

iMIS Food - Chemical Hazards - Mycotoxins Table

Mycotoxin	Fungus	Food products	Health effects	Preventive measures	Regulation	Comments
Aflatoxins	<i>Aspergillus</i> spp.	Cereals, nuts, spices, milk	Liver cancer, acute poisoning	Proper drying and storage, sorting of crops	• Reg. (EU) 2023/915	Highly toxic and heat-stable.
Ochratoxin A (OTA)	<i>Aspergillus</i> & <i>Penicillium</i> spp.	Cereals, coffee, wine, spices	Kidney damage, potential carcinogen	Moisture control during storage	• Reg. (EU) 2023/915	Can accumulate in the body over time.
Patulin	<i>Penicillium expansum</i> & others	Apples and apple products	Gastrointestinal issues (nausea, vomiting)	Using high-quality, undamaged fruit	• Reg. (EU) 2023/915	An indicator of poor quality raw fruit.
Deoxynivalenol (DON)	<i>Fusarium</i> spp.	Wheat, maize, barley, oats	Vomiting, diarrhoea, immune system effects	Good agricultural practices, proper grain drying	• Reg. (EU) 2023/915	Commonly known as "vomitoxin".
T-2 & HT-2 Toxins	<i>Fusarium</i> spp.	Oats, barley, wheat	Severe damage to skin and digestive tract, immune suppression	Good agricultural practices	• Reg. (EU) 2023/915	Among the most toxic of the <i>Fusarium</i> toxins.
Zearalenone (ZEA)	<i>Fusarium</i> spp.	Maize, wheat, barley	Hormonal and reproductive problems	Good agricultural practices	• Reg. (EU) 2023/915	Acts like the hormone estrogen.
Fumonisin	<i>Fusarium</i> spp.	Maize and maize products	Probable carcinogen, toxic to nerves and liver	Good agricultural practices, resistant crop varieties	• Reg. (EU) 2023/915	Mainly a concern in maize-based diets.
Ergot Alkaloids	<i>Claviceps</i> spp.	Rye, wheat, triticale	Causes ergotism (seizures, gangrene)	Cleaning of grain to remove sclerotia (ergots)	• Reg. (EU) 2023/915	Historically caused widespread poisoning epidemics.
Alternaria Toxins	<i>Alternaria</i> spp.	Cereals, tomatoes, sunflower seeds	Potential genetic damage, acute toxicity	Good agricultural practices	No specific MLs set; monitoring recommended	An "emerging" group of mycotoxins of growing concern.

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Citrinin	<i>Penicillium</i> , <i>Aspergillus</i> , <i>Monascus</i> spp.	Grains, red yeast rice supplements	Kidney damage	Control of mould during storage and fermentation	• Reg. (EU) 2023/915	Regulated only in red yeast rice supplements.
Sterigmatocystin	<i>Aspergillus</i> spp.	Cereals, coffee, cheese	Liver cancer, genetic damage	Good storage practices	No specific MLs have been set	A chemical precursor to aflatoxins.

