiology 39, 828-830 (363).

Hult, K., Pleština, R., Habazin-Novak, V., Radíc, B., Čeovíć, S., 1982: Ochratoxin A in human blood and Balkan endemic nephropathy. Archives of Toxicology 51, 313-321 (172).

Hult, K., Rutquist, L., Holmberg, T., Thafvelin, B., Gatenbeck, S., 1984: Ochratoxin A in blood of slaughter pigs. Nordisk Veterinaermedicin 36, 314-316 (367).

Hussain, I., Anwar, J., 2008: A study on contamination of aflatoxin M_1 in raw milk in the Punjab province of Pakistan. Food Control 19, 393-395. doi: 10.1016/j.foodcont.2007.04.019 (348).

Iavicoli, I., Brera, C., Carelli, G., Caputi, R., Marinaccio, A., Miraglia, M., 2002: External and internal dose in subjects occupationally exposed to ochratoxin A. International Archives of Occupational and Environmental Health 75, 381-386. doi: 10.1007/s00420-002-0319-3 (174).

Ibeh, I.N., Uraih, N., Ogonar, J.I., 1994: Dietary exposure to aflatoxin in human male infertility in Benin City, Nigeria. International Journal of Fertility and Menopausal Studies 39, 208-214 (114).

Ioannou-Kakouri, E., Aletari, M., Christou, E., Hadjioannou, A., Koliou, A., Akkelidou, D., 1999: Surveillance and control of aflatoxins B_1, B_2, G_1, G_2, and M_1 in foodstuffs in the Republic of Cyprus: 1992-1996. Journal of the Association of Official Analytical Chemists International 82, 883-892 (323).

Iqbal, S.Z., Asi, M.R., 2013: Assessment of aflatoxin M_1 in milk and milk products from Punjab, Pakistan. Food Control 30, 235-239. doi: 10.1016/j.foodcont.2012.06.026 (428).

Iqbal, S.Z., Asi, M.R., Ariño, A., 2011: Aflatoxin M_1 contamination in cow and buffalo milk samples from the North West Frontier Province (NWFP) and Punjab provinces of Pakistan. Food Additives and Contaminants: Part B 4, 282-288. doi: 10.1080/19393210.2011.637237 (429).

Jiang, Y., Jolly, P.E., Ellis, W.O., Wang, J.-S., Phillips, T.D., Williams, J.H., 2005: Aflatoxin B_1 albumin adduct levels and cellular immune status in Ghanaians. International Immunology 17, 807-814. doi: 10.1093/intimm/dxh262 (10).

Jimenez, A.M., Lopez de Cerain, A., Gonzalez-Peňas, E., Bello, J., Betbeder, A.M., Creppy, E.E., 1998: Exposure to ochratoxin A in Europe: comparison with a region of northern Spain. Journal of Toxicology – Toxin Reviews 17, 479-491 (103).

Johnson, N.M., Qian, G., Xu, L., Tietze D., Marroqiun-Cardona, A., Robinson, A., Rodriguez, M., Kaufman, L., Cunningham, K., Wittmer, J., Guerra, F., Donnelly, K.C., Williams, J.H., Wang, J.-S., Phillips, T.D., 2010: Aflatoxin and PAH exposure biomarkers in a U.S. population with a high incidence of hepatocellular carcinoma. Science of the Total Environment 408, 6027-6031. doi: 10.1016/j.scitotenv.2010.09.005 (247).

Jolly, P.E., Jiang, Y., Ellis, W.O., Awuah, R.T., Appawu, J., Nnedu, O., Stiles, J.K., Wang, J.-S., Adjei, O., Jolly, C.M., Williams, J.H., 2007: Association between aflatoxin exposure and health characteristics, liver function, hepatitis and malaria infections in Ghanaians. Journal of Nutritional & Environmental Medicine 16, 242-257. doi: 10.1080/13590840701703918 (248).

Jolly, P., Jiang, Y., Ellis, W., Awuah, R., Nnedu, O., Phillips, T., Wang, J.-S., Afriyie-Gyawu, E., Tang, L., Persom, S., Williams, J., Jolly, C., 2006: Determinants of aflatoxin levels in Ghanaians: sociodemographic factors, knowledge of aflatoxin and food handling and consumption practices. International Journal of Hygiene and Environmental Health 209, 345-358. doi: 10.1016/j.ijheh.2006.02.002 (12).

Jolly, P.E., Shuaib, F.M., Jiang, Y., Preko, P., Baidoo, J., Stiles, J.K., Wang, J.-S., Phillips, T.D., Williams, J.H., 2011: Association of high viral load and abnormal liver function with high aflatoxin B_1-albumin adduct levels in HIV-positive Ghanaians: preliminary observations. Food Additives and Contaminants: Part A 28, 1224-1234. doi: 10.1080/19440049.2011.581698 (249).

Jonsyn, F.E., 1999: Intake of aflatoxins and ochratoxins by infants in Sierra Leone: possible effects on the general health of these children. Journal of Nutrition and Environmental Medicine 9, 15-22 (118).

Jonsyn, F.E., Maxwell, S.M., Hendrickse, R.G., 1995: Human fetal exposure to ochratoxin A and aflatoxins. Annals of Tropical Paediatrics 15, 3-9 (6).

Jonsyn, F.E., Maxwell, S.M., Hendrickse, R.G., 1995: Ochratoxin A and aflatoxins in breast milk samples from Sierra Leone. Mycopathologia 131, 121-126 (47).

Jonsyn-Ellis, F.E., 2000: Seasonal variation in exposure frequency and concentration levels of aflatoxins and ochratoxins in urine samples of boys and girls. Mycopathologia 152, 35-40 (182).

Jørgensen, K., Petersen, A., 2002: Content of ochratoxin A in paired kidney and meat samples from healthy Danish slaughter pigs. Food Additives and Contaminants 19, 562-567. doi: 10.1080/02652030110113807 (383).

Josefsson, A.E., 1979: Study of ochratoxin A in pig kidneys. Vår Föda 31, 415-420 (382).
Kamkar, A., 2005: A study on the occurrence of aflatoxin M_1 in raw milk produced in Sarab City of Iran. Food Control 16, 593-599. doi: 10.1016/j.foodcont.2004.06.021 (346).
Kamkar, A., Yazdankhah, S., Nafchi, A.M., Nejad, A.S.M., 2014: Aflatoxin M_1 in raw cow and buffalo milk in Sush city of Iran. Food Additives and Contaminants: Part B 7, 21-24. doi: 10.1080/19393210.2013.830277 (430).
Kara, R., Ince, S., 2014: Aflatoxin M_1 in buffalo and cow milk in Afyonkarahisar, Turkey. Food Additives and Contaminants: Part B 7, 7-10. doi: 10.1080/19393210.2013.825646 (431).
Karaioannoglou, P., Mantis, A., Koufidis, D., Koidis, P., Triantafillou, J., 1989: Occurrence of aflatoxin M_1 in raw and pasteurized milk and in Feta and Telme cheese samples. Milchwissenschaft 44, 746-748 (324).
Kart, A., Elmali, M., Yapar, K., Yaman, H., 2009: Occurrence of aflatoxin M_1 determined by ELISA in UHT (sterilized) and raw milk samples produced in Turkey. Asian Journal of Chemistry 21, 2047-2051 (458).
Kawamura, O., Lim, J.-M., Okumura, H., Kishimoto, S., Chen, G., Ueno, Y., 1996: Analysis of aflatoxin B_1-human serum albumin adducts by a sandwich enzyme-linked immunosorbent assay. Mycotoxins 43, 43-46 (250).
Kawamura, O., Sato, S., Nagura, M., Kishimoto, S., Ueno, I., Sato, S., Uda, T., Ito, Y., Ueno, Y., 1990: Enzyme-linked immunosorbent assay for detection and survey of ochratoxin A in livestock sera and mixed feeds. Food and Agricultural Immunology 2, 135-143 (432).
Kennedy, D.G., McEvoy, J.D.G., Blanchflower, W.J., Hewitt, S.A., Cannavan, A., McCaughey, W.J., Elliott, C.T., 1995: Possible naturally occurring zeranol in bovine bile in Northern Ireland. Journal of Veterinary Medicine Series B 42, 509-512 (309).
Keskin, Y., Başkaya, R., Karsli, S., Yurdun, T., Özyaral, O., 2009: Detection of aflatoxin M_1 in human breast milk and raw cow's milk in Istanbul, Turkey. Journal of Food Protection 72, 885-889 (53).
Ketterer, P.J., Williams, E.S., Blaney, B.J., Connole, M.D., 1975: Canine aflatoxicosis. Australian Veterinary Journal 51, 355-357 (433).
Kim, H.J., Lee, J.E., Kwak, B.-M, Ahn, J.-H., Jeong, S.H., 2010: Occurrence of aflatoxin M_1 in raw milk from South Korea winter seasons using an immunoaffinity column and high performance liquid chromatography. Journal of Food Safety 30, 804-813 (434).
Klapec, T., Šarkanji, B., Banjari, I., Strelec, I., 2012: Urinary ochratoxin A and ochratoxin alpha in pregnant women. Food and Chemical Toxicology 50, 4487-4492. doi: 10.1016/j.fct.2012.09.030 (251).
Kotowski, K., Grabarkiewicz-Szczęsna, J., Waskiewicz, A., Kostecki, M., Golinski, P., 2000: Ochratoxin A in porcine blood and in consumed feed samples. Mycotoxin Research 16, 66-72 (364).
Kotowski, K., Kostecki, M., Grabarkiewicz-Szczęsna, J., Golinski, P., 1993: Ochratoxin A residue in kidneys and blood of pigs. Medycyna Weterynaryjna 49, 554-556 (365).
Kovács, F., Sándor, G., Ványi, A., Domány, S., Zomborszky-Kovács, M., 1995: Detection of ochratoxin A in human blood and colostrum. Acta Veterinaria Hungarica 43, 393-400 (27).
Krishnamachari, K.A.V.R., Bhat, R.V., Nagarajan, V., Tilak, T.B.G., 1975: Investigations into an outbreak of hepatitis in parts of western India. Indian Journal of Medical Research 63, 1036-1049 (131).
Krogh, P., 1977: Ochratoxin A residues in tissues of slaughter pigs with nephropathy. Nordic Veterinary Medicine A 29, 402-405 (384).
Kuciel-Lisieska, G., Obremski, K., Stelmachów, J., Gajęcka, M., Zielonka, Ł., Jakimiuk, E., Gajęcki, M., 2008: Presence of zearalenone in blood plasma in women with neoplastic lesions in the mammary gland. Bulletin of the Veterinary Institute in Pulawy 523, 671-674 (252).
Lamplugh, S.M, Hendrickse, R.G., Apeagyei, F., Mwanmut, D.D., 1988: Aflatoxins in breast milk, neonatal cord blood, and serum of pregnant women. British Medical Journal 296, 968 (253).
Langseth, W., Nymoen, U., Bergsjø, B., 1993: Ochratoxin A in plasma of Norwegian swine determined by an HPLC column-switching method. Natural Toxins 1, 216-221 (401).
Lattanzio, V.M.T., Solfrizzo, M., de Girolamo, A., Chulze, S.N., Torres, A.M., Visconti, A., 2011: LC-MS/MS characterization of the urinary excretion profile of the mycotoxin deoxynivalenol in human and rat. Journal of Chromatography B 879, 707-715. doi: 10.1016/j.chromb.2011.01.029 (254).

Lee, J.E., Kwak, B.-M., Ahn, J.-H., Jeon, T.-H., 2009: Occurrence of aflatoxin M_1 in raw milk in South Korea using an immunoaffinity column and liquid chromatography. Food Control 20, 136-138 doi: 10.1016/j.foodcont.2008.03.002 (435).

Leong, Y.-H., Rosma, A., Latiff, A.A., Izzah, AN, 2012: Associations of serum aflatoxin B_1-lysine adduct level with socio-demographic factors and aflatoxins intake from nuts and related nut products in Malaysia. International Journal of Hygiene and Environmental Health 215, 368-372, doi: 10.1016/j.ijheh.2011.12.005 (255).

Lewis, R.E., Wiederhold, N.P., Chi, J., Han, X.Y., Komanduri, K.V., Kontoyiannis, D.P., Prince, R.A., 2005: Detection of gliotoxin in experimental and human aspergillosis. Infection and Immunity 73, 635-637. doi: 10.1128/IAI.73.1.635-637.2005 (160).

Liggett, A.D., Colvin, B.M., Beaver, R.W., Wilson, D.M., 1986: Canine aflatoxicosis: a continuing problem. Veterinary and Human Toxicology 28, 428-430 (436).

Liman, B.C., Şebeck, N., 2001: Quantitative analysis of aflatoxin M_1 in raw milk contaminated at low levels. Toxicology Letters 123, 42 (437).

Lino, C.M., Baeta, M.L., Henri, M., Dinis, A.M.P., Pena, A.S., Silveira, M.I.N., 2008: Levels of ochratoxin A in serum from urban and rural Portuguese populations and estimation of exposure degree. Food and Chemical Toxicology 46, 879-885. doi: 10.1016/j.fct.2007.10.012 (175).

Liu, Z.-H., Tu, W.-S., Li, D.-R.O., Li, Y.-D., Xie, C.-H., Yang, Y.-Z., Qin, B.-B., 1990: A new method for the quantitation of aflatoxin M_1 in urine by high performance liquid chromatography and its application to the etiologic study of hepatoma. Biomedical Chromatography 4, 83-86 (200).

Lopez, C., Ramos, L., Bulacio, L., Ramadan, S., Rodriguez, F., 2002: Aflatoxin B_1 content in patients with hepatic diseases. MEDICINA (Buenos Aires) 62, 313-316 (133).

López, C.E., Ramos, L.L., Ramadán, S.S., Bulacio, L.C., 2003: Presence of aflatoxin M_1 in milk for human consumption in Argentina. Food Control 14, 31-34 (328).

Losito, I., Monaci, L., Palmisano, F., Tantillo, G., 2004: Determination of ochratoxin A in meat products by high-performance liquid chromatography coupled to electrospray ionisation sequential mass spectrometry. Rapid Communications in Mass Spectrometry 18, 1965-1971. doi: 10.1002/rcm.1577 (394).

Maaroufi, K., Achour, A., Betbeder, A.M., Hammami, M., Ellouz, F., Creppy, E.E., Bacha, H., 1995: Foodstuffs and human blood contamination by the mycotoxin ochratoxin A: correlation with chronic interstitial nephropathy in Tunisia. Archives of Toxicology 69, 552-558 (32).

Maaroufi, K., Achour, A., Hammami, M., El May, M., Betbeder, A.M., Ellouz, F., Creppy, E.E., Bacha, H., 1995: Ochratoxin A in human blood in relation to nephropathy in Tunisia. Human & Experimental Toxicology 14, 609-615 (26).

MAFF - UK, 1993: Mycotoxins: Third report: 36th report of the steering group on chemical aspects of food surveillance (London: HSMO) pp. 39-44 (386).

MAFF – UK, 1996: Survey of aflatoxin M_1 in farm gate milk. Food-Surveillance-Information-Sheet No. 78 (329).

Mahdavi, R., Nikniaz, L., Arefhosseini, S.R., Vahed Jabbari M., 2010: Determination of aflatoxin M_1 in breast milk samples in Tabriz-Iran. Maternal and Child Health Journal 14, 141-145. doi: 10.1007/s10995-008-0439-9 (256).

Majerus, P., Otteneder, H., Hower, C., 1989: Beitrag zum Vorkommen von Ochratoxin A in Schweineblutserum. Deutsche Lebensmittel-Rundschau 85, 307-313 (405).

Malir, F., Jergeova, Z., Severa, J., Cerna, M., Smid, J., Betbeder, A.M., Baudrimont, I., Creppy, E.E., 1998: The level of ochratoxin A in blood serum of adults in the Czech Republic. Revue de Médicine Vétérinaire 149, 710 (169).

Malir, F., Ostry, V., Grosse, Y., Roubal, T., Skarkova, J., Ruprich, J., 2006: Monitoring the mycotoxins in food and their biomarkers in the Czech Republic. Molecular Nutrition & Food Research 50, 513-518. doi: 10.1002/mnfr.200500175 (257).

Manique, R., Pena, A., Lino, C.M., Moltó, J.C., Mañes, J., 2008: Ochratoxin A in the morning and afternoon portions of urine from Coimbra and Valencian populations. Toxicon 51, 1281-1287. doi: 10.1016/j.toxicon.2008.02.014 (210).

Maragos, C.M., Richard, J.L., 1994: Quantitation and stability of fumonisins B_1 and B_2 in milk. Journal of the Association of Official Analytical Chemists International 77, 1162-1167 (351).

Marquardt, R.R., Frohlich, A.A., Sreemannarayana, O., Abramson, D., Bernatsky, A., 1988: Ochratoxin A in blood from slaughter pigs in western Canada. Canadian Journal of Veterinary Research 52, 186-190 (366).

Martins, M.L., Martins, H.M., 2000: Aflatoxin M_1 in raw and ultra high temperature-treated milk commercialized in Portugal. Food Additives and Contaminants 17, 871-874 (330).

Märtlbauer, E., Usleber, E., Dietrich, R., Schneider, E., 2009: Ochratoxin A in human blood serum – retrospective long-term data. Mycotoxin Research 25, 175-186. doi: 10.1007/s12550-009-0025-z (258).

Matsumura, M., Mori, T., 1998: Detection of aflatoxins in autopsied materials from a patient infected with *Aspergillus flavus*. Nippon Ishinkin Gakkai Zasshi 39, 167-171 (97).

Maxwell, S.M., Apeagyei, F., de Vries, H.R., Mwanmut, D.D., Hendrickse, R.G., 1989: Aflatoxins in breast milk, neonatal cord blood and sera of pregnant women. Journal of Toxicology – Toxin Reviews 8, 19-29 (4).

Maxwell, S.M., Familusi, J.B., Sodeinde, O., Chan, M.C.K., Hendrickse, R.G., 1994: Detection of naphthols and aflatoxins in Nigerian cord blood. Annals of Tropical Paediatrics 14, 3-5 (3).

McCoy, L.F., Scholl, P.F., Sutcliffe, A.E., Kieszak, S.M., Powers, C.D., Rogers, H.S., Gong, Y.Y., Groopman, J.D., Wild, C.P., Schleicher, R.L., 2008: Human aflatoxin albumin adducts quantitatively compared by ELISA, HPLC with fluorescence detection, and HPLC with isotope dilution mass spectrometry. Cancer Epidemiology, Biomarkers & Prevention 17, 1653-1657 (152).

McKenzie, R.A., Blaney, B.J., Connole, M.D., Fitzpatrick, L.A., 1981: Acute aflatoxicosis in calves fed peanut hay. Australian Veterinary Journal 57, 284-286 (306).

Medina, Á., Mateo, E.M., Roig, R.J., Blanquer, A., Jiménez, M., 2010: Ochratoxin A levels in the plasma of healthy blood donors from Valencia and estimation of exposure degree: comparison with previous national Spanish data. Food Additives and Contaminants: Part A 27, 1273-1284. doi: 10.1080/19440049.2010.487876 (259).

Meky, F.A., Turner, P.C., Ashcroft, A.E., Miller, J.D., Qiao, Y.-L., Roth, M.J., Wild, C.P., 2003: Development of a urinary biomarker of human exposure to deoxynivalenol. Food and Chemical Toxicology 41, 265-273 (206).

Meyer, K., Usleber, E., Märtlbauer, E., Bauer, J., 1997: Analysis of zearalenone-metabolites in bile of gilts with reproductive problems. Berliner und Münchener Tierärztliche Wochenschrift 110, 281-283 (359).

Micco, C., Ambruzzi, M.A., Miraglia, M., Brera, C., Onori, R., Benelli, L., 1991: Contamination of human milk with ochratoxin A. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds.). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 105-108 (64).

Milićević, D., Jovanović, M., Matekalo-Sverak, V., Radičević, T., Petrović, M., Lilić, S., 2011: A survey of spontaneous occurrence of ochratoxin A residues in chicken tissues and concurrence with histopathological changes in liver and kidneys. Journal of Environmental Science and Health, Part C 29, 159-175. doi: 10.1080/10590501.2011.577687 (438).

Milićević, D., Jurić, V., Stefanović, S., Jovanović, M., Janković, S., 2008: Survey of slaughtered pigs for occurrence of ochratoxin A and porcine nephropathy in Serbia. International Journal of Molecular Sciences 9, 2169-2183. doi: 10.3390/ijms9112169 (439).

Minervini, F., Giannoccaro, A., Nicassio, M., Panzarini, G., Lacalandra, G.M., 2013: First evidence of placental transfer of ochratoxin A in horses. Toxins (Basel) 5, 84-92. doi: 10.3390/toxins5010084 (440).

Miraglia, M., Brera, C., Cava, E., Calfapietra, F.R., 1998: The evaluation of major sources of ochratoxin A (OA) intake through the analysis of OA in biological fluids in Italy. Revue de Médicine Vétérinaire 149, 711 (65).

Mizrak, D., Engin, B., Önder, F.O., Yener, B., Bektaş, M., Biyikili, Z., Idilman, R., Çinar, K., Karayalçin, K., Ersöz, S., Karayalçin, S., Özden, A., Yurdaydin, C., Yazihan, N., Ataoğlu, H., Bozkaya, H., Uzunalimoğlu, Ö., 2009: Aflatoxin exposure in viral hepatitis patients in Turkey. Turkish Journal of Gastroenterology 20, 192-197. doi: 10.4318/tjg.2009.0006 (98).

Mohd Redzwan, S., Rosita, J., Mohd Sokhini, A.M., Nurul Aqilah, A.R., 2012: Association between aflatoxin M_1 excreted in human urine samples with the consumption of milk and dairy products.

Bulletin of Environmental Contamination and Toxicology 89, 1115-1119. doi: 10.1007/s00128-012-0853-y (260).
Mokhles, M., Abdl El Wahhab, M.A., Tawfik, M., Ezzat, W., Gamil, K., Ibrahim, M., 2007: Detection of aflatoxin among hepatocellular carcinoma patients in Egypt. Pakistan Journal of Biological Science 10, 1422-1429 (144).
Monaci, L., Tantillo, G., Palmisano, F., 2004: Determination of ochratoxin A in pig tissues by liquid-liquid extraction and clean-up and high-performance liquid chromatography. Analytical and Bioanalytical Chemistry 378, 1777-1782. doi: 10.1007/s00216-004-2497-1 (395).
Moreno Guillamont, E., Lino, C.N., Baeta, M.L., Pena, A.S., Silveira, M.I.N., Mañes Vinuesa, J., 2005: A comparative study of extraction apparatus in HPLC analysis of ochratoxin A in muscle. Analytical and Bioanalytical Chemistry 383, 570-575. doi: 10.1007/s00216-005-0051-4 (373).
Morgan, M.R.A., McNerney, R., Chan, H.W.-S., Anderson, P.H., 1986: Ochratoxin A in pig kidney determined by enzyme-linked immunosorbent assay (ELISA). Journal of the Science of Food and Agriculture 37, 475-480 (387).
Muñoz, K., Blaszkewicz, M., Degen, G.H., 2010: Simultaneous analysis of ochratoxin A and its major metabolite ochratoxin alpha in plasma and urine for an advanced biomonitoring of the mycotoxin. Journal of Chromatography B 878, 2623-2629. doi: 10.1016/j.chromb.2009.11.044 (261).
Muñoz, K., Campos, V., Blaszkewicz, M., Vega, M., Alvarez, A., Neira, J., Degen, G.H., 2010: Exposure of neonates to ochratoxin A: first biomonitoring results in human milk (colostrum) from Chile. Mycotoxin Research 26, 59-67. doi: 10.1007/s12550-009-0040-0 (262).
Muñoz, K., Vega, M., Rios, G., Muñoz, S., Madariaga, R., 2006: Preliminary study of ochratoxin A in human plasma in agricultural zones of Chile and its relation to food consumption. Food and Chemical Toxicology 44, 1884-1889. doi: 10.1016/j.fct.2006.06.008 (38).
Naudé, T.W., O'Brien, O.M., Rundberget, T., Mc Gregor, A.D.G., Roux, C., Flåøyen, A., 2002: Tremorgenic neuromycotoxicosis in 2 dogs ascribed to the ingestion of penitrem A and possibly roquefortine in rice contaminated with *Penicillium crustosum*. Journal of the South African Veterinary Association 73, 211-215 (353).
Navas, S.A., Sabino, M., Rodriguez-Amaya, D.B., 2005: Aflatoxin M_1 and ochratoxin A in a human milk bank in the city of São Paulo, Brazil. Food Additives and Contaminants 22, 457-462. doi: 10.1080/02652030500110550 (60).
Nayak, S., Sashidhar, R.B., Bhat, R.V., 2001: Quantification and validation of enzyme immunoassay for urinary aflatoxin B_1-N^7-guanine adduct for biological monitoring of aflatoxins. Analyst 126, 179-183. doi: 10.1039/b005778i (190).
Nelson, D.B., Kimbrough, R., Landigran, P.S., Hayes, A.W., Yang, G.C., Benanides, J., Morens, D.M., Morse, D., Pollack, M., Powell, K.E., Sullivan-Bolyai, J.Z., 1980: Aflatoxins and Reye's Syndrome: a case control study. Pediatrics 66, 865-869 (148).
Newman, S.J., Smith, J.R., Stenske, K.A., Newman, L.B., Dunlap, J.R., Imerman, P.M., Kirk, C.A., 2007: Aflatoxicosis in nine dogs after exposure to contaminated commercial dog food. Journal of Veterinary Diagnostic Investigation 19, 168-175 (354).
Ngindu, A., Kenya, P.R., Ocheng, D.M., Omondi, T.N., Ngare, W., Gatei, D., Johnson, B.K., Ngira, J.A., Nandwa, H., Jansen, A.J., Kaviti, J.N., Arap Siongok, T., 1982: Outbreak of acute hepatitis caused by aflatoxin poisoning in Kenya. Lancet 12, 1346-1348 (92).
Njumbe Ediage, E., di Mavungu, J.D., Song, S., Sioen, I., de Saeger, S., 2013: Multimycotoxin analysis in urines to assess infant exposure: a case study in Cameroon. Environmental International 57-58, 50-59. doi: 10.1016/j.envint.2013.04.002 (263).
Njumbe Ediage, E., di Mavungu, J.D., Song, S., Wu, A., van Peteghem, C., de Saeger, S., 2013: A direct assessment of mycotoxin biomarkers in human urine samples by liquid chromatography tandem mass spectrometry. Analytica Chimica Acta 741, 58-69. doi: 10.1016/j.aca.2012.06.038 (264).
Nuryono, N., Agus, A., Wedhastri, S., Maryudani, Y.B., Sigit Setyabudi, F.M.C., Böhm, J., Razzazi-Fazeli, E., 2009: A limited survey of aflatoxin M_1 in milk from Indonesia by ELISA. Food Control 20, 721-724. doi: 10.1016/j.foodcont.2008.09.005 (441).

Nyathi, C.B., Mutiro, C.F., Hasler, J.A., Chetsanga, C.J., 1987: A survey of urinary aflatoxin in Zimbabwe. International Journal of Epidemiology 16, 516-519 (77).
Nyathi, C.B., Mutiro, C.F., Hasler, J.A., Chetsanga, C.J., 1989: Human exposure to aflatoxins in Zimbabwe. Central African Journal of Medicine 35, 542-545 (62).
Obuseh, F.A., Jolly, P.E., Jisng, Y., Shuaib, M.B., Waterbor, J., Ellis, W.O., Piyathilake C.J.; Desmond, R.A., Afriyie-Gyawu, E., Phillips, T.D., 2010: Aflatoxin B_1 albumin adducts in plasma and aflatoxin M_1 in urine are associated with plasma concentrations of vitamins A and E. International Journal for Vitamin and Nutrition Research 80, 355-368. doi: 10.1024/0300-9831/a000021 (265).
Okumura, H., Kawamura, O., Kishimoto, S., Hasegawa, A., Shrestha, S.M., Okuda, K., Obata, H., Okuda, H., Haruki, K., Uchida, T., Ogasawara, Y., Ueno, Y., 1993: Aflatoxin M_1 in Nepalese sera, quantified by combination of monoclonal antibody immunoaffinity chromatography and enzyme-linked immunosorbent assay. Carcinogenesis 14, 1233-1235 (143).
Olberg, I.H., Yndestad, M., 1982: A Norwegian survey of ochratoxin A in cereals and animal tissue. Nordisk Jordbruksforskning 64, 296 (388).
Olubuyide, I.O., Maxwell, S.M., Akinyinka, O.O., Hart, C.A., Neal, G.E., Hendrickse, R.G., 1993: HbsAg and aflatoxins in sera of rural (Igbo-Ora) and urban (Ibadan) populations in Nigeria. African Journal of Medicine and Medical Sciences 22, 77-80 (132).
Omar, S.S., 2012: Incidence of aflatoxin M_1 in human and animal milk in Jordan. Journal of Toxicology and Environmental Health, Part A 75, 1404-1409. doi: 10.1080/15287394.2012.721174 (266).
Ominski, K.H., Frohlich, A.A., Marquardt, R.R., Crow, G.H., Abramson, D., 1996: The incidence and distribution of ochratoxin A in western Canadian swine. Food Additives and Contaminants 13, 185-198 (406).
Onyemelukwe, C.G., Nirodi, C., West, C.E., 1980: Aflatoxin B_1 in hepatocellular carcinoma. Tropical and Geographical Medicine 32, 237-240 (91).
Onyemelukwe, G.C., Ogbadu, G., 1981: Aflatoxin levels in sera of healthy first time rural blood donors: preliminary report. Transactions of the Royal Society of Tropical Medicine and Hygiene 75, 780-782 (130).
Onyemelukwe, G.C., Ogbadu, G.H., Salifu, A., 1982: Aflatoxins, B_1, B_2, G_1, G_2 in primary liver cell carcinoma. Toxicology Letters 10, 309-312 (267).
Oruç, H.H., Sonal, S., 2001: Determination of aflatoxin M_1 levels in cheese and milk consumed in Bursa, Turkey. Veterinary and Human Toxicology 43, 292-293 (331).
Ostry, V., Malir, F., Roubai, T., Skarkova, J., Ruprich, J., Cerna, M., Creppy, E.E., 2005: Monitoring of mycotoxin biomarkers in the Czech Republic. Mycotoxin Research 21, 49-52 (268).
Ostry, V., Ruprich, J., Cerna, M., 1998: The determination of ultra-trace amounts of aflatoxin M_1 in human urine in The Czech Republic. Revue de Médicine Vétérinaire 149, 712 (269).
Oyelami, O.A., Maxwell, S.M., Adelusola, K.A., Aladekoma, T.A., Oyelese, A.O., 1995: Aflatoxins in the autopsy brain tissue of children in Nigeria. Mycopathologia 132, 35-38 (44).
Oyelami, O.A., Maxwell, S.M., Adelusola, K.A., Aladekoma, T.A., Oyelese, A.O., 1997: Aflatoxins in the lungs of children with kwashiorkor and children with miscellaneous diseases in Nigeria. Journal of Toxicology and Environmental Health 51, 623-628 (95).
Oyelami, O.A., Maxwell, S.M., Adelusola, K.A., Aladekoma, T.A., Oyelese, A.O., 1998: Aflatoxins in autopsy kidney specimens from children in Nigeria. Journal of Toxicology and Environmental Health, Part A 55, 317-323 (270).
Özçelik, N., Koşar, A., Soysal, D., 2001: Ochratoxin A in human serum samples collected in Isparta-Turkey from healthy individuals and individuals suffering from different urinary disorders. Toxicology Letters 121, 9-13 (167).
Pacin, A.M., Ciancio Bovier, E.V., Motta, E., Resnik, S.L., Villa, D., Olsen, M., 2008: Survey of Argentinean human plasma for ochratoxin A. Food Additives and Contaminants: Part A 25, 635-641. doi: 10.1080/02652030701613709 (110).
Palli, D., Miraglia, M., Saieva, C., Masala, G., Cava, E., Colatosti, M., Corsi, A.M., Russo, A., Brera, C., 1999: Serum levels of ochratoxin A in healthy adults in Tuscany: correlation with individual characteristics and between repeat measurements. Cancer Epidemiology, Biomarkers & Prevention 8, 265-269 (166).

Pascale, M., Visconti, A., 2000: Rapid method for the determination of ochratoxin A in urine by immunoaffinity column clean-up and high-performance liquid chromatography. Mycopathologia 152, 91-95 (214).

Pena, A., Seifrtová, M., Lino, C., Silveira, I., Solich, P., 2006: Estimation of ochratoxin A in Portuguese population: new data on the occurrence in human urine by high performance liquid chromatography with fluorescence detection. Food and Chemical Toxicology 44, 1449-1454. doi: 10.1016/j.fct.2006.04.017 (213).

Pepeljnjak, S., Blaževic, N., Čuljak, K., 1982: Histopathological changes and findings of ochratoxin A in organs of pigs, in the area of endemic nephropathy in Yugoslavia. In: Proceedings of the V. International IUPAC Symposium on Mycotoxins and Phycotoxins, September 1-3, 1982, Austria, Vienna, Technical University, Austria, pp. 346-348 (368).

Peraica, M., Domijan, A.-M., Fuchs, R., Lucić, A., Radić, B., 1999: The occurrence of ochratoxin A in blood in general population of Croatia. Toxicology Letters 110, 105-112 (99).

Peraica, M., Domijan, A.-M., Matašin, M., Lucić, A., Radić, B., Delaš, F., Horvat, M., Bosanac, I., Balija, M., Grgičević, D., 2001: Variations of ochratoxin A concentration in the blood of healthy populations in some Croatian cities. Archives of Toxicology 75, 410-414. doi: 10.1007/s002040100258 (100).

Pérez de Obanos, A., López de Ceraín, A., Jiménez, A.M., Gonzáles Peñas, E., Bello, J., 2001: Ochratoxin A in human plasma: new data of exposition in Spain. Revista de Toxicología 18, 19-23 (271).

Petkova-Bocharova, T., Castegnaro, M., 1991: Ochratoxin A in human blood in relation to Balkan endemic nephropathy and urinary tract tumours in Bulgaria. In: Castegnaro, M., Pleština, R., Dirheimer, G., Chernozemsky, I.N., Bartsch, H. (eds.). Mycotoxins, Endemic Nephropathy and Urinary Tract Tumours. No. 115 (Lyon IARC), 135-137 (42).

Petkova-Bocharova, T., Castegnaro, M., Pfohl-Leszkowicz, A., Garren, L., Grosso, F., Nikolov, I., Vrabcheva, T., Dragacci, S., Chernozemsky, I.N., 2003: Analysis of ochratoxin A in serum and urine of inhabitants from an area with Balkan endemic nephropathy: a one month follow up study. Facta Universitas Series: Medicine and Biology 10, 62-68 (177).

Pfohl-Leszkowicz, A., Tozlovanu, M., Manderville, R., Peraica, M., Castegnaro, M., Stefanovic, V., 2007: New molecular and field evidence for the implication of mycotoxins but not aristolochic acid in human nephropathy and urinary tract tumor. Molecular Nutrition & Food Research 51, 1131-1146. doi: 10.1012/mnfr.200700045 (272).

Phillips, D.L., Yourtee, D.M., Searles, S., 1976: Presence of aflatoxin B_1 in human liver in the United States. Toxicology and Applied Pharmacology 36, 403-406 (84).

Phoku, J.Z., Dutton, M.F., Njobeh, P.B., Mwanza, M., Egbuta, M.A., Chilaka, C.A., 2012: *Fusarium* infection of maize and maized-based products and exposure of a rural population to fumonisin B_1 in Limpopo Province, South Africa. Food Additives and Contaminants: Part A 29, 1743-1751. doi: 10.1080/19440049.2012.708671 (274).

Piekkola, S., Turner, P.C., Abdel-Hamid, M., Ezzat, S., El-Daly, M., El-Kafrawy, S., Savchenko, E., Poussa, T., Woo, J.C.S., Mykkänen, H., El-Nezami H., 2012: Characterisation of aflatoxin and deoxynivalenol exposure among pregnant Egyptian women. Food Additives and Contaminants: Part A 29, 962-971. doi: 10.1080/19440049.2012.658442 (273).

Pietri, A., Bertuzzi, T., Gualla, A., Piva, G., 2006: Occurrence of ochratoxin A in raw ham muscles and in pork products from northern Italy. Italian Journal of Food Science 18, 99-106 (400).

Pietri, A., Bertuzzi, T., Moschini, M., Piva, G., 2003: Aflatoxin M_1 occurrence in milk samples destined for Parmigiano Reggiano cheese production. Italian Journal of Food Science 15, 301-306 (325).

Plestina, R., Ceović, S., Gatenbeck, S., Habazin-Novak, V., Hult, K., Hökby, E., Krogh, P., Radić, B., 1990: Human exposure to ochratoxin A in areas of Yugoslavia with endemic nephropathy. Journal of Environmental Pathology, Toxicology, Oncology 10, 145-148 (164).

Polychronaki, N., Turner, P.C., Mykkänen, H., Gong, Y., Amra, H., Abdel-Wahhab, M., El-Nezami, H., 2006: Determinants of aflatoxin M_1 in breast milk in a selected group of Egyptian mothers. Food Additives and Contaminants 23, 700-708. doi: 10.1080/02652030600627222 (55).

Polychronaki, N., West, R.M., Turner, P.C., Amra, H., Abdel-Wahab, M., Mykkänen, H., El-Nezami, H., 2007: A longitudinal assessment of aflatoxin M_1 excretion in breast milk of selected Egyptian mothers. Food and Chemical Toxicology 45, 1210-1215. doi: 10.1016/j.fct.2007.01.001 (61).

Polychronaki, N., Wild, C.P., Mykkänen, H., Amra, H., Abdel-Wahhab, M., Sylla, A., Diallo, M., El-Nezami, H., Turner, P.C., 2008: Urinary biomarkers of aflatoxin exposure in young children from Egypt and Guinea. Food and Chemical Toxicology 46, 519-526. doi: 10.1016/j.fct.2007.08.034 (192).

Postupolski, J., Karlowski, K., Kubik, P., 2006: Ochratoxin A in maternal and foetal blood and in maternal milk. Roczniki Panstwowego Zaklado Higieny 57, 23-30 (37).

Pozzo, L., Cavallarin, L., Nucera, D., Antoniazzi, S., Schiavone, A., 2010: A survey of ochratoxin A contamination in feeds and sera from organic and standard swine farms in northwest Italy. Journal of the Science and Food of Agriculture 90, 1467-1472. doi: 10.1002/jsfa.3965 (442).

Qian, G.-S., Ross, R.K., Yu, M.C., Yuan, J.-M., Gao Y.-T., Henderson, B.E., Wogan, G.N., Groopman, J.D., 1994: A follow-up study of urinary markers of aflatoxin exposure and liver cancer risk in Shanghai, People's Republic of China. Cancer Epidemiology, Biomarkers & Prevention 3, 3-10 (183).

Radić, B., Fuchs, R., Peraica, M., Lucić, A., 1997: Ochratoxin A in human sera in the area with endemic nephropathy in Croatia. Toxicology Letters 91, 105-109 (161).

Rafiei, H., Dehghan, P., Pakshir, K., Pour, M.C., Akbari, M., 2014: The concentration of aflatoxin M_1 in the mothers' milk in Khorrambid City, Fars, Iran. Advanced Biomedical Research 3, 152. doi: 10.4103/2277-9175.137859 (456).

Rahimi, E., Shakerian, A., Jafariyan, M., Ebrahimi, M., Riahi, M., 2009: Occurrence of aflatoxin M_1 in raw, pasteurized and UHT milk commercialized in Esfahan and Shahr-e Kord, Iran. Food Security 1, 317-320. doi: 10.1007/s12571-009-0028-9 (443).

Ray, A.C., Abitt, B., Cotter, S.R., Murphy, M.J., Reagor, J.C., Robinson, R.M., West, J.E., Whitford, H.W., 1986: Bovine abortion and death associated with consumption of aflatoxin-contaminated peanuts. Journal of American Veterinary Medical Association 188, 1187-1188 (313).

Razzazi, E., Böhm, J., Grajewski, J., Szczepaniak, K., Kübber-Heiss, A.J., Iben, C.H., 2001: Residues of ochratoxin A in pet foods, canine and feline kidneys. Journal of Animal Physiology and Animal Nutrition 85, 212-216 (308).

Richard, J.L., Dvorak, T.J., Ross, P.F., 1996: Natural occurrence of gliotoxin in turkeys infected with *Aspergillus fumigatus*, Fresenius. Mycopathologia 134, 167-170 (410).

Richir, C., Paccalin, J., Faugeres, R., Moreux, M., Audry, S., N'Diaye, P., 1980: Searching for mycotoxins in human body fluids and viscera. Zentralblatt für Bakteriologie, Mikrobiologie und Hygiene Abt. 1 Orig. A 246 (Suppl. 8), 337-342 (89).

Riley, R.T., Torres, O., Showker, J.L., Zitomer, N.C., Matute, J., Voss, K.A., Gelineau-van Waes, J., Maddox, J.R., Gregory, S.G., Ashley-Koch, A.E., 2012: The kinetics of urinary fumonisin B_1 excretion in humans consuming maize-based diets. Molecular Nutrition & Food Research 56, 1445-1455. doi: 10.1002/mnfr.201200166 (279).

Rodriguez Velasco, M.L., Calonge Delso, M.M., Ordónez Escudero, D., 2003: ELISA and HPLC determination of the occurrence of aflatoxin M_1 in raw cow's milk. Food Additives and Contaminants 20, 276-280. doi: 10/1080/0265203021000045208 (347).

Rodríguez-Carrasco, Y., Moltó, J.C., Mañes, J., Berrada, H., 2014: Development of a GC-MS/MS strategy to determine 15 mycotoxins and metabolites in human urine. Talanta 128, 125-131. doi: 10.1016/j.talanta.2014.04.072 (464).

Rodríguez-Carrasco, Y., Moltó, J.C., Mañes, J., Berrada, H., 2014: Exposure assessment approach through mycotoxin/creatinine ratio evaluation in urine by GC-MS/MS. Food and Chemical Toxicology 72, 69-75. doi: 10.1016/j.fct.2014.07.014 (463).

Rogan, W.J., Yang, G.C., Kimborough, R.D., 1985: Aflatoxin and Reye's Syndrome: a study of livers from deceased cases. Archives of Environmental Health 40, 91-95 (94).

Rohani, F.G., Aminaee, M.M., Kianfar, M., 2011: Survey of aflatoxin M_1 in cow's milk for human consumption in Kerman Province of Iran. Food Additives and Contaminants: Part B 4, 191-194. doi: 10.1080/19393210.2011.599866 (444).

Rosner, H., Rohrmann, B., Peiker, G., 2000: Ochratoxin A in human serum. Archiv für Lebensmittelhygiene 51, 104-107 (1).

Rousseau, D.M., Candlish, A.A.G., Slegers, G.A., van Peteghem, C.H., Stimson, W.H., Smith, J.E., 1987: Detection of ochratoxin A in porcine kidneys by a monoclonal antibody-based radioimmunoassay. Applied and Environmental Microbiology 53, 514-518 (389).

Rousseau, D.M., Slegers, G.A., van Peteghem, C.H., 1986: Solid-phase radioimmunoassay of ochratoxin A in serum. Journal of Agricultural and Food Chemistry 34, 862-865 (407).
Rousseau, D.M., van Peteghem, C.H., 1989: Spontaneous occurrence of ochratoxin A residues in porcine kidneys in Belgium. Bulletin of Environmental Contamination and Toxicology 42, 181-186 (390).
Roussi, V., Govaris, A., Varagouli, A., Botsoglou, N.A., 2002: Occurrence of aflatoxin M_1 in raw and market milk commercialized in Greece. Food Additives and Contaminants 19, 863-868. doi: 10.1080/02652030210146864 (332).
Ruangwises, N., Ruangwises, S., 2010: Aflatoxin M_1 contamination in raw milk within the central region of Thailand. Bulletin of Environmental Contamination and Toxicology 85, 195-198. doi: 10.1007/s00128-010-0056-3 (445).
Rubert, J., León, N., Sáez, C., Martins, C.P.B., Godula, M., Yusà, V., Mañes, J., Soriano, J.M., Soler, C., 2014: Evaluation of mycotoxins and their metabolites in human breast milk using liquid chromatography coupled to high resolution mass spectrometry. Analytica Chimica Acta 820, 39-46. doi: 10.1016/j.aca.2014.02.009 (275).
Rubert, J., Soriano, J.M., Mañes, J., Soler, C., 2011: Rapid mycotoxin analysis in human urine: a pilot study. Food and Chemical Toxicology 49, 2299-2304. doi: 10.1016/j.fct.2011.06.030 (276).
Rutqvist, L., Björklund, N.-E., Hult, K., Gatenbeck, S., 1977: Spontaneous occurrence of ochratoxin residues in kidneys of fattening pigs. Zentralblatt für Veterinär Medizin A 24, 402-408 (391).
Ruprich, J., Ostrý, V., 1993: Study of human exposure to ochratoxin A and assessment of possible sources. Central European Journal of Public Health 1, 46-48 (168).
Ruprich, J., Ostrý, V., 1993: Health risk assessment of the mycotoxin ochratoxin A to humans: Czech Republic – Brno – 1991/1992. Central European Journal of Public Health 1, 86-93 (176).
Ryan, N.J., Hogan, G.R., Hayes, A.W., Unger, P.D., Siraj, M.V., 1979: Aflatoxin B_1: its role in the etiology of Reye's Syndrome. Pediatrics 64, 71-75 (8).
Saad, A.M., Abdelgadir, A.M., Moss, M.O., 1989: Aflatoxin in human and camel milk in Abu Dhabi, United Arab Emirates. Mycotoxin Research 5, 57-60 (56).
Saad, A.M., Abdelgadir, A.M., Moss, M.O., 1995: Exposure of infants to aflatoxin M_1 from mothers' breast milk in Abu Dhabi, UAE. Food Additives and Contaminants 12, 255-261 (57).
Sabino, M., Purchio, A., Milanez, T.V., 1996: Survey of aflatoxins B_1, M_1 and aflatoxicol in poultry and swine tissues from farms located in the states of Rio Grande Do Sul and Santa Catarina, Brazil. Revista de Microbiologia 27, 189-191 (376).
Sabino, M., Purchio, A., Zorzetto, M.A.P., 1989: Variations in the levels of aflatoxin in cows milk consumed in the city of São Paulo, Brazil. Food Additives and Contaminants 6, 321-326 (333).
Sadeghi, N., Oveisi, M.R., Jannat, B., Hajimahmoodi, M., Bonyani, H., Jannat, F., 2009: Incidence of aflatoxin M_1 in human breast milk in Tehran, Iran. Food Control 20, 75-78. doi: 10.1016/j.foodcont.2008.02.005 (58).
Saitanu, K., 1997: Incidence of aflatoxin M_1 in Thai milk products. Journal of Food Protection 60, 1010-1012 (334).
Salem, D.A., 2002: Natural occurrence of aflatoxins in feedstuffs and milk of dairy farms in Assiut Province, Egypt. Wiener Tierärztliche Monatsschrift 89, 86-91 (335).
Sambuu, R., Takagi, M., Shiga, S., Uno, S., Kokushi, E., Namula, Z., Otoi, T., Miyamoto, A., Deguchi, E., Fink-Gremmels, J., 2011: Detection of zearalenone and its metabolites in naturally contaminated porcine follicular fluid by using liquid chromatography-tandem mass spectrometry. Journal of Reproduction and Development 57, 303-306 (446).
Sangare-Tigori, B., Moukha, S., Kouadio, J.H., Dano, D.S., Betbeder, A.-M., Achour, A., Creppy, E.E., 2006: Ochratoxin A in human blood in Abidjan, Côte d'Ivoire. Toxicon 47, 894-900. doi: 10.1016/j.toxicon.2006.03.001 (35).
Santini, A., Raiola, A., Ferrantelli, V., Giangrosso, G., Macaluso, A., Bognanno, M., Galvano, F., Ritieni, A., 2013: Aflatoxin M_1 in raw, UHT milk and dairy products in Sicily (Italy). Food Additives and Contaminants: Part B 6, 181-186. doi: 10.1080/19393210.2013.780186 (447).
Šarkanj, B., Warth, B., Uhlig, S., Abia, W.A., Sulyok, M., Klapec, T., Krska, R., Banjari, I., 2013: Urinary analysis reveals high deoxynivalenol exposure in pregnant women from Croatia. Food and Chemical Toxicology 62, 231-237. doi: 10.1016/j.fct.2013.08.043 (277).

Sassahara, M., Pontes Netto, D., Yanaka, E.K., 2005: Aflatoxin occurrence in foodstuff supplied to dairy cattle and aflatoxin M_1 in raw milk in the north of Paraná State. Food and Chemical Toxicology 43, 981-984. doi: 10.1016/j.fct.2005.02.003 (336).

Scaglioni, P.T., Becker-Algeri, T., Drunkler, D., Badiale-Furlong, E., 2014: Aflatoxin B_1 and M_1 in milk. Analytica Chimica Acta 829, 68-74. doi: 10.1016/j.aca.2014.04.036 [and personal communication] (385).

Schiavone, A., Cavallero, C., Girotto, L., Pozzo, L., Antoniazzi, S., Cavallarin, L., 2008: A survey on the occurrence of ochratoxin A in feeds and sera collected in conventional and organic poultry farms in northern Italy. Italian Journal of Animal Science 7, 495-503 (448).

Schuddeboom, L.J., 1983: Development of legislation concerning mycotoxins in dairy products in The Netherlands. Microbiologie – Aliments – Nutrition 1, 179-185 (337).

Scott, P.M., Kanhere, S.R., Lau, B.P.-Y., Lewis, D.A., Hayward, S., Ryan, J.J., Kuiper-Goodman, T., 1998: Survey of Canadian human blood plasma for ochratoxin A. Food Additives and Contaminants 15, 555-562 (108).

Sefidgar, S.A.A., Azizi, G., Khosravi, A.R., Roudbar-Mohammadi, S., 2008: Presence of aflatoxin M_1 in raw milk at cattle farms in Babol, Iran. Pakistan Journal of Biological Science 11, 484-486 (314).

Sewram, V., Mshicileli, N., Shephard, G.S., Marasas, W.F.O., 2003: Fumonisin mycotoxins in human hair. Biomarkers 8, 110-118. doi: 10.1080/1354750031000081002 (80).

Shank, R.C., Bourgeois, C.H., Keschamras, N., Chandavimol, P., 1971: Aflatoxins in autopsy specimens from Thai children with an acute disease of unknown aetiology. Food and Cosmetics Toxicology 9, 501-507 (2).

Sheabar, F.Z., Groopman, J.D., Qian, G.-S., Wogan, G.N., 1993: Quantitative analysis of aflatoxin – albumin adducts. Carcinogenesis 14, 1203-1208 (126).

Shephard, G.S., Burger, H.-M., Gambacorta, L., Gong, Y.Y., Krska, R., Rheeder, J.P., Solfrizzo, M., Srey, C., Sulyok, M., Visconti, A., Warth, B., van der Westhuizen, L., 2013: Multiple mycotoxin exposure determined by urinary biomarkers in rural subsistence farmers in the former Transkei, South Africa. Food and Chemical Toxicology 62, 217-225. doi: 10.1016/j.fct.2013.08.040 (278).

Shouman, B.O., El Morsi, D., Shabaan, S., Abdel-Hamid, A.H., Mehrim, A., 2012: Aflatoxin B_1 level in relation to child's feeding and growth. Indian Journal of Pediatrics 79, 56-61. doi: 10.1007/s12098-011-0493-y (280).

Shuaib, F.M.B., Jolly, P.E., Ehiri, J.E., Jiang, Y., Ellis, W.O., Stiles, J.K., Yatich, N.J., Funkhouser, E., Person, S.D., Wilson, C., Williams, J.H., 2010: Association between anemia and aflatoxin B_1 biomarker levels among pregnant women in Kumasi, Ghana. American Journal of Tropical Medicine and Hygiene 83, 1077-1083. doi: 10.4269/atmh.2010.09-0772 (281).

Shundo, L., Sabino, M., 2006: Aflatoxin M_1 in milk by immunoaffinity column cleanup with TLC/HPLC determination. Brazilian Journal of Microbiology 37, 164-167. doi: 10.1590/S1517-83822006000200013 (342).

Siddappa, V., Nanjegowda, K. D., Viswanath, P., 2012: Occurrence of aflatoxin M_1 in some samples of UHT, raw & pasteurized milk from Indian states of Karnataka and Tamilnadu. Food and Chemical Toxicology 50, 4158-4162. doi: 10.1016/j.fct.2012.08.034 (449).

Siray, M.Y., Hayes, A.W., Unger, P.D., Hogan, G.R., Ryan, N.J., Wray, B.B., 1981: Analysis of aflatoxin B_1 in human tissues with high-pressure liquid chromatography. Toxicology and Applied Pharmacology 58, 422-430 (7).

Skaug, M.A., 2003: Levels of ochratoxin A and IGG against conidia of *Penicillium verrucosum* in blood samples from healthy farm workers. Annals of Agricultural and Environmental Medicine 10, 73-77 (36).

Skaug, M.A., Helland, I., Solvoll, K., Saugstad, O.D., 2001: Presence of ochratoxin A in human milk in relation to dietary intake. Food Additives and Contaminants 18, 321-327. doi: 10.1080/02652030010021477 (68).

Skaug, M.A., Størmer, F.C., Saugstad, O.D., 1998: Ochratoxin A: a naturally occurring mycotoxin found in human milk samples from Norway. Acta Pædiatrica 87, 1275-1278 (69).

Sodeinde, O., Chan, M.C.K., Maxwell, S.M., Familusi, J.B., Hendrickse, R.G., 1995: Neonatal jaundice, aflatoxins and naphthols: report of a study in Ibadan, Nigeria. Annals of Tropical Paediatrics 15, 107-113 (116).

Soini, Y., Chia, S.C., Bennett, W.P., Groopman, J.D., Wang, J.-S., de Benedetti, V.M.G., Cawley, H., Welsh, J.A., Hansen, C., Bergasa, N.V., Jones, E.A., di Bisceglie, A.M., Trivers, G.E., Sandoval, C.A., Calderon, I.E., Munoz Espinosa, L.E., Harris, C.C., 1996: An aflatoxin-associated mutational hotspot at codon 249 in the *p53* tumor suppressor gene occurs in hepatocellular carcinomas from Mexico. Carcinogenesis 17, 1007-1012 (128).

Solfrizzo, M., Gambacorta, L., Lattanzio, V.M., Powers, S., Visconti, A., 2011: Simultaneous LC-MS/MS determination of aflatoxin M_1, ochratoxin A, deoxynivalenol, de-epoxydeoxynivalenol, α and ß-zearalenols and fumonisin B_1 in urine as a multibiomarker method to assess exposure to mycotoxins. Analytica Chimica Acta 401, 2831-2841. doi: 10.1007/s00216-011-5354-z (282).

Solfrizzo, M., Gambacorta, L., Visconti, A., 2014: Assessment of multi-mycotoxin exposure in southern Italy by urinary multi-biomarker determination. Toxins (Basel) 6, 523-538. doi: 10.3390/toxins6020523 (283).

Solti, L., Salamon, F., Barna-Vetró, I., Gyöngyösi, Á., Szabó, E., Wölfling, A., 1997: Ochratoxin A content of human sera determined by a sensitive ELISA. Journal of Analytical Toxicology 21, 44-48 (165).

Song, S., Njumbe Ediage, E., Wu, A., de Saeger, S., 2013: Development and application of salting-out assisted liquid/liquid extraction for multi-mycotoxin biomarkers analysis in pig urine with high performance liquid chromatography/tandem mass spectrometry. Journal of Chromatography A 1292, 111-120. doi: 10.1016/j.chroma.2012.10.071 (450).

Srivastava, V.P., Bu-Abbas, A., Alaa-Basuny, Al-Johar, W., Al-Mufti, S., Siddiqui, M.K.J., 2001: Aflatoxin M_1 contamination in commercial samples of milk and dairy products in Kuwait. Food Additives and Contaminants 18, 993-997. doi: 10.1080/02652030110050357 (338).

Srivatanakul, P., Parkin, D.M., Jiang, Y.-Z., Khlat, M., Kao-Ian, U.-T., Sontipong, S., Wild, C., 1991: The role of infection by *Opisthorchis viverrini*, hepatitis B virus, and aflatoxin exposure in the etiology of liver cancer in Thailand. Cancer 68, 2411-2417 (196).

Srey, C.S., Kimanya, M., Routledge, M.N., Shirima, C.P., Gong, Y.Y., 2014: Deoxynivalenol exposure assessment in young children in Tanzania. Molecular Nutrition & Food Research 58, 1574-1580. doi: 10.1002/mnfr.201400012 (465).

Stoev, S.D., Dutton, M.F., Njobeh, P.B., Mosonik, J.S., Steenkamp, P.A., 2010: Mycotoxic nephropathy in Bulgarian pigs and chickens: complex aetiology and similarity to Balkan Endemic Nephropathy. Food Additives and Contaminants: Part A 27, 72-88. doi: 10.1080/02652030903207227 (402).

Stora, C., Dvorackova, I., Ayraud, N., 1981: Characterization of aflatoxin B_1 (AFB) in human liver cancer. Research Communications in Chemical Pathology and Pharmacology 31, 77-85 (86).

Stubblefield, R.D., Honstead, J.P., Shotwell, O.L., 1991: An analytical survey of aflatoxins in tissues from swine grown in regions reporting 1988 aflatoxin-contaminated corn. Journal of the Association of Official Analytical Chemists 74, 897-899 (374).

Studer-Rohr, I., Schlatter, J., Dietrich, D.R., 2000: Kinetic parameters and intraindividual fluctuations of ochratoxin A plasma levels in humans. Archives of Toxicology 74, 499-510. doi: 10.1007/s002040000157 (101).

Sun, Z., Lu, P., Gail, M.H., Pee, D., Zhang, Q., Ming, L., Wang, J., Wu, Y., Liu, G., Wu, Y., Zhu, Y., 1999: Increased risk of hepatocellular carcinoma in male hepatitis B surface antigen carriers with chronic hepatitis who have detectable urinary aflatoxin metabolite M_1. Hepatology 30, 379-383 (199).

Suzangar, M., Emami, A., Barnett, R., 1976: Aflatoxin contamination of village milk in Isfahan, Iran. Tropical Science 18, 155-159 (339).

Sylla, A., Diallo, M.S., Castegnaro, J.-J., Wild, C.P., 1999: Interactions between hepatitis B virus infection and exposure to aflatoxins in the development of hepatocellular carcinoma: a molecular epidemiological approach. Mutation Research 428, 187-196 (156).

Szuets, P., Mesterhazy, A., Falkay, GY., Bartok, T., 1997: Early telarche symptoms in children and their relations to zearalenon contamination in foodstuffs. Cereal Research Communications 25, 429-436 (179).

Tajik, H., Rohani, S.M.R., Moradi, M., 2007: Detection of aflatoxin M_1 in raw and commercial pasteurized milk in Urmia, Iran. Pakistan Journal of Biological Sciences 10, 4103-4107 (341).

Tajkarimi, M., Shojaee Aliabadi, F., Salah Nejad, M., Pursoltani, H., Motallebi, A.A., Mahdavi, H., 2007: Seasonal study of aflatoxin M_1 contamination in milk in five regions in Iran. International Journal of Food Microbiology 116, 346-349. doi: 10.1016/j.ijfoodmicro.2007.02.008 (344).

Tang, L., Tang, M., Xu, L., Luo, H., Huang, T., Yu, J., Zhang, L., Gao, W., Cox, S.B., Wang, J.-S., 2008: Modulation of aflatoxin biomarkers in human blood and urine by green tea polyphenols intervention. Carcinogenesis 29, 411-417. doi: 10.1093/carcin/bgn008 (134).

Tang, L., Xu, L., Afriyie-Gyawu, E., Liu, W., Wang, P., Tang, Y., Wang, Z., Huebner, H.J., Ankrah, N.-A., Ofori-Adjei, D., Williams, J.H., Wang, J.-S., Phillips, T.D., 2009: Aflatoxin-albumin adducts and correlation with decreased serum levels of vitamins A and E in an adult Ghanaian population. Food Additives and Contaminants: Part A 26, 108-118. doi: 10.1080/02652030802308472 (360).

Tangni, E.K., Waegeneers, N., van Overmeire, I., Goeyens, L., Pussemier, L., 2009: Mycotoxin analyses in some home produced eggs in Belgium reveal small contribution to the total intake. Science of the Total Environment 407, 4411-4418. doi: 10.1016/j.scitotenv.2008.10.060 (302).

Tápai, K., Téren, J., Mesterházy, Á., 1997: Ochratoxin A in the sera of blood donors and ill persons. Cereal Research Communications 25, 307-308 (170).

Tchana, A.N., Moundipa, P.F., Tchouanguep, F.M., 2010: Aflatoxin contamination in food and body fluids in relation to malnutrition and cancer status in Cameroon. International Journal of Environmental Research and Public Health 7, 178-188. doi: 10.3390/ijerph7010178 (284).

Thieu, N.Q., Pettersson, H., 2009: Zearalenone, deoxynivalenol and aflatoxin B_1 and their metabolites in pig urine as biomarkers for mycotoxin exposure. Mycotoxin Research 25, 59-66. doi: 10.1007/s12550-009-0009-z (451).

Thirumala-Devi, K., Mayo, M.A., Hall, A.J., Craufurd, P.Q., Wheeler, T.R., Waliyar, F., Subrahmanyam, A., Reddy, D.V.R., 2002: Development and application of an indirect competitive enzyme-linked immunoassay for aflatoxin M_1 in milk and milk-based confectionery. Journal of Agricultural and Food Chemistry 50, 933-937. doi: 10.1021/jf011139b (305).

Thuvander, A., Paulsen, J.E., Axberg, K., Johansson, N., Vidnes, A., Enghardt-Barbieri, H., Trygg, K., Lund-Larsen, K., Jahrl, S., Widenfalk, A., Bosnes, V., Alexander, J., Hult, K., Olsen, M., 2001: Levels of ochratoxin A in blood from Norwegian and Swedish blood donors and their possible correlation with food consumption. Food and Chemical Toxicology 39, 1145-1151 [and personal communication] (39).

Tomaszewski, J., Mitурski, R., Semezuk, A., Kotarski, J., Jakowicki, J., 1998: Tissue zearalenone concentrations in normal, hyperplastic and neoplastic human endometrium. Ginkologia Polska 69, 363-366 (75).

Tsuboi, S., Nakagawa, T., Tomita, M., Seo, T., Ono, H., Kawamura, K., Iwamura N., 1984: Detection of aflatoxin B_1 in serum samples of male Japanese subjects by radioimmunoassay and high-performance liquid chromatography. Cancer Research 44, 1231-1234 (123).

Turconi, G., Guarcello, M., Livieri, C., Comizolli, S., Maccarini, L., Castellazzi, A.M., Pietri, A., Piva, G., Roggi, C., 2004: Evaluation of xenobiotics in human milk and ingestion by the newborn. An epidemiological survey in Lombardy (Northern Italy). European Journal of Nutrition 43, 191-197. doi: 10.1007/s00394-004-0458-2 (48).

Turner, P.C., Burley, V.J., Rothwell, J.A., White, K.L.M., Cade, J.E., Wild, C.P., 2008: Dietary wheat reduction decreases the level of urinary deoxynivalenol in UK adults. Journal of Exposure Science and Environmental Epidemiology 18, 392-399 (208).

Turner, P.C., Collison, A.C., Cheung, Y.B., Gong, Y.Y., Hall, A.J., Prentice, A.M., Wild, C.P., 2007: Aflatoxin exposure *in utero* causes growth faltering in Gambian infants. International Journal of Epidemiology 36, 1119-1125. doi: 10.1093/ije/dym122 (22).

Turner, P.C., Dingley, K.H., Coxhead, J., Russell, S., Garner, C.R., 1998: Detectable levels of serum aflatoxin B_1-albumin adducts in the United Kingdom population: implications for aflatoxin-B_1 exposure in the United Kingdom. Cancer Epidemiology, Biomarkers & Prevention 7, 441-447 (140).

Turner, P.C., Gong, Y.Y., Pourshams, A., Jafari, E., Routledge, M.N., Malekzadeh, R., Wild, C.P., Boffetta, P., Islami, F., 2012: A pilot survey for *Fusarium* mycotoxin biomarkers in women from Golestan, northern Iran. World Mycotoxin Journal 5, 195-199. doi: 10.3920/WMJ2011.1337 (285).

Turner, P.C., Hopton, R.P., Lecluse, Y., White K.L.M., Fisher, J., Lebailly, P., 2010: Determinants of urinary deoxynivalenol and de-epoxy-deoxynivalenol in male farmers from Normandy, France. Journal of Agricultural and Food Chemistry 58, 5206-5212. doi: 10.1021/jf100892v (286).

Turner, P.C., Hopton, R.P., White K.L.M., Fisher, J., Cade, J.E., Wild, C.P., 2011: Assessment of deoxynivalenol metabolite profiles in UK adults. Food and Chemical Toxicology 49, 132-135. doi: 10.1016/j.fct.2010.10.007 (287).

Turner, P.C., Ji, B.T., Shu, X.O., Zheng, W., Chow, W.H., Gao, Y.T., Hardie, L.J., 2011: A biomarker survey of urinary deoxynivalenol in China: the Shanghai Women's Health Study. Food Additives and Contaminants: Part A 28, 1220-1223. doi: 10.1080/19440049.2011.584070 (288).

Turner, P.C., Loffredo, C., El Kafrawy, S., Ezzat, S., Abdel Latif Eissa, S., El Daly, M., Nada, O., Abdel-Hamid, M., 2008: Pilot survey of aflatoxin-albumin adducts in sera from Egypt. Food Additives and Contaminants: Part A 25, 583-587. doi: 10.1080/02652030701713939 (155).

Turner, P.C., Mendy, M., Whittle, H., Fortuin, M, Hall, A.J., Wild, C.P., 2000: Hepatitis B infection and aflatoxin biomarker levels in Gambian children. Tropical Medicine and International Health 5, 837-841 (145).

Turner, P.C., Moore, S.E., Hall, A.J., Prentice, A.M., Wild, C.P., 2003: Modification of immune function through exposure to dietary aflatoxin in Gambian children. Environmental Health Perspectives 111, 217-220 (147).

Turner, P.C., Rothwell, J.A., White, K.L.M., Gong, Y.Y., Cade, J.E., Wild, C.P., 2008: Urinary deoxynivalenol is correlated with cereal intake in individuals from the United Kingdom. Environmental Health Perspectives 116, 21-25. doi: 10.1289/ehp.10663 (207).

Turner, P.C., Sylla, A., Gong, Y.Y., Diallo, M.S., Sutcliffe, A.E., Hall, A.J., Wild, C.P., 2005: Reduction in exposure to carcinogenic aflatoxins by postharvest intervention measures in west Africa: a community-based intervention study. Lancet 365, 1950-1956 (23).

Turner, P.C., Sylla, A., Kuang, S.-Y., Marchant, C.L., Diallo, M.S., Hall, A.J., Groopman, J.D., Wild, C.P., 2005: Absence of *TP53* codon 249 mutations in young Guinean children with high aflatoxin exposure. Cancer Epidemiology, Biomarkers & Prevention 14, 2053-2055. doi: 10.1158/1055-9965EPI-04-0923 (24).

Turner, P.C., White, K.L.M., Burley, V.J., Hopton, R.P., Rajendram, A., Fisher, J., Cade, J.E., Wild, C.P., 2010: A comparison of deoxynivalenol intake and urinary deoxynivalenol in UK adults. Biomarkers 15, 553-562. doi: 10.3109/1354750X.2010.495787 (289).

Tyllinen, H., Hintikka, E.-L., 1982: Occurrence of ochratoxin A in swine kidneys and feed in Finland. Nordisk Jordbruksforskning 64, 298-299 (392).

Ueno, Y., Maki, S., Lin, J., Furuya, M., Sugiura, Y., Kawamura, O., 1998: A 4-year study of plasma ochratoxin A in a selected population in Tokyo by immunoassay and immunoaffinity column-linked HPLC. Food and Chemical Toxicology 36, 445-449 (105).

Valenta, H., Dänicke, S., Döll, S., 2003: Analysis of deoxynivalenol and de-epoxy-deoxynivalenol in animal tissues by liquid chromatography after clean-up with an immunoaffinity column. Mycotoxin Research 19, 51-55 (370).

van der Westhuizen, L., Shephard, G.S., Burger, H.M., Rheeder, J.P., Gelderblom, W.C.A., Wild, C.P., Gong, Y.Y., 2011: Fumonisin B_1 as a urinary biomarker of exposure in a maize intervention study among South African subsistence farmers. Cancer Epidemiology, Biomarkers & Prevention 20, 483-489. doi: 10.1158/1055-9965.EPI-10-1002 (290).

Viegas, S., Veiga, L., Malta-Vacas, J., Sabino, R., Figueredo, P., Almeida, A., Viegas, C., Carolino, E., 2012: Occupational exposure to aflatoxin (AFB_1) in poultry production. Journal of Toxicology and Environmental Health, Part A 75, 1330-1334. doi: 10.1080/15287394.2012.721164 (452).

Vinitketkumnuen, U., Chewonarin, T., Kongtawelert, P., Lertjanyarak, A., Peerakhom, S., Wild, C.P., 1997: Aflatoxin exposure is higher in vegetarians than in nonvegetarians in Thailand. Natural Toxins 5, 168-171 (291).

Visconti, A., Bottalico, A., Solfrizzo, M., 1985: Aflatoxin M_1 in milk, in southern Italy. Mycotoxin Research 1, 71-75 (340).

Vulic, A., Pleadin, J., Perši, N., Mitak, M., 2012: Analysis of naturally occurring zearalenone in feeding stuffs and urine of farm animals in Croatia. Journal of Immunoassay and Immunochemistry 33, 369-376. doi: 10.1080/15321819.2012.655821 (453).

Wafa, E.W., Yahya, R.S., Sobh, M.A., Eraky, I., El-Baz, M., El-Gayar, H.A.M., Betbeder, A.M., Creppy, E.E., 1998: Human ochratoxicosis and nephropathy in Egypt: a preliminary study. Human & Experimental Toxicology 17, 124-129 (113).

Wallin, S., Hardie, L.J., Kotova, N., Warensjö Lemming, E., Nälsén, C., Ridefelt, P., Turner, P.C., White, K.L.M., Olsen, M., 2013: Biomonitoring study of deoxynivalenol exposure and association with typical cereal consumption in Swedish adults. World Mycotoxin Journal 6, 439-448. doi: 10.3920/WMJ2013.1581 (292).

Wang, J.-S., Abubaker, S., He, X., Sun, G., Strickland, P.T., Groopman, J.D., 2001: Development of aflatoxin B_1-lysine adduct monoclonal antibody for human exposure studies. Applied and Environmental Microbiology 67, 2712-2717. doi: 10.1128/AEM.67.6.2712-2717.2001 (141).

Wang, J.-S., Huang, T., Su, J., Liang, F., Wei, Z., Liang, Y., Luo, H., Kuang, S.-Y., Qian, G.-S., Sun, G., He, X., Kensler, T.W., Groopman, J.D., 2001: Hepatocellular carcinoma and aflatoxin exposure in Zhuqing Village, Fusui County, People's Republic of China. Cancer Epidemiology, Biomarkers & Prevention 10, 143-146 (151).

Wang, J.-S., Qian, G.-S., Zarba, A., He, X., Zhu, Y.-R., Zhang B.-C., Jacobson, L., Gange, S.J., Muñoz, A., Kensler, T.W., Groopman, J.D., 1996: Temporal patterns of aflatoxin-albumin adducts in hepatitis B surface antigen-positive and antigen-negative residents of Daxin, Qidong County, People's Republic of China. Cancer Epidemiology, Biomarkers & Prevention 5, 253-261 (124).

Wang, J.-S., Shen, X., He, X., Zhu, Y.-R., Zhang, B.-C., Wang, J.-B., Qian, G.-S., Kuang, S.-Y., Zarba A., Egner, P.A., Jacobson, L.P., Muñoz, A., Helzlsouer, K.J., Groopman, J.D., Kensler, T.W., 1999: Protective alterations in phase 1 and 2 metabolism of aflatoxin B_1 by oltipraz in residents of Qidong, People's Republic of China. Journal of the National Cancer Institute 91, 347-354 (187).

Wang, P., Afriyie-Gyawu, E., Tang, Y., Johnson, N.M., Xu, L., Tang, L., Huebner, H.J., Ankrah, N.-A., Ofori-Adjei, D., Ellis, W., Jolly, P.E., Williams, J.H., Wang, J.-S., Phillips, T.D., 2008: NovaSil clay intervention in Ghanaians at high risk for aflatoxicosis: II. Reduction in biomarkers of aflatoxin exposure in blood and urine. Food Additives and Contaminants: Part A 25, 622-634. doi: 10.1080/02652030701598694 (457).

Warth, B., Sulyok, M., Berthiller, F., Schuhmacher, R., Fruhmann, P., Hametner, C., Adam, G., Fröhlich, J., Krska, R., 2011: Direct quantification of deoxynivalenol glucuronide in human urine as biomarker of exposure to the *Fusarium* mycotoxin deoxynivalenol. Analytical and Bioanalytical Chemistry 401, 195-200. doi: 10.1007/s00216-011-5095-z (293).

Warth, B., Sulyok, M., Fruhmann, P., Berthiller, F., Schuhmacher, R., Hametner, C., Adam, G., Fröhlivh, J., Krska, R., 2012: Assessment of human deoxynivalenol exposure using an LC-MS/MS based biomarker method. Toxicology Letters 211, 85-90. doi: 10.1016/j.toxlet.2012.02.023 (295).

Warth, B., Sulyok, M., Berthiller, F., Schuhmacher, R., Krska, R., 2013: New insights into the human metabolism of the *Fusarium* mycotoxins deoxynivalenol and zearalenone. Toxicology Letters 220, 88-94. doi: 10.1016/j.toxlet.2013.04.012 (294).

Wild, C.P., Fortuin, M., Donato, F., Whittle, H.C., Hall, A.J., Wolf, C.R., Montesano, R., 1993: Aflatoxin, liver enzymes, and hepatitis B virus infection in Gambian children. Cancer Epidemiology, Biomarkers & Prevention 2, 555-561 (125).

Wild, C.P., Jiang, Y.-Z., Allen, S.J., Jansen, L.A.M., Hall, A.J., Montesano, R., 1990: Aflatoxin-albumin adducts in human sera from different regions of the world. Carcinogenesis 11, 2271-2274 (120).

Wild, C.P., Jiang, Y-Z., Sabbioni, G., Chapot, B., Montesano, R., 1990: Evaluation of methods for quantitation of aflatoxin-albumin adducts and their application to human exposure assessment. Cancer Research 50, 245-251 (157).

Wild, C.P., Pionneau, F.A., Montesano, R., Mutiro, C.F., Chetsanga, C.J., 1987: Aflatoxin detected in human breast milk by immunoassay. International Journal of Cancer 40, 328-333 (63).

Wild, C.P., Umbenhauer, D., Chapot, B., Montesano, R., 1986: Monitoring of individual human exposure to aflatoxins (AF) and N-nitrosamines (NNO) by immunoassays. Journal of Cellular Biochemistry 30, 171-179 (189).

Wild, C.P., Yin, F., Turner, P.C., Chemin, I., Chapot, B., Mendy, M., Whittle, H., Kirk, G.D., Hall, A.J., 2000: Environmental and genetic determinants of aflatoxin-albumin adducts in The Gambia. International Journal of Cancer 86, 1-7 (119).

Wilkinson, A.P., Denning, D.W., Morgan, R.A., 1988: Analysis of UK sera for aflatoxin by enzyme-linked immunosorbent assay. Human Toxicology 7, 353-356 (149).

Wilkinson, A.P., Denning, D.W., Morgan, M.R.A., 1989: Immunoassay of aflatoxin in food and human tissue. Journal of Toxicology – Toxin Reviews 8, 69-79 (21).

Wray, B.B., Hayes, A.W., 1980: Aflatoxin B_1 in the serum of a patient with primary hepatic carcinoma. Environmental Research 22, 400-403 (122).

Xu, L., Cai, Q., Tang, L., Wang, S., Hu, X., Su, J., Sun, G., Wang, J.-S., 2010: Evaluation of fumonisin biomarkers in a cross-sectional study with two high-risk populations in China. Food Additives and Contaminants: Part A 27, 1161-1169. doi: 10.1080/19440049.2010.481638 (296).

Xu, L., Qian, G., Tang, L., Su, J., Wang, J.-S., 2010: Genetic variations of hepatitis B virus and serum aflatoxin-lysine adduct on high risk of hepatocellular carcinoma in southern Guangxi, China. Journal of Hepatology 53, 671-676 [and personal communication] (297).

Yang, G., Nesheim, S., Benavides, J., Ueno, I., Campbell, A.D., Pohland, A., 1980: Radioimmunoassay detection of aflatoxin B_1 in monkey and human urine. Zentralblatt für Bakteriologie, Mikrobiologie und Hygiene Abt. 1 Orig. A 246 (Suppl. 8), 329-335 (188).

Yard, E.E., Daniel, J.H., Lewis, L.S., Ryback, M.E., Paliakov, E.M., Kim, A.A., Montgomery, M., Bunnell, R., Abudo, M.U., Akhwale, W., Breiman, R.E., Sharif, S.K., 2013: Human aflatoxin exposure in Kenya, 2007: a cross-sectional study. Food Additives and Contaminants: Part A 30, 1322-1331. doi: 10.1080/19440049.2013.789558 (298).

Yu, M.-W., Chiang, Y.-C., Lien, J.-P., Chen, C.-J., 1997: Plasma antioxidant vitamins, chronic hepatitis B virus infection and urinary aflatoxin B_1-DNA adducts in healthy males. Carcinogenesis 18, 1189-1194 (184).

Yu, M.-W., Lien, J.-P., Liaw, Y.-F., Chen, C.-J., 1996: Effects of multiple risk factors for hepatocellular carcinoma on formation of aflatoxin B_1-DNA adducts. Cancer Epidemiology, Biomarkers & Prevention 5, 613-619 (194).

Zaied, C., Bouaziz, C., Azizi, I., Bensassi, F., Chour, A., Bacha, H., Abid, S., 2011: Presence of ochratoxin A in Tunisian blood nephropathy patients. Exposure level to OTA. Experimental and Toxicologic Pathology 63, 613-618. doi: 10.1016/j.etp.2010.05.001 (299).

Zarba, A., Wild, C.P., Hall, A.J., Montesano, R., Hudson, G.J., Groopman, J.D., 1992: Aflatoxin M_1 in human breast milk from The Gambia, West Africa, quantified by combined monoclonal antibody immunoaffinity chromatography and HPLC. Carcinogenesis 13, 891-894 (50).

Zheng, N., Wang, J.-Q., Han, R.-W., Zhen, Y.-P., Xu, X.-M., Sun, P., 2013: Survey of aflatoxin M_1 in raw milk in the five provinces of China. Food Additives and Contaminants: Part B 6, 110-115. doi: 10.1080/19393210.2012.763191 (454).

Zhu, J-Q., Zhang, L.-S., Hu, X., Xiao, Y., Chen, J.-S., Xu, Y.-C., Fremy, J., Chu, F.S., 1987: Correlation of dietary aflatoxin B_1 levels with excretion of aflatoxin M_1 in human urine. Cancer Research 47, 1848-1852 (186).

Zimmerli, B., Dick, R., 1995: Determination of ochratoxin A at the ppt level in human blood, serum, milk and some foodstuffs by high-performance liquid chromatography with enhanced fluorescence detection and immunoaffinity column cleanup: methodology and Swiss data. Journal of Chromatography B, 666, 85-99 (70).

Zlăvog, A.V., Cuciureanu, M., Şchiriac, E., Popa (Morariu), I., Diaconu, C., Cuciureanu, R., 2013: Estimation of ochratoxin A in the human blood of Romanian population. Medical Surgical Journal of the Society of Physicians and Naturalists, Jasi 117, 1009-1013 (300).**Sunt prepre commo qui ut venis re et acia nim dit, apedi tem quassunt moles molo quiatium exerum rae ma dit eature velesed mi, offici doluptatur, nobitat volecat magnatust, abore, vellacea dolore, imintib eroresti que sus vendiae cuptatur, il eatio mo bera consequae nam re, cus et molum**