## $\label{eq:annex} ANNEX$ Maximum levels for certain contaminants in foodstuffs $(^1)$

Section 1: Nitrate

Foodstuffs (1)		Maximum levels (mg NO <sub>3</sub> /kg)	
1.1	Fresh spinach (Spinacia oleracea) (2)	Harvested 1 October to 31 March Harvested 1 April to 30 September	3 000 2 500
1.2	Preserved, deep-frozen or frozen spinach		2 000
1.3	Fresh Lettuce ( <i>Lactuca sativa</i> L.) (protected and open-grown lettuce) excluding lettuce listed in point 1.4	Harvested 1 October to 31 March: lettuce grown under cover lettuce grown in the open air Harvested 1 April to 30 September: lettuce grown under cover lettuce grown in the open air	4 500 4 000 3 500 2 500
1.4	Iceberg-type lettuce	Lettuce grown under cover Lettuce grown in the open air	2 500 2 000
1.5	Processed cereal-based foods and baby foods for infants and young children (3) (4)		200

Section 2: Mycotoxins

Foodstuffs (1)		Maximum levels (μg/kg)		
2.1	Aflatoxins	B <sub>1</sub>	Sum of B <sub>1</sub> , B <sub>2</sub> , G <sub>1</sub> and G <sub>2</sub>	M <sub>1</sub>
2.1.1	Groundnuts to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs	8,0 (5)	15,0 (5)	_
2.1.2	Nuts to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in food-stuffs	5,0 ( <sup>5</sup> )	10,0 (5)	_
2.1.3	Groundnuts and nuts and processed products thereof, intended for direct human consumption or use as an ingredient in food-stuffs	2,0 (5)	4,0 (5)	_
2.1.4	Dried fruit to be subjected to sorting, or other physical treatment, before human consumption or use as an ingredient in foodstuffs	5,0	10,0	_
2.1.5	Dried fruit and processed products thereof, intended for direct human consumption or use as an ingredient in foodstuffs	2,0	4,0	_
2.1.6	All cereals and all products derived from cereals, including processed cereal products, with the exception of foodstuffs listed in 2.1.7, 2.1.10 and 2.1.12	2,0	4,0	_
2.1.7	Maize to be subjected to sorting or other physical treatment before human consumption or use as an ingredient in food- stuffs	5,0	10,0	_
2.1.8	Raw milk (6), heat-treated milk and milk for the manufacture of milk-based products	_	_	0,050

	Foodstuffs (¹)		Maximum levels (μg/kg)		
2.1.9	Following species of spices:  Capsicum spp. (dried fruits thereof, whole or ground, including chillies, chilli powder, cayenne and paprika)  Piper spp. (fruits thereof, including white and black pepper)  Myristica fragrans (nutmeg)  Zingiber officinale (ginger)  Curcuma longa (turmeric)	5,0	10,0	_	
2.1.10	Processed cereal-based foods and baby foods for infants and young children (3) (7)	0,10	_	_	
2.1.11	Infant formulae and follow-on formulae, including infant milk and follow-on milk (4) (8)				
2.1.12	Dietary foods for special medical purposes (9) (10) intended specifically for infants	0,10 — 0,025			
2.2	Ochratoxin A				
2.2.1	Unprocessed cereals		5,0		
2.2.2	All products derived from unprocessed cereals, including processed cereal products and cereals intended for direct human consumption with the exception of foodstuffs listed in 2.2.9 and 2.2.10	3,0			
2.2.3	Dried vine fruit (currants, raisins and sultanas)	10,0			
2.2.4	Roasted coffee beans and ground roasted coffee, excluding soluble coffee	5,0			
2.2.5	Soluble coffee (instant coffee)	10,0			
2.2.6	Wine (including sparkling wine, excluding liqueur wine and wine with an alcoholic strength of not less than 15 % vol) and fruit wine (11)	2,0 (12)			
2.2.7	Aromatised wine, aromatised wine-based drinks and aromatised wine-product cocktails (13)		2,0 (12)		
2.2.8	Grape juice, concentrated grape juice as reconstituted, grape nectar, grape must and concentrated grape must as reconstituted, intended for direct human consumption (14)	2,0 (12)			
2.2.9	Processed cereal-based foods and baby foods for infants and young children (3) (7)	0,50			
2.2.10	Dietary foods for special medical purposes (9) (10) intended specifically for infants	0,50			
2.2.11	Green coffee, dried fruit other than dried vine fruit, beer, cocoa and cocoa products, liqueur wines, meat products, spices and liquorice	_			
2.3	Patulin				
2.3.1	Fruit juices, concentrated fruit juices as reconstituted and fruit nectars (14)		50		

	Foodstuffs (¹)	Maximum levels (μg/kg)
2.3.2	Spirit drinks (15), cider and other fermented drinks derived from apples or containing apple juice	50
2.3.3	Solid apple products, including apple compote, apple puree intended for direct consumption with the exception of foodstuffs listed in 2.3.4 and 2.3.5	25
2.3.4	Apple juice and solid apple products, including apple compote and apple puree, for infants and young children (16) and labelled and sold as such (4)	10,0
2.3.5	Baby foods other than processed cereal-based foods for infants and young children (3) (4)	10,0
2.4	Deoxynivalenol (17)	
2.4.1	Unprocessed cereals (18) (19) other than durum wheat, oats and maize	1 250
2.4.2	Unprocessed durum wheat and oats (18) (19)	1 750
2.4.3	Unprocessed maize (18)	1 750 ( <sup>20</sup> )
2.4.4	Cereals intended for direct human consumption, cereal flour (including maize flour, maize meal and maize grits (21)), bran as end product marketed for direct human consumption and germ, with the exception of foodstuffs listed in 2.4.7	750
2.4.5	Pasta (dry) ( <sup>22</sup> )	750
2.4.6	Bread (including small bakery wares), pastries, biscuits, cereal snacks and breakfast cereals	500
2.4.7	Processed cereal-based foods and baby foods for infants and young children (3) (7)	200
2.5	Zearalenone (17)	
2.5.1	Unprocessed cereals (18) (19) other than maize	100
2.5.2	Unprocessed maize (18)	200 (20)
2.5.3	Cereals intended for direct human consumption, cereal flour, bran as end product marketed for direct human consumption and germ, with the exception of foodstuffs listed in 2.5.4, 2.5.7 and 2.5.8	75
2.5.4	Maize intended for direct human consumption, maize flour, maize meal, maize grits, maize germ and refined maize oil (21)	200 (20)
2.5.5	Bread (including small bakery wares), pastries, biscuits, cereal snacks and breakfast cereals, excluding maize snacks and maize based breakfast cereals	50
2.5.6	Maize snacks and maize based breakfast cereals	50 (20)

Foodstuffs (1)		Maximum levels (μg/kg)	
2.5.7	Processed cereal-based foods (excluding processed maize-based foods) and baby foods for infants and young children (3) (7)	20	
2.5.8	Processed maize-based foods for infants and young children (3) (7)	20 (20)	
2.6	Fumonisins	Sum of B <sub>1</sub> and B <sub>2</sub>	
2.6.1	Unprocessed maize (18)	2 000 (23)	
2.6.2	Maize flour, maize meal, maize grits, maize germ and refined maize oil (21)	1 000 (23)	
2.6.3	Maize based foods for direct human consumption, excluding foods listed in 2.6.2 and 2.6.4	400 (23)	
2.6.4	Processed maize-based foods and baby foods for infants and young children (3) (7)	200 (23)	
2.7	T-2 and HT-2 toxin (17)	Sum of T-2 and HT-2 toxin	
2.7.1	Unprocessed cereals (18) and cereal products		

## Section 3: Metals

Foodstuffs (1)		Maximum levels (mg/kg wet weight)	
3.1	Lead		
3.1.1	Raw milk (6), heat-treated milk and milk for the manufacture of milk-based products	0,020	
3.1.2	Infant formulae and follow-on formulae (4) (8)	0,020	
3.1.3	Meat (excluding offal) of bovine animals, sheep, pig and poultry (6)	0,10	
3.1.4	Offal of bovine animals, sheep, pig and poultry (6)	0,50	
3.1.5	Muscle meat of fish (24) (25)	0,30	
3.1.6	Crustaceans, excluding brown meat of crab and excluding head and thorax meat of lobster and similar large crustaceans (Nephropidae and Palinuridae) (26)	0,50	
3.1.7	Bivalve molluscs (26)	1,5	
3.1.8	Cephalopods (without viscera) (26)	1,0	
3.1.9	Cereals, legumes and pulses	0,20	
3.1.10	Vegetables, excluding brassica vegetables, leaf vegetables, fresh herbs and fungi ( <sup>27</sup> ). For potatoes the maximum level applies to peeled potatoes	0,10	

	Foodstuffs (¹)	Maximum levels (mg/kg wet weight)
3.1.11	Brassica vegetables, leaf vegetables and cultivated fungi (27)	0,30
3.1.12	Fruit, excluding berries and small fruit (27)	0,10
3.1.13	Berries and small fruit (27)	0,20
3.1.14	Fats and oils, including milk fat	0,10
3.1.15	Fruit juices, concentrated fruit juices as reconstituted and fruit nectars (14)	0,050
3.1.16	Wine (including sparkling wine, excluding liqueur wine), cider, perry and fruit wine (11)	0,20 (28)
3.1.17	Aromatized wine, aromatized wine-based drinks and aromatized wine-product cocktails (13)	0,20 (28)
3.2	Cadmium	
3.2.1	Meat (excluding offal) of bovine animals, sheep, pig and poultry (6)	0,050
3.2.2	Horsemeat, excluding offal (6)	0,20
3.2.3	Liver of bovine animals, sheep, pig, poultry and horse (6)	0,50
3.2.4	Kidney of bovine animals, sheep, pig, poultry and horse (6)	1,0
3.2.5	Muscle meat of fish ( <sup>24</sup> ) ( <sup>25</sup> ), excluding species listed in 3.2.6 and 3.2.7	0,050
3.2.6	Muscle meat of the following fish (24) (25): anchovy (Engraulis species) bonito (Sarda sarda) common two-banded seabream (Diplodus vulgaris) eel (Anguilla anguilla) grey mullet (Mugil labrosus labrosus) horse mackerel or scad (Trachurus species) louvar or luvar (Luvarus imperialis) sardine (Sardina pilchardus) sardinops (Sardinops species) tuna (Thunnus species, Euthynnus species, Katsuwonus pelamis) wedge sole (Dicologoglossa cuneata)	0,10
3.2.7	Muscle meat of swordfish (Xiphias gladius) (24) (25)	0,30
3.2.8	Crustaceans, excluding brown meat of crab and excluding head and thorax meat of lobster and similar large crustaceans (Nephropidae and Palinuridae) (26)	0,50
3.2.9	Bivalve molluscs (26)	1,0
3.2.10	Cephalopods (without viscera) (26)	1,0

	Foodstuffs (¹)	Maximum levels (mg/kg wet weight)
3.2.11	Cereals excluding bran, germ, wheat and rice	0,10
3.2.12	Bran, germ, wheat and rice	0,20
3.2.13	Soybeans	0,20
3.2.14	Vegetables and fruit, excluding leaf vegetables, fresh herbs, fungi, stem vegetables, pine nuts, root vegetables and potatoes (27)	0,050
3.2.15	Leaf vegetables, fresh herbs, cultivated fungi and celeriac (27)	0,20
3.2.16	Stem vegetables, root vegetables and potatoes, excluding celeriac ( <sup>27</sup> ). For potatoes the maximum level applies to peeled potatoes	0,10
3.3	Mercury	
3.3.1	Fishery products (26) and muscle meat of fish (24) (25), excluding species listed in 3.3.2. The maximum level applies to crustaceans, excluding the brown meat of crab and excluding head and thorax meat of lobster and similar large crustaceans (Nephropidae and Palinuridae)	0,50
3.3.2	Muscle meat of the following fish (24) (25): anglerfish (Lophius species) atlantic catfish (Anarhichas lupus) bonito (Sarda sarda) eel (Anguilla species) emperor, orange roughy, rosy soldierfish (Hoplostethus species) grenadier (Coryphaenoides rupestris) halibut (Hippoglossus hippoglossus) marlin (Makaira species) megrim (Lepidorhombus species) mullet (Mullus species) pike (Esox lucius) plain bonito (Orcynopsis unicolor) poor cod (Tricopterus minutes) portuguese dogfish (Centroscymnus coelolepis) rays (Raja species) redfish (Sebastes marinus, S. mentella, S. viviparus) sail fish (Istiophorus platypterus) scabbard fish (Lepidopus caudatus, Aphanopus carbo) seabream, pandora (Pagellus species) shark (all species) snake mackerel or butterfish (Lepidocybium flavobrunneum, Ruvettus pretiosus, Gempylus serpens) sturgeon (Acipenser species) swordfish (Xiphias gladius) tuna (Thunnus species, Euthynnus species, Katsuwonus pelamis)	1,0
3.4	Tin (inorganic)	
3.4.1	Canned foods other than beverages	200
3.4.2	Canned beverages, including fruit juices and vegetable juices	100

Foodstuffs (¹)		Maximum levels (mg/kg wet weight)
3.4.3	Canned baby foods and processed cereal-based foods for infants and young children, excluding dried and powdered products (3) (29)	50
3.4.4	Canned infant formulae and follow-on formulae (including infant milk and follow-on milk), excluding dried and powdered products (8) (29)	50
3.4.5	Canned dietary foods for special medical purposes (9) (29) intended specifically for infants, excluding dried and powdered products	50

## Section 4: 3-monochloropropane-1,2-diol (3-MCPD)

Foodstuffs (¹)		Maximum levels (μg/kg)
4.1	Hydrolysed vegetable protein (30)	20
4.2	Soy sauce (30)	20

## Section 5: Dioxins and PCBs (31)

		Maximum levels		
	Foodstuffs		Sum of dioxins and dioxin-like PCBs (WHO- PCDD/F-PCB-TEQ) ( <sup>32</sup> )	
5.1	Meat and meat products (excluding edible offal) of the following animals (6)			
	— bovine animals and sheep	3,0 pg/g fat ( <sup>33</sup> )	4,5 pg/g fat ( <sup>33</sup> )	
	— poultry	2,0 pg/g fat ( <sup>33</sup> )	4,0 pg/g fat ( <sup>33</sup> )	
	— pigs	1,0 pg/g fat ( <sup>33</sup> )	1,5 pg/g fat ( <sup>33</sup> )	
5.2	Liver of terrestrial animals referred to in 5.1 (6), and derived products thereof	6,0 pg/g fat ( <sup>33</sup> )	12,0 pg/g fat ( <sup>33</sup> )	
5.3	Muscle meat of fish and fishery products and products thereof, excluding eel (25) (34). The maximum level applies to crustaceans, excluding the brown meat of crab and excluding head and thorax meat of lobster and similar large crustaceans (Nephropidae and Palinuridae)	4,0 pg/g wet weight	8,0 pg/g wet weight	
5.4	Muscle meat of eel (Anguilla anguilla) and products thereof	4,0 pg/g wet weight	12,0 pg/g wet weight	
5.5	Raw milk (6) and dairy products (6), including butterfat	3,0 pg/g fat ( <sup>33</sup> )	6,0 pg/g fat ( <sup>33</sup> )	

		Maximum levels		
	Foodstuffs		Sum of dioxins and dioxin-like PCBs (WHO-PCDD/F-PCB-TEQ) (32)	
5.6	Hen eggs and egg products (6)	3,0 pg/g fat ( <sup>33</sup> )	6,0 pg/g fat ( <sup>33</sup> )	
5.7	Fat of the following animals:			
	— bovine animals and sheep	3,0 pg/g fat	4,5 pg/g fat	
	— poultry	2,0 pg/g fat	4,0 pg/g fat	
	— pigs	1,0 pg/g fat	1,5 pg/g fat	
5.8	Mixed animal fats	2,0 pg/g fat	3,0 pg/g fat	
5.9	Vegetable oils and fats	0,75 pg/g fat	1,5 pg/g fat	
5.10	Marine oils (fish body oil, fish liver oil and oils of other marine organisms intended for human consumption)	2,0 pg/g fat	10,0 pg/g fat	

Section 6: Polycyclic aromatic hydrocarbons

Foodstuffs		Maximum levels (µg/kg wet weight)
6.1	Benzo(a)pyrene (35)	
6.1.1	Oils and fats (excluding cocoa butter) intended for direct human consumption or use as an ingredient in foods	2,0
6.1.2	Smoked meats and smoked meat products	5,0
6.1.3	Muscle meat of smoked fish and smoked fishery products (25) (36), excluding bivalve molluscs. The maximum level applies to smoked crustaceans, excluding the brown meat of crab and excluding head and thorax meat of lobster and similar large crustaceans (Nephropidae and Palinuridae)	5,0
6.1.4	Muscle meat of fish (24) (25), other than smoked fish	2,0
6.1.5	Crustaceans, cephalopods, other than smoked (26). The maximum level applies to crustaceans, excluding the brown meat of crab and excluding head and thorax meat of lobster and similar large crustaceans (Nephropidae and Palinuridae)	5,0
6.1.6	Bivalve molluscs (26)	10,0
6.1.7	Processed cereal-based foods and baby foods for infants and young children (3) (29)	1,0
6.1.8	Infant formulae and follow-on formulae, including infant milk and follow-on milk (8) (29)	1,0
6.1.9	Dietary foods for special medical purposes (9) (29) intended specifically for infants	1,0

- (¹) As regards fruits, vegetables and cereals, reference is made to the foodstuffs listed in the relevant category as defined in Regulation (EC) No 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC (OJ L 70, 16.3.2005, p. 1) as last amended by Regulation (EC) No 178/2006 (OJ L 29, 2.2.2006, p. 3). This means, inter alia, that buckwheat (Fagopyrum sp) is included in 'cereals' and buckwheat products are included in 'cereal products'.
- (2) The maximum levels do not apply for fresh spinach to be subjected to processing and which is directly transported in bulk from field to processing plant.
- (3) Foodstuffs listed in this category as defined in Commission Directive 96/5/EC of 16 February 1996 on processed cereal-based foods and baby foods for infants and young children (OJ L 49, 28.2.1996, p. 17) as last amended by Directive 2003/13/EC (OJ L 41, 14.2.2003, p. 33).
- (4) The maximum level refers to the products ready to use (marketed as such or after reconstitution as instructed by the manufacturer).
- (5) The maximum levels refer to the edible part of groundnuts and nuts. If groundnuts and nuts 'in shell' are analysed, it is assumed when calculating the aflatoxin content all the contamination is on the edible part.
- (6) Foodstuffs listed in this category as defined in Regulation (EC) No 853/2004 of the European Parliament and of the Council of 29 April 2004 laying down specific hygiene rules for food of animal origin (OJ L 226, 25.6.2004, p. 22).
- (7) The maximum level refers to the dry matter. The dry matter is determined in accordance with Regulation (EC) No 401/2006.
- (8) Foodstuffs listed in this category as defined in Commission Directive 91/321/EEC of 14 May 1991 on infant formulae and follow-on formulae (OJ L 175, 4.7.1991, p. 35) as last amended by Directive 2003/14/EC (OJ L 41, 14.2.2003, p. 37).
- (9) Foodstuffs listed in this category as defined in Commission Directive 1999/21/EC of 25 March 1999 on dietary foods for special medical purposes (OJ L 91, 7.4.1999, p. 29).
- (10) The maximum level refers in the case of milk and milk products, to the products ready for use (marketed as such or reconstituted as instructed by the manufacturer) and in the case of products other than milk and milk products, to the dry matter. The dry matter is determined in accordance with Regulation (EC) No 401/2006.
- (11) Foodstuffs listed in this category as defined in Council Regulation (EC) No 1493/1999 of 17 May 1999 on the common organisation of the market in wine (OJ L 179, 14.7.1999, p. 1) as last amended by the Protocol concerning the conditions and arrangements for admission of the Republic of Bulgaria and Romania to the European Union (OJ L 157, 21.6.2005, p. 29).
- (12) The maximum level applies to products produced from the 2005 harvest onwards.
- (13) Foodstuffs listed in this category as defined in Council Regulation (EEC) No 1601/91 of 10 June 1991 laying down general rules on the definition, description and presentation of aromatised wines, aromatised wine-based drinks and aromatised wine-product cocktails (OJ L 149, 14.6.1991, p. 1) as last amended by the Protocol concerning the conditions and arrangements for admission of the Republic of Bulgaria and Romania to the European Union. The maximum level for OTA applicable to these beverages is function of the proportion of wine and/or grape must present in the finished product.
- (14) Foodstuffs listed in this category as defined in Council Directive 2001/112/EC of 20 December 2001 relating to fruit juices and certain similar products intended for human consumption (OJ L 10, 12.1.2002, p. 58).
- (15) Foodstuffs listed in this category as defined in Council Regulation (EEC) No 1576/89 of 29 May 1989 laying down general rules on the definition, description and presentation of spirit drinks (OJ L 160, 12.6.1989, p. 1), as last amended by the Protocol concerning the conditions and arrangements for admission of the Republic of Bulgaria and Romania to the European Union.
- (16) Infants and young children as defined in Directive 91/321/EEC and Directive 96/5/EC.
- (17) For the purpose of the application of maximum levels for deoxynivalenol, zearalenone, T-2 and HT-2 toxin established in points 2.4, 2.5 and 2.7 rice is not included in 'cereals' and rice products are not included in 'cereal products'.
- (18) The maximum level applies to unprocessed cereals placed on the market for first-stage processing. 'First-stage processing' shall mean any physical or thermal treatment, other than drying, of or on the grain. Cleaning, sorting and drying procedures are not considered to be 'first-stage processing' insofar no physical action is exerted on the grain kernel itself and the whole grain remains intact after cleaning and sorting. In integrated production and processing systems, the maximum level applies to the unprocessed cereals in case they are intended for first-stage processing.
- (19) The maximum level applies to cereals harvested and taken over, as from the 2005/06 marketing year, in accordance with Commission Regulation (EC) No 824/2000 of 19 April 2000 establishing procedures for the taking-over of cereals by intervention agencies and laying down methods of analysis for determining the quality of cereals (OJ L 100, 20.4.2000, p. 31), as last amended by Regulation (EC) No 1068/2005 (OJ L 174, 7.7.2005, p. 65).
- (20) Maximum level shall apply from 1 July 2007.
- (21) This category includes also similar products otherwise denominated such as semolina.
- (22) Pasta (dry) means pasta with a water content of approximately 12 %.