

Mycotoxin Regulations for Food and Feed in the EU

AFLATOXIN

Aflatoxin in Food

Commodity	Maximum Level		
	B1	Total	M1
Groundnuts (peanuts) and other oilseeds for sorting or processing	8 ppb	15 ppb	-
Groundnuts (peanuts) and other oilseeds intended for direct human consumption	2 ppb	4 ppb	-
Almonds, pistachios and apricot kernels for sorting or processing	12 ppb	15 ppb	-
Almonds, pistachios and apricot kernels intended for direct human consumption	8 ppb	10 ppb	-
Hazelnuts and Brazil nuts for sorting or processing	8 ppb	15 ppb	-
Hazelnuts and Brazil nuts intended for direct human consumption	5 ppb	10 ppb	-
Tree nuts, other than those listed for sorting and processing	5 ppb	10 ppb	-
Tree nuts, other than those listed intended for direct human consumption	2 ppb	4 ppb	-
Dried fruit for sorting and processing	5 ppb	10 ppb	-
Dried fruit intended for direct human consumption	2 ppb	4 ppb	-
Maize and rice (including brown rice) for sorting and processing	5 ppb	10 ppb	-
All cereals, including maize and rice, intended for direct human consumption	2 ppb	4 ppb	-
Spices (capsicum, pepper, nutmeg, ginger, turmeric)	5 ppb	10 ppb	-
Milk (raw milk, milk for manufacturing of milk based products and heat treated milk)	-	-	0.05 ppb
Baby foods and processed cereal based foods for infants and young children	0.1 ppb	-	-
Infant formulae and follow-on formulae, including infant milk and follow-on milk	-	-	0.025 ppb
Dietary foods for special medical purposes intended specifically for infants	0.1 ppb	-	0.025 ppb

Aflatoxin in Feed

Commodity	Maximum Level (B1)
All feed materials	20 ppb
Complementary and complete feed	10 ppb
Complementary and complete feed with the exception of:	
• compound feed for dairy cattle and calves, dairy sheep and lambs, dairy goats and kids, piglets and young poultry animals	5 ppb

FUMONISIN

Fumonisin in Food

Commodity	Maximum Level (B1 & B2)
Unprocessed maize not intended for wet milling	4000 ppb
Maize and maize based foods intended for direct human consumption	1000 ppb
Maize based breakfast cereals and maize based snacks	800 ppb
Processed maize based foods and baby foods for infants and young children	200 ppb

Fumonisin in Feed

Commodity	Guidance Level (B1 & B2)
Maize and maize based products	60 ppm
Complementary and complete feeding stuffs for pigs, horses, rabbits and pet animals	5 ppm
Complementary and complete feeding stuffs for fish	10 ppm
Complementary and complete feeding stuffs for poultry, calves (<4 months), lambs and kids	20 ppm
Complementary and complete feeding stuffs for adult ruminants (>4 months) and mink	50 ppm

OCHRATOXIN A

Ochratoxin in Food

Commodity	Maximum Level
Unprocessed cereals	5 ppb
All products derived from unprocessed cereals (including cereal products and cereal grains intended for direct human consumption)	3 ppb
Dried wine fruit (currants, raisins and sultanas)	10 ppb
Roasted coffee beans and ground roasted coffee	5 ppb
Soluble coffee (instant coffee)	10 ppb
Wine (including sparkling wine, excluding liqueur wine and wine with an alcoholic strength of not less than 15 % volume) and fruit wine	2 ppb
Flavoured wine, flavoured wine based drinks and flavoured wine product cocktails	2 ppb
Grape juice, concentrated grape juice as reconstituted, grape nectar, grape must and concentrated must as reconstituted, intended for direct human consumption	2 ppb
Species of spices (including white and black pepper, nutmeg, ginger and turmeric, excluding <i>Capsicum</i> spp.)	15 ppb
<i>Capsicum</i> spp. spices (including chillies, chilli powder, cayenne and paprika)	20 ppb
Mixtures of spices	15 ppb
Liquorice root	20 ppb
Liquorice extract	80 ppb
Baby foods and processed cereal based foods for infants and young children	0.5 ppb
Dietary foods for special medical purposes intended specifically for infants	0.5 ppb
Wheat gluten not sold directly to the consumer	8 ppb

Ochratoxin in Feed

Commodity	Guidance Level
Cereals and cereal products	0.25 ppm
Complementary and complete feeding stuffs for pigs	0.05 ppm
Complementary and complete feeding stuffs for poultry	0.1 ppm
Complementary and complete feeding stuffs for cats and dogs	0.01 ppm

CITRININ

Citrinin in Food

Commodity	Maximum Level
Food supplements based on rice fermented with red yeast <i>Monascus purpureus</i>	2000 ppb

PATULIN

Patulin in Food

Commodity	Maximum Level
Fruit juices and drinks containing apple juice or derived from apples	50 ppb
Solid apple products, such as apple puree, intended for direct human consumption	25 ppb
Apple juice and solid apple products for infants and young children	10 ppb

ZEARALENONE

Zearalenone in Food

Commodity	Maximum Level
Unprocessed cereals other than maize	100 ppb
Unprocessed maize	350 ppb
Cereals intended for direct human consumption, cereal flour, bran as end product for direct human consumption	75 ppb
Maize intended for direct human consumption, maize based snacks and maize based breakfast cereals	100 ppb
Refined maize oil	400 ppb
Bread, pastries, biscuits, cereal snacks and breakfast cereals	50 ppb
Processed cereal and maize based foods and baby foods for infants and young children	20 ppb

Zearalenone in Feed

Commodity	Guidance Level
Cereals and cereal products with the exception of maize by-products	2 ppm
Maize by-products	3 ppm
Complementary and complete feeding stuffs for piglets, gilts (young sows), puppies, kittens, dogs and cats for reproduction	0.1 ppm
Complementary and complete feeding stuffs for adult dogs and cats other than for reproduction	0.2 ppm
Complementary and complete feeding stuffs for sows and fattening pigs	0.25 ppm
Complementary and complete feeding stuffs for calves, dairy cattle, sheep (including lamb) and goats (including kids)	0.5 ppm

T-2 & HT-2

T-2 & HT-2 in Food

Commodity	Guidance Level (T-2 & HT-2)
Unprocessed cereals	
• Barley (including malting barley) in maize	200 ppb
• Oats (with husk)	1000 ppb
• Wheat, rye and other cereals	100 ppb
Cereal grains for direct human consumption	
• Oats	200 ppb
• Maize	100 ppb
• Other cereals	50 ppb
Cereal products for human consumption	
• Oat bran and flaked oats	200 ppb
• Cereal bran except oat bran, oat milling products other than oat bran and flaked oats and maize milling products	100 ppb
• Other cereal milling products	50 ppb
• Breakfast cereals including formed cereal flakes	75 ppb
• Bread (including small bakery wares), pastries, biscuits, cereal snacks, pasta	25 ppb
• Cereal-based foods for infants and young children	15 ppb

T-2 & HT-2 in Feed

Commodity	Guidance Level
Cereal products for feed and compound feed:	
• Oat milling products (husks)	2000 ppb
• Other cereal products	500 ppb
• Compound feed, with the exception of feed for cats	250 ppb
• Compound feed for cats	50 ppb

DEOXYNIVALENOL

Deoxynivalenol in Food

Commodity	Maximum Level
Unprocessed cereals (excluding durum wheat, oats and maize)	1250 ppb
Unprocessed durum wheat and oats	1750 ppb
Unprocessed maize	1750 ppb
Cereal flour, maize flour, maize, grits and maize meal	750 ppb
Bread, biscuits, pastries, cereal snacks and breakfast cereals	500 ppb
Dry pasta	750 ppb
Processed cereal based baby and infant food	200 ppb

Deoxynivalenol in Feed

Commodity	Guidance Level
Cereals and cereal products with the exception of maize by-products	8 ppm
Maize by-products	12 ppm
Complementary and complete feeding stuffs	5 ppm
Complementary and complete feeding stuffs for pigs	0.9 ppm
Complementary and complete feeding stuffs for calves (<4 months), lambs, kids and dogs	2 ppm

ERGOT ALKALOIDS

Ergotalkaloids/Rye Ergot (*Claviceps purpurea*) in Feed

Commodity	Maximum Level
Feed materials and compound feed containing unground cereals	1000 ppm

TROPANE ALKALOIDS

Tropane Alkaloids (Atropine and Scopolamine) in Food

Commodity	Maximum Level
Processed cereal-based foods and baby foods for infants and young children, containing millet, sorghum, buckwheat or their derived products	1 ppb

References - Regulations for Food and Feed

Commission Regulation (EC) No 1881/2006	Commission Regulation (EC) No 1137/2015
Commission Regulation (EC) No 1126/2007	Commission Regulation (EC) No 239/2016
Commission Regulation (EC) No 105/2010	Directive 2002/32/EC
Commission Regulation (EC) No 165/2010	Commission Recommendation 2006/576/EU
Commission Recommendation 2013/165/EU	Commission Recommendation 2013/627/EU
Commission Regulation (EC) No 212/2014	Commission Recommendation 2016/1319/EU

August 2016