

SCHEDULE 3

Regulation 4(9)

Insertion of Schedules 3, 4 and 5 to the Animal Feed
(Composition, Marketing and Use) (England) Regulations 2015

After Schedule 2 to the Animal Feed (Composition, Marketing and Use) (England) Regulations 2015 insert—

“SCHEDULE 3

Regulation 12(2)

Categories of feed materials which may be indicated in place of individual feed materials

<i>Description of the category</i>	<i>Definition</i>
1. Meat and animal derivatives	All the fleshy parts of slaughtered warm-blooded land animals, fresh or preserved by appropriate treatment, and all products and derivatives of the processing of the carcase or parts of the carcase of warm-blooded land animals
2. Milk and milk derivatives	All milk products, fresh or preserved by appropriate treatment, and derivatives from their processing
3. Eggs and egg derivatives	All egg products fresh or preserved by appropriate treatment and derivatives from their processing
4. Oils and fats	All animal and vegetable oils and fats
5. Yeasts	All yeasts, the cells of which have been killed and dried
6. Fish and fish derivatives	Fish or parts of fish, fresh or preserved by appropriate treatment, and derivatives from their processing
7. Cereals	All types of cereal, regardless of their presentation, or products made from the starchy endosperm
8. Vegetables	All types of vegetables and legumes, fresh or preserved by appropriate treatment
9. Derivatives of vegetable origin	Derivatives resulting from the treatment of vegetable products, in particular cereals, vegetables, legumes and oil seeds
10. Vegetable protein extracts	All products of vegetable origin in which the proteins have been concentrated by an adequate process to contain at least 50% crude protein, as related to the dry matter, and which may be restructured (textured)
11. Minerals	All inorganic substances suitable for animal feed

<i>Description of the category</i>	<i>Definition</i>
12. Various sugars	All types of sugar
13. Fruit	All types of fruit, fresh or preserved by appropriate treatment
14. Nuts	All kernels from shells
15. Seeds	All types of seeds as such or roughly crushed
16. Algae	Algae, fresh or preserved by appropriate treatment
17. Molluscs and crustaceans	All types of molluscs, crustaceans, shellfish, fresh or preserved by appropriate treatment, and their processing derivatives
18. Insects	All types of insects and their stages of development
19. Bakery products	All bread, cakes, biscuits and pasta products

SCHEDULE 4

Regulations 15 and 15A

Maximum levels of undesirable substances

Table 1: INORGANIC CONTAMINANTS AND NITROGENOUS COMPOUNDS

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
1. Arsenic ⁽¹⁾	Feed materials with the exception of: — meal made from grass, from dried lucerne and from dried clover, and dried sugar beet pulp and dried molasses sugar beet pulp; — palm kernel expeller; — peat; leonardite; — phosphates, calcareous marine algae; — calcium carbonate; calcium and magnesium carbonate ⁽²⁾ ; calcareous marine shells; — magnesium oxide; magnesium carbonate;	2 4 5 10 15 20

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	— fish, other aquatic animals and products derived from them;	25
	— seaweed meal and feed materials derived from seaweed.	40
	Iron particles used as tracer.	50
	Feed additives belonging to the functional group of compounds of trace elements with the exception of:	30
	— cupric sulphate pentahydrate; cupric carbonate; dicopper chloride trihydroxide; ferrous carbonate; dimanganese chloride trihydroxide	50
	— zinc oxide; manganous oxide; cupric oxide.	100
	Complementary feed with the exception of:	4
	— mineral feed;	12
	— complementary feed for pet animals containing fish, other aquatic animals and products derived from them and/or seaweed meal and feed materials derived from seaweed;	10
	— long-term supply formulations of feed for particular nutritional purposes with a concentration of trace elements higher than 100 times the established maximum content in complete feed;	30
	Complete feed with the exception of:	2
	— complete feed for fish and fur animals;	10
	— complete feed for pet animals containing fish, other aquatic animals and	10

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
2. Cadmium	products derived from them and/or seaweed meal and feed materials derived from seaweed.	
	Feed materials of vegetable origin	1
	Feed materials of animal origin	2
	Feed materials of mineral origin	2
	with the exception of:	
	— phosphates.	10
	Feed additives belonging to the functional group of compounds of trace elements	10
	with the exception of:	
	— cupric oxide, manganous oxide, zinc oxide and manganous sulphate monohydrate.	30
	Feed additives belonging to the functional groups of binders and anti-caking agents	2
	Premixtures ⁽³⁾	15
	Complementary feed	0.5
	with the exception of:	
	— mineral feed	
	— – containing < 7 % phosphorus ⁽⁴⁾	5
— – containing ≥ 7 % phosphorus ⁽⁴⁾	0.75 per 1 % phosphorus ⁽⁴⁾ , with a maximum of 7.5	
— complementary feed for pet animals	2	
— long-term supply formulations of feed for particular nutritional purposes with a concentration of trace elements higher than 100 times the established maximum content in complete feed;	15	
Complete feed	0.5	
with the exception of:		

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	— complete feed for cattle (except calves), sheep (except lambs), goats (except kids) and fish;	1
	— complete feed for pet animals.	2
3. Fluorine ⁽⁵⁾	Feed materials	150
	with the exception of:	
	— feed materials of animal origin except marine crustaceans such as marine krill; calcareous marine shells;	500
	— marine crustaceans such as marine krill;	3 000
	— phosphates;	2 000
	— calcium carbonate; calcium and magnesium carbonate ⁽²⁾	350
	— magnesium oxide;	600
	— calcareous marine algae.	1 250
	Vermiculite (E 561).	3 000
	Complementary feed:	
	— containing ≤ 4 % phosphorus ⁽⁴⁾ ;	500
	— containing > 4 % phosphorus ⁽⁴⁾ .	125 per 1 % phosphorus ⁽⁴⁾
	Complete feed	150
	with the exception of:	
	— complete feed for pigs;	100
	— complete feed for poultry (except chicks) and fish;	350
	— complete feed for chicks;	250
	— complete feed for cattle, sheep and goats	
	— in lactation;	30
	— other.	50
4. Lead ⁽⁶⁾	Feed materials	10

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	with the exception of:	
	— forage ⁽⁷⁾ ;	30
	— phosphates, calcareous marine algae and calcareous marine shells;	15
	— calcium carbonate; calcium and magnesium carbonate ⁽²⁾ ;	20
	— yeasts.	5
	Feed additives belonging to the functional group of compounds of trace elements	100
	with the exception of:	
	— zinc oxide;	400
	— manganous oxide, ferrous carbonate, cupric carbonate, copper (I) oxide.	200
	Feed additives belonging to the functional groups of binders and anti-caking agents	30
	with the exception of:	
	— clinoptilolite of volcanic origin; natrolite-phonolite.	60
	Premixtures ⁽³⁾	200
	Complementary feed	10
	with the exception of:	
	— mineral feed;	15
	— long-term supply formulations of feed for particular nutritional purposes with a concentration of trace elements higher than 100 times the established maximum content in complete feed.	60
	Complete feed.	5
5. Mercury ⁽⁸⁾	Feed materials	0.1
	with the exception of:	
	— fish, other aquatic animals and products derived from them intended for the production	0.5

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	of compound feed for food producing animals;	
	— fish, other aquatic animals and products derived from them intended for the production of compound feed for dogs, cats, ornamental fish and fur animals;	1.0 ⁽⁹⁾
	— fish, other aquatic animals and products derived from them as canned wet feed material for direct feeding of dogs and cats;	0.3
	— calcium carbonate; calcium and magnesium carbonate ⁽²⁾ .	0.3
	Compound feed with the exception of:	0.1
	— mineral feed;	0.2
	— compound feed for fish;	0.2
	— compound feed for dogs, cats, ornamental fish and fur animals.	0.3
6. Nitrite ⁽¹⁰⁾	Feed materials with the exception of:	15
	— fishmeal;	30
	— silage;	—
	— products and by-products from sugar beet and sugarcane and from starch and alcoholic drink production.	—
	Complete feed with the exception of:	15
	— complete feed for dogs and cats with a moisture content exceeding 20 %.	—
7. Melamine ⁽¹¹⁾	Feed with the exception of:	2.5
	— canned pet food	2.5 ⁽¹²⁾
	— the following feed additives:	

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	— guanidino acetic acid (GAA);	20
	— urea;	—
	— biuret.	—

- (1) The maximum levels refer to total arsenic.
- (2) Calcium and magnesium carbonate refers to the natural mixture of calcium carbonate and magnesium carbonate as described in [Commission Regulation \(EU\) No 68/2013](#) on the Catalogue of feed materials.
- (3) The maximum level established for premixtures takes into account the additives with the highest level of lead and cadmium and not the sensitivity of the different animal species to lead and cadmium. As provided in Article 16 of Regulation (EC) No 1831/2003 of the European Parliament and of the Council on additives for use in animal nutrition, in order to protect animal and public health, it is the responsibility of the producer of premixtures to ensure that, in addition to compliance with the maximum levels for premixtures, the instructions for use of the premixture are in accordance with the maximum levels for complementary and complete feed.
- (4) The % of phosphorus is relative to a feed with a moisture content of 12 %.
- (5) Maximum levels refer to an analytical determination of fluorine, whereby extraction is performed with hydrochloric acid 1 N for 20 minutes at ambient temperature. Equivalent extraction procedures can be applied for which it can be demonstrated that the used extraction procedure has an equal extraction efficiency.
- (6) For the determination of lead in kaolinitic clay and in feed containing kaolinitic clay, the maximum level refers to an analytical determination of lead, whereby extraction is performed in nitric acid (5 % w/w) for 30 minutes at boiling temperature. Equivalent extraction procedures can be applied for which it can be demonstrated that the used extraction procedure has an equal extraction efficiency.
- (7) Forage includes products intended for animal feed such as hay, silage, fresh grass, etc.
- (8) The maximum levels refer to total mercury.
- (9) The maximum level is applicable on wet weight basis.
- (10) The maximum levels are expressed as sodium nitrite.
- (11) The maximum level refers to melamine only. The inclusion of the structurally related compounds cyanuric acid, ammeline and ammelide in the maximum level will be considered at a later stage.
- (12) The maximum level is applicable to canned pet food as sold.

Table 2: MYCOTOXINS

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
1. Aflatoxin B1	Feed materials	0.02
	Complementary and complete feed	0.01
	with the exception of:	
	— compound feed for dairy cattle and calves, dairy sheep and lambs, dairy goats and kids, piglets and young poultry animals,	0.005
	— compound feed for cattle (except dairy cattle and calves), sheep (except dairy sheep and	0.02

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	lambs), goats (except dairy goats and kids), pigs (except piglets) and poultry (except young animals).	
2. Rye ergot (Claviceps purpurea)	Feed materials and compound feed containing unground cereals.	1 000

Table 3: INHERENT PLANT TOXINS

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
1. Free gossypol	Feed materials with the exception of: — cottonseed, — cottonseed cakes and cottonseed meal. Complete feed	20 6 000 1 200 20
	with the exception of: — complete feed for cattle (except calves), — complete feed for sheep (except lambs) and goats (except kids), — complete feed for poultry (except laying hens) and calves, — complete feed for rabbits, lambs, kids and pigs (except piglets).	500 300 100 60
2. Hydrocyanic acid	Feed materials with the exception of: — linseed, — linseed cakes, — manioc products and almond cakes.	50 250 350 100

(1) The maximum levels are expressed as allyl isothiocyanate.

(2) Upon request of the competent authorities, the responsible operator must perform an analysis to demonstrate that the content of total glucosinolates is lower than 30 mmol/kg. The method of analysis of reference is EN-ISO 9167:2019 (Rapeseed and rapeseed meals — Determination of glucosinolates content — Method using high-performance liquid chromatography); published by the International Organization for Standardization in May 2019, edition 1. Available from the ISO website <https://www.iso.org/home.html>.

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	Complete feed	50
	with the exception of:	
	— complete feed for young chickens (< 6 weeks).	10
3. Theobromine	Complete feed	300
	with the exception of:	
	— complete feed for pigs,	200
	— complete feed for dogs, rabbits, horses and fur animals.	50
4. vinyl thioxazolidone (5-vinyloxazolidine-2-thione)	Complete feed for poultry	1 000
	with the exception of:	
	— complete feed for laying hens.	500
5. Volatile mustard oil ⁽¹⁾	Feed materials	100
	with the exception of:	
	— Camelina seed and products derived from it ⁽²⁾ , products derived from mustard seed ⁽²⁾ , rape seed and products derived from them.	4 000
	Complete feed	150
	with the exception of:	
	— complete feed for cattle (except calves), sheep (except lambs) and goats (except kids);	1 000
	— complete feed for pigs (except piglets) and poultry.	500

(1) The maximum levels are expressed as allyl isothiocyanate.

(2) Upon request of the competent authorities, the responsible operator must perform an analysis to demonstrate that the content of total glucosinolates is lower than 30 mmol/kg. The method of analysis of reference is EN-ISO 9167:2019 (Rapeseed and rapeseed meals — Determination of glucosinolates content — Method using high-performance liquid chromatography); published by the International Organization for Standardization in May 2019, edition 1. Available from the ISO website <https://www.iso.org/home.html>.

Table 4: ORGANOCHLORINE COMPOUNDS (EXCEPT DIOXINS AND PCBs)

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
1. Aldrin ⁽¹⁾	Feed materials and compound feed	0.01 ⁽²⁾
	with the exception of:	
	— fats and oils,	0.1 ⁽²⁾
	— compound feed for fish.	0.02 ⁽²⁾
2. Dieldrin ⁽¹⁾	Feed materials and compound feed	0.01 ⁽²⁾
	with the exception of:	
	— fats and oils,	0.1 ⁽²⁾
	— compound feed for fish.	0.02 ⁽²⁾
3. Camphechlor (toxaphene) – sum of indicator congeners CHB 26, 50 and 62 ⁽³⁾	Fish, other aquatic animals and products derived from them	0.02
	with the exception of:	
	— fish oil.	0.2
	Complete feed for fish.	0.05
4. Chlordane (sum of cis- and trans-isomers and oxychlordane, expressed as chlordane)	Feed materials and compound feed	0.02
	with the exception of:	
	— fats and oils.	0.05
5. DDT (sum of DDT-, DDD- (or TDE-) and DDE-isomers, expressed as DDT)	Feed materials and compound feed	0.05
	with the exception of:	
	— fats and oils.	0.5
6. Endosulfan (sum of alpha- and beta-isomers and of feed)	Feed materials and compound feed	0.1

(1) Singly or combined expressed as dieldrin.

(2) Maximum level for aldrin and dieldrin, singly or combined, expressed as dieldrin.

(3) Numbering system according to Parlar, prefixed by either CHB or ‘Parlar’:

CHB 26: 2-endo,3-exo,5-endo,6-exo,8,8,10,10-octochlorobornane,

CHB 50: 2-endo,3-exo,5-endo,6-exo,8,8,9,10,10-nonachlorobornane,

CHB 62: 2,2,5,5,8,9,9,10,10-nonachlorobornane.

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
endosulfansulphate expressed as endosulfan)	with the exception of: — cotton seed and products derived from its processing, except crude cotton seed oil — soybean and products derived from its processing, except crude soybean oil — crude vegetable oil — complete feed for fish except for <i>Salmonids</i> — complete feed for <i>Salmonids</i>	0.3 0.5 1.0 0.005 0.05
7. Endrin (sum of endrin and of delta-ketoi-endrin, expressed as endrin)	Feed materials and compound feed	0.01
	with the exception of: — fats and oils.	0.05
8. Heptachlor (sum of heptachlor and heptachlorepoide, expressed as heptachlor)	Feed materials and compound feed	0.01
	with the exception of: — fats and oils.	0.2
9. Hexachlorobenzene (HCB)	Feed materials and compound feed	0.01
	with the exception of: — fats and oils.	0.2
10. Hexachlorocyclohexane (HCH)		
— alpha-isomers	Feed materials and compound feed	0.02

(1) Singly or combined expressed as dieldrin.

(2) Maximum level for aldrin and dieldrin, singly or combined, expressed as dieldrin.

(3) Numbering system according to Parlar, prefixed by either CHB or 'Parlar':

CHB 26: 2-endo,3-exo,5-endo,6-exo,8,8,10,10-octochlorobornane,

CHB 50: 2-endo,3-exo,5-endo,6-exo,8,8,9,10,10-nonachlorobornane,

CHB 62: 2,2,5,5,8,9,9,10,10-nonachlorobornane.

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	with the exception of:	
	— fats and oils.	0.2
— beta-isomers	Feed materials	0.01
	with the exception of:	
	— fats and oils.	0.1
	Compound feed	0.01
	with the exception of:	
	— compound feed for dairy cattle.	0.005
— gamma-isomers	Feed materials and compound feed	0.2
	with the exception of:	
	— fats and oils.	2.0

(1) Singly or combined expressed as dieldrin.

(2) Maximum level for aldrin and dieldrin, singly or combined, expressed as dieldrin.

(3) Numbering system according to Parlar, prefixed by either CHB or 'Parlar':

CHB 26: 2-endo,3-exo,5-endo,6-exo,8,8,10,10-octochlorobornane,

CHB 50: 2-endo,3-exo,5-endo,6-exo,8,8,9,10,10-nonachlorobornane,

CHB 62: 2,2,5,5,8,9,9,10,10-nonachlorobornane.

Table 5 (Part 1): DIOXINS AND PCBs

Undesirable substance	Products intended for animal feed	Maximum content in ng WHO-PCDD/F-TEQ/kg (ppt) ⁽¹⁾ relative to a feed with a moisture content of 12 %
1. Dioxins (sum of polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) expressed in World Health Organisation (WHO) toxic equivalents, using the WHO-TEFs (toxic equivalency factors, 2005) ⁽²⁾)	Feed materials of plant origin	0.75
	with the exception of:	
	— vegetable oils and their by-products.	0.75
	Feed materials of mineral origin	0.75
	Feed materials of animal origin:	

Undesirable substance	Products intended for animal feed	Maximum content in ng WHO-PCDD/F-TEQ/kg (ppt) ⁽¹⁾ relative to a feed with a moisture content of 12 %
	— Animal fat, including milk fat and egg fat,	1.50
	— Other land animal products including milk and milk products and eggs and egg products.	0.75
	— Fish oil,	5.0
	— Fish, other aquatic animals, and products derived from them with the exception of fish oil, hydrolysed fish protein containing more than 20 % fat ⁽³⁾ and crustacea meal,	1.25
	— Hydrolysed fish protein containing more than 20 % fat; crustacea meal.	1.75
	Feed additives belonging to the functional groups of binders and anti-caking agents ⁽⁴⁾	0.75
	Feed additives belonging to the functional group of compounds of trace elements.	1.0
	Premixtures	1.0
	Compound feed	0.75
	with the exception of:	
	— compound feed for pet animals and fish,	1.75
	— compound feed for fur animals.	—
Undesirable substance	Products intended for animal feed	Maximum content in ng WHO-PCDD/F-PCB-TEQ/kg (ppt) ⁽¹⁾ relative to a feed with a moisture content of 12 %
2. Sum of dioxins and dioxin-like PCBs (sum of polychlorinated dibenzo-pa-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and polychlorinated biphenyls (PCBs) expressed in World Health Organisation	Feed materials of plant origin	1.25

Undesirable substance	Products intended for animal feed	Maximum content in ng WHO-PCDD/F-TEQ/kg (ppt) ⁽¹⁾ relative to a feed with a moisture content of 12 %
(WHO) toxic equivalents, using the WHO-TEFs (toxic equivalency factors), 2005 ⁽²⁾)	with the exception of:	
	— vegetable oils and their by-products	1.5
	Feed materials of mineral origin	1.0
	Feed materials of animal origin:	
	— Animal fat, including milk fat and egg fat	2.0
	— Other land animal products including milk and milk products and eggs and egg products	1.25
	— Fish oil	20.0
	— Fish, other aquatic animals, and products derived from them with the exception of fish oil and fish protein, hydrolysed, containing more than 20 % fat ⁽³⁾	4.0
	— Fish protein, hydrolysed, containing more than 20 % fat	9.0
	Feed additives belonging to the functional groups of binders and anti-caking agents ⁽⁴⁾	1.5
	Feed additives belonging to the functional group of compounds of trace elements	1.5
	Premixtures	1.5
	Compound feed	1.5
	with the exception of:	
	— compound feed for pet animals and fish	5.5
— compound feed for fur animals		
Undesirable substance	Products intended for animal feed	Maximum content in µg/kg (ppb) relative to a feed with a moisture content of 12 % ⁽¹⁾

Undesirable substance	Products intended for animal feed	Maximum content in ng WHO-PCDD/F-TEQ/kg (ppt) ⁽¹⁾ relative to a feed with a moisture content of 12 %
3. Non-dioxin-like PCBs (sum of PCB 28, PCB 52, PCB 101, PCB 138, PCB 153 and PCB 180 (ICES – 6) ⁽¹⁾)	Feed materials of plant origin	10
	Feed materials of mineral origin	10
	Feed materials of animal origin:	
	— Animal fat, including milk fat and egg fat	10
	— Other land animal products including milk and milk products and eggs and egg products	10
	— Fish oil	175
	— Fish, other aquatic animals and products derived from them with the exception of fish oil and fish protein, hydrolysed, containing more than 20 % fat ⁽⁵⁾	30
	— Fish protein, hydrolysed, containing more than 20 % fat	50
	Feed additives belonging to the functional groups of binders and anti-caking agents ⁽⁴⁾	10
	Feed additives belonging to the functional group of compounds of trace elements	10
	Premixtures	10
	Compound feed	10
	with the exception of:	
— compound feed for pet animals and fish	40	
— compound feed for fur animals	—	

- (1) Upper-bound concentrations; upper-bound concentrations are calculated on the assumption that all values of the different congeners below the limit of quantification are equal to the limit of quantification.
- (2) Table 5 (Part 2): Table of TEF (toxic equivalency factors) for dioxins, furans and dioxin-like PCBs: WHO-TEFs for human risk assessment based on the conclusions of the World Health Organisation (WHO) – International Programme on Chemical Safety (IPCS) expert meeting which was held in Geneva in June 2005 (Martin van den Berg et al., The 2005 World Health Organisation Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicological Sciences 93(2), 223–241 (2006)).
- (3) Fresh fish and other aquatic animals directly delivered and used without intermediate processing for the production of feed for fur animals are not subject to the maximum levels, while maximum levels of 3.5 ng WHO-PCDD/F-TEQ/kg product

and 6.5 ng WHO-PCDD/F-PCB-TEQ/kg product are applicable to fresh fish and 20.0 ng WHO-PCDD/F-PCB-TEQ/kg product is applicable to fish liver used for the direct feeding of pet animals, zoo and circus animals or used as feed material for the production of pet food. The products or processed animal proteins produced from these animals (fur animals, pet animals, zoo and circus animals) cannot enter the food chain and cannot be fed to farmed animals which are kept, fattened or bred for the production of food.

- (4) The maximum level is also applicable to the feed additives belonging to the functional groups of substances for the control of radionuclide contamination and substances for reduction of the contamination of feed by mycotoxins which also belong to the functional groups of binders and anti-caking agents.
- (5) Fresh fish and other aquatic animals directly delivered and used without intermediate processing for the production of feed for fur animals are not subject to the maximum levels, while maximum levels of 75 µg/kg product are applicable to fresh fish and 200 µg/kg product are applicable to fish liver used for the direct feeding of pet animals, zoo and circus animals or used as feed material for the production of pet food. The products or processed animal proteins produced from these animals (fur animals, pet animals, zoo and circus animals) cannot enter the food chain and cannot be fed to farmed animals which are kept, fattened or bred for the production of food.

Table 5 (Part 2): Table of TEF (toxic equivalency factors) for dioxins, furans and dioxin-like PCBs

<i>Congener</i>	<i>TEF value</i>
Dibenzo-para-dioxins ('PCDDs') and Dibenzo-para-furans (PCDFs)	
2,3,7,8-TCDD	1
1,2,3,7,8-PeCDD	1
1,2,3,4,7,8-HxCDD	0.1
1,2,3,6,7,8-HxCDD	0.1
1,2,3,7,8,9-HxCDD	0.1
1,2,3,4,6,7,8-HpCDD	0.01
OCDD	0.0003
2,3,7,8-TCDF	0.1
1,2,3,7,8-PeCDF	0.03
2,3,4,7,8-PeCDF	0.3
1,2,3,4,7,8-HxCDF	0.1
1,2,3,6,7,8-HxCDF	0.1
1,2,3,7,8,9-HxCDF	0.1
2,3,4,6,7,8-HxCDF	0.1
1,2,3,4,6,7,8-HpCDF	0.01
1,2,3,4,7,8,9-HpCDF	0.01
OCDF	0.0003

'Dioxin-like' PCBs: Non-ortho PCBs + Mono-ortho PCBs

<i>Congener</i>	<i>TEF value</i>
Non-ortho PCBs	
PCB 77	0.0001
PCB 81	0.0003
PCB 126	0.1
PCB 169	0.03
Mono-ortho PCBs	
PCB 105	0.00003
PCB 114	0.00003
PCB 118	0.00003
PCB 123	0.00003
PCB 156	0.00003
PCB 157	0.00003
PCB 167	0.00003
PCB 189	0.00003

Abbreviations used: ‘T’ = tetra; ‘Pe’ = penta; ‘Hx’ = hexa; ‘Hp’ = hepta; ‘O’ = octa; ‘CDD’ = chlorodibenzodioxin; ‘CDF’ = chlorodibenzofuran; ‘CB’ = chlorobiphenyl.

Table 6: HARMFUL BOTANICAL IMPURITIES

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
1. Weed seeds and unground and uncrushed fruits containing alkaloids, glucosides or other toxic substances separately or in combination including — <i>Datura</i> sp.	Feed materials and compound feed	3 000 1 000
2. <i>Crotalaria</i> spp.	Feed materials and compound feed	100
3. Seeds and husks from <i>Ricinus communis</i> L., <i>Croton tiglium</i> L. and <i>Abrus precatorius</i> L. as well as their processed derivatives ⁽¹⁾ , separately or in combination	Feed materials and compound feed	10 ⁽²⁾
4. Unhusked beech mast — <i>Fagus sylvatica</i> L.	Feed materials and compound feed	Seeds and fruit as well as their processed derivatives may only be present in feed in trace

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
5. Purghera — <i>Jatropha curcas</i> L.	Feed materials and compound feed	amounts not quantitatively determinable Seeds and fruit as well as their processed derivatives may only be present in feed in trace amounts not quantitatively determinable
6. Seeds from <i>Ambrosia</i> spp.	Feed materials ⁽³⁾ with the exception of: – Millet (grains of <i>Panicum miliaceum</i> L.) and sorghum (grains of <i>Sorghum bicolor</i> (L) Moench s.l.) not directly fed to animals ⁽³⁾	50 200
7. Seeds from — Indian mustard — <i>Brassica juncea</i> (L.) Czern. and Coss. ssp. <i>integrifolia</i> (West.) Thell. — Sareptian mustard — <i>Brassica juncea</i> (L.) Czern. and Coss. ssp. <i>juncea</i> — Chinese mustard — <i>Brassica juncea</i> (L.) Czern. and Coss. ssp. <i>juncea</i> var. <i>lutea</i> Batalin — Black mustard — <i>Brassica nigra</i> (L.) Koch — Ethiopian mustard — <i>Brassica carinata</i> A. Braun	Compound feed containing unground grains and seeds Feed materials and compound feed	50 Seeds may only be present in feed in trace amounts not quantitatively determinable

(1) Insofar as determinable by analytical microscopy.

(2) Includes also seed husk fragments.

(3) Where unequivocal evidence is provided that the grains and seeds are intended for milling or crushing, there is no need to perform a cleaning of the grains and seeds containing non-compliant levels of seeds of *Ambrosia* spp. before milling or crushing on the condition that:

— the consignment is transported as a whole to the milling or crushing plant, and the milling or crushing plant is informed in advance of the presence of high levels of *Ambrosia* spp. seeds in order to take additional prevention measures to avoid dissemination into the environment,

—solid evidence is provided that prevention measures are taken to avoid dissemination of *Ambrosia* spp. seeds into the environment during transport to the crushing or milling plant, and

—the competent authority agrees to the transport, after having ensured that the abovementioned conditions are fulfilled.

In case these conditions are not fulfilled, the consignment must be cleared before any transport into the country and the screenings must be appropriately destroyed.

Table 7: AUTHORISED FEED ADDITIVES IN NON-TARGET FEED FOLLOWING UNAVOIDABLE CARRY-OVER

<i>Coccidiostat</i>	<i>Products intended for animal feed⁽¹⁾</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
1. Decoquinat	Feed materials	0.4
	Compound feed for	
	— laying birds and chickens reared for laying (> 16 weeks);	0.4
	— other animal species	1.2
	Premixtures for use in feed in which the use of decoquinat is not authorised.	⁽²⁾
2. Diclazuril	Feed materials	0.01
	Compound feed for	
	— laying birds and chickens reared for laying (> 16 weeks),	0.01
	— rabbits for fattening and breeding for the period before slaughter in which the use of diclazuril is prohibited (withdrawal feed),	0.01
	— other animal species other than chickens reared for laying (< 16 weeks), chickens for fattening, guinea fowl and turkeys for fattening.	0.03
	Premixtures for use in feed in which the use of diclazuril is not authorised.	⁽²⁾
3. Halofuginone hydrobromide	Feed materials	0.03
	Compound feed for	
	— laying birds, chickens reared for laying and turkeys (> 12 weeks),	0.03
	— chickens for fattening and turkeys (< 12 weeks) for	0.03

(1) Without prejudice to the authorised levels pursuant to Regulation (EC) No 1831/2003.

(2) The maximum level of the substance in the premixture is the concentration which shall not result in a level of the substance higher than 50 % of the maximum levels established in the feed when the instructions for use of the premixture are followed.

<i>Cocidiostat</i>	<i>Products intended for animal feed⁽¹⁾</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	the period before slaughter in which the use of halofuginone hydrobromide is prohibited (withdrawal feed),	
	— other animal species.	0.09
	Premixtures for use in feed in ⁽²⁾ which the use of halofuginone hydrobromide is not authorised.	
4. Lasalocid A sodium	Feed materials	1.25
	Compound feed for	
	— dogs, calves, rabbits, equine species, dairy animals, laying birds, turkeys (> 16 weeks) and chickens reared for laying (> 16 weeks),	1.25
	— chickens for fattening, chickens reared for laying (< 16 weeks) and turkeys (< 16 weeks) for the period before slaughter in which the use of lasalocid A sodium is prohibited (withdrawal feed),	1.25
	— pheasants, guinea fowl, quails and partridges (except laying birds) for the period before slaughter in which the use of lasalocid A sodium is prohibited (withdrawal feed),	1.25
	— other animal species.	3.75
	Premixtures for use in feed in ⁽²⁾ which the use of lasalocid A sodium is not authorised.	
5. Maduramicin ammonium alpha	Feed materials	0.05
	Compound feed for	
	— equine species, rabbits, turkeys (> 16 weeks), laying birds and chickens reared for laying (> 16 weeks),	0.05

(1) Without prejudice to the authorised levels pursuant to Regulation (EC) No 1831/2003.

(2) The maximum level of the substance in the premixture is the concentration which shall not result in a level of the substance higher than 50 % of the maximum levels established in the feed when the instructions for use of the premixture are followed.

<i>Coccidiostat</i>	<i>Products intended for animal feed⁽¹⁾</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	— chickens for fattening and turkeys (< 16 weeks) for the period before slaughter in which the use of maduramicin ammonium alpha is prohibited (withdrawal feed),	0.05
	— other animal species.	0.15
	Premixtures for use in feed in which the use of maduramicin ammonium alpha is not authorised.	⁽²⁾
6. Monensin sodium	Feed materials	1.25
	Compound feed for	
	— equine species, dogs, small ruminants (sheep and goat), ducks, bovine, dairy cattle, laying birds, chickens reared for laying (> 16 weeks) and turkeys (> 16 weeks),	1.25
	— chickens for fattening, chickens reared for laying (< 16 weeks) and turkeys (< 16 weeks) for the period before slaughter in which the use of monensin sodium is prohibited (withdrawal feed),	1.25
	— other animal species.	3.75
	Premixtures for use in feed in which the use of monensin sodium is not authorised.	⁽²⁾
7. Narasin	Feed materials	0.7
	Compound feed for	
	— turkeys, rabbits, equine species, laying birds and chickens reared for laying (> 16 weeks),	0.7
	— other animal species.	2.1

(1) Without prejudice to the authorised levels pursuant to Regulation (EC) No 1831/2003.

(2) The maximum level of the substance in the premixture is the concentration which shall not result in a level of the substance higher than 50 % of the maximum levels established in the feed when the instructions for use of the premixture are followed.

<i>Cocidiostat</i>	<i>Products intended for animal feed⁽¹⁾</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	Premixtures for use in feed in which the use of narasin is not authorised. ⁽²⁾	
8. Nicarbazin	Feed materials	1.25
	Compound feed for	
	— equine species, laying birds and chickens reared for laying (> 16 weeks),	1.25
	— other animal species.	3.75
	Premixtures for use in feed in which the use of nicarbazin (alone or in combination with narasin) is not authorised. ⁽²⁾	
9. Robenidine hydrochloride	Feed materials	0.7
	Compound feed for	
	— laying birds and chickens reared for laying (> 16 weeks),	0.7
	— chickens for fattening, rabbits for fattening and breeding and turkeys for the period before slaughter in which the use of robenidine hydrochloride is prohibited (withdrawal feed),	0.7
	— other animal species.	2.1
	Premixtures for use in feed in which the use of robenidine hydrochloride is not authorised. ⁽²⁾	
10. Salinomycin sodium	Feed materials	0.7
	Compound feed for	
	— equine species, turkeys, laying birds and chickens reared for laying (> 12 weeks),	0.7
	— chickens for fattening, chickens reared for laying (< 12 weeks) and rabbits for fattening for the period before slaughter in which the	0.7

(1) Without prejudice to the authorised levels pursuant to Regulation (EC) No 1831/2003.

(2) The maximum level of the substance in the premixture is the concentration which shall not result in a level of the substance higher than 50 % of the maximum levels established in the feed when the instructions for use of the premixture are followed.

<i>Coccidiostat</i>	<i>Products intended for animal feed⁽¹⁾</i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12 %</i>
	use of salinomycin sodium is prohibited (withdrawal feed), — other animal species.	2.1
	Premixtures for use in feed in ⁽²⁾ which the use of salinomycin sodium is not authorised	
11. Semduramicin sodium	Feed materials	0.25
	Compound feed for — laying birds and chickens reared for laying (> 16 weeks), — chickens for fattening for the period before slaughter in which the use of semduramicin sodium is prohibited (withdrawal feed), — other animal species.	0.25 0.25 0.75
	Premixtures for use in feed in ⁽²⁾ which the use of semduramicin sodium is not authorised.	

(1) Without prejudice to the authorised levels pursuant to Regulation (EC) No 1831/2003.

(2) The maximum level of the substance in the premixture is the concentration which shall not result in a level of the substance higher than 50 % of the maximum levels established in the feed when the instructions for use of the premixture are followed.

SCHEDULE 5

Regulations 15 and 15A

Action thresholds triggering investigations: dioxins and PCBs

Table 1: DIOXINS AND PCBs

<i>Undesirable substances</i>	<i>Products intended for animal feed</i>	<i>Action threshold in ng WHO-PCDD/F TEQ/kg (ppt) ⁽²⁾ relative to a feedingstuff with a moisture content of 12 %</i>	<i>Comments and additional information (e.g. of investigations to be performed)</i>
1. Dioxins (sum of polychlorinated dibenzo-para-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) expressed in World Health	Feed materials of plant origin	0.5	⁽³⁾

<i>Undesirable substances</i>	<i>Products intended for animal feed</i>	<i>Action threshold in ng WHO-PCDD/F TEQ/kg (ppt) ⁽²⁾ relative to a feedingstuff with a moisture content of 12 %</i>	<i>Comments and additional information of nature of investigations to be performed)</i>
Organisation (WHO) toxic equivalents, using the WHO-TEFs (toxic equivalency factors, 2005) ⁽¹⁾	with the exception of:		
	— vegetable oils and their by-products.	0.5	(3)
	Feed materials of mineral origin	0.5	(3)
	Feed materials of animal origin:		
	— Animal fat, including milk fat and egg fat,	0.75	(3)
	— Other land animal products including milk and milk products and eggs and egg products,	0.5	(3)
	— Fish oil,	4.0	(4)
	— Fish, other aquatic animals and products derived from them, with the exception of fish oil, hydrolysed fish protein containing more than 20 % fat and crustacea meal,	0.75	(4)
	— Hydrolysed fish protein containing more than 20 % fat; crustacea meal.	1.25	(4)
	Feed additives belonging to the functional groups of binders and anti-caking agents	0.5	(3)
	Feed additives belonging to the functional group of	0.5	(3)

Draft Legislation: This is a draft item of legislation. This draft has since been made as a UK Statutory Instrument: The Food and Feed (Miscellaneous Amendments) Regulations 2022 No. 1351

<i>Undesirable substances</i>	<i>Products intended for animal feed</i>	<i>Action threshold in ng WHO-PCDD/F TEQ/kg (ppt) ⁽²⁾ relative to a feedingstuff with a moisture content of 12 %</i>	<i>Comments and additional information nature of investigations to be performed)</i>
	compounds of trace elements		
	Premixtures	0.5	(3)
	Compound feed	0.5	(3)
	with the exception of:		
	— compound feed for pet animals and fish,	1.25	(4)
	— compound feed for fur animals.		
2. Dioxin-like PCBs (sum of polychlorinated biphenyls (PCBs) expressed in World Health Organisation (WHO) toxic equivalents, using the WHO-TEFs (toxic equivalency factors, 2005) ⁽¹⁾)	Feed materials of plant origin	0.35	(3)
	with the exception of:		
	— vegetable oils and their by-products	0.5	(3)
	Feed materials of mineral origin	0.35	(3)
	Feed materials of animal origin:		
	— Animal fat, including milk fat and egg fat	0.75	(3)
	— Other land animal products including milk and milk products and eggs and egg products	0.35	(3)
	— Fish oil	11.0	(4)
	— Fish, other aquatic animals and products derived from them,	2.0	(4)

<i>Undesirable substances</i>	<i>Products intended for animal feed</i>	<i>Action threshold in ng WHO-PCDD/F TEQ/kg (ppt) ⁽²⁾ relative to a feedingstuff with a moisture content of 12 %</i>	<i>Comments and additional information nature of investigations to be performed)</i>
	with the exception of fish oil and fish protein, hydrolysed, containing more than 20 % fat ⁽³⁾		
	— Fish protein, hydrolysed, containing more than 20 % fat	5.0	(4)
	Feed additives belonging to the functional groups of binders and anti-caking agents	0.5	(3)
	Feed additives belonging to the functional group of compounds of trace elements	0.35	(3)
	Premixtures	0.35	(3)
	Compound feed	0.5	(3)
	with the exception of:		
	— compound feed for pet animals and fish	2.5	(4)
	— compound feed for fur animals	—	

- (1) Table 2: Table of TEF (toxic equivalency factors) for dioxins, furans and dioxin-like PCBs: WHO-TEFs for human risk assessment based on the conclusions of the World Health Organisation (WHO) – International Programme on Chemical Safety (IPCS) expert meeting which was held in Geneva in June 2005 (Martin van den Berg et al., The 2005 World Health Organisation Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicological Sciences 93(2), 223–241 (2006)).
- (2) Upper-bound concentrations; upper-bound concentrations are calculated on the assumption that all values of the different congeners below the limit of quantification are equal to the limit of quantification.
- (3) Identification of source of contamination. Once source is identified, take appropriate measures, where possible, to reduce or eliminate source of contamination.
- (4) In many cases it might not be necessary to perform an investigation into the source of contamination as the background level in some areas is close to or above the action level. However, in cases where the action level is exceeded, all information, such as sampling period, geographical origin, fish species etc., shall be recorded with a view to future measures to manage the presence of dioxins and dioxin-like compounds in these materials for animal nutrition.

Table 2: Table of TEF (toxic equivalency factors) for dioxins, furans and dioxin-like PCBs

<i>Congener</i>	<i>TEF value</i>
Dibenzo-para-dioxins ('PCDDs') and Dibenzo-para-furans (PCDFs)	

Congener	TEF value
2,3,7,8-TCDD	1
1,2,3,7,8-PeCDD	1
1,2,3,4,7,8-HxCDD	0.1
1,2,3,6,7,8-HxCDD	0.1
1,2,3,7,8,9-HxCDD	0.1
1,2,3,4,6,7,8-HpCDD	0.01
OCDD	0.0003
2,3,7,8-TCDF	0.1
1,2,3,7,8-PeCDF	0.03
2,3,4,7,8-PeCDF	0.3
1,2,3,4,7,8-HxCDF	0.1
1,2,3,6,7,8-HxCDF	0.1
1,2,3,7,8,9-HxCDF	0.1
2,3,4,6,7,8-HxCDF	0.1
1,2,3,4,6,7,8-HpCDF	0.01
1,2,3,4,7,8,9-HpCDF	0.01
OCDF	0.0003
‘Dioxin-like’ PCBs: Non-ortho PCBs + Mono-ortho PCBs	
Non-ortho PCBs	
PCB 77	0.0001
PCB 81	0.0003
PCB 126	0.1
PCB 169	0.03
Mono-ortho PCBs	
PCB 105	0.00003
PCB 114	0.00003
PCB 118	0.00003
PCB 123	0.00003
PCB 156	0.00003
PCB 157	0.00003

<i>Congener</i>	<i>TEF value</i>
PCB 167	0.00003
PCB 189	0.00003

Abbreviations used: ‘T’ = tetra; ‘Pe’ = penta; ‘Hx’ = hexa; ‘Hp’ = hepta; ‘O’ = octa; ‘CDD’ = chlorodibenzodioxin; ‘CDF’ = chlorodibenzofuran; ‘CB’ = chlorobiphenyl.”