

[<sup>F1</sup>SCHEDULE 1B

Regulations 15 and 15A

## Maximum levels of undesirable substances

**Textual Amendments**

**F1** Schs. 1A-1C inserted (31.12.2022) by The Food and Feed (Miscellaneous Amendments) (Wales) (EU Exit) Regulations 2022 (S.I. 2022/1362), reg. 1, **Sch. 3**

**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>
<b>1. Arsenic<sup>(1)</sup></b>	<b>Feed materials</b>	2
	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;	4
	— palm kernel expeller;	4
	— peat, leonardite;	5
	— phosphates, calcareous marine algae;	10
	— calcium carbonate; calcium and magnesium carbonate <sup>(2)</sup> , calcareous marine shells;	15
	— magnesium oxide, magnesium carbonate;	20
	— fish, other aquatic animals and products derived from them;	25
	— seaweed meal and feed materials derived from seaweed.	40
	<b>Iron particles used as tracer</b>	50
	<b>Feed additives belonging to the functional group of compounds of trace elements</b>	30
	with the exception of:	
	— cupric sulphate pentahydrate, cupric carbonate, dicopper chloride trihydroxide, ferrous carbonate, dimanganese chloride trihydroxide;	50
	— zinc oxide, manganous oxide, cupric oxide.	100
	<b>Complementary feed</b>	4
	with the exception of:	

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
	<ul style="list-style-type: none"> <li>— mineral feed;</li> <li>— 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;</li> <li>— 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.</li> </ul>	<p>12</p> <p>10</p> <p>30</p>
	<p><b>Complete feed</b> with the exception of:</p> <ul style="list-style-type: none"> <li>— complete feed for fish and fur animals;</li> <li>— complete feed for pet animals containing fish, other aquatic animals and products derived from them and/or seaweed meal and feed materials derived from seaweed.</li> </ul>	<p>2</p> <p>10</p> <p>10</p>
<b>2. Cadmium</b>	<b>Feed materials of vegetable origin</b>	1
	<b>Feed materials of animal origin</b>	2
	<b>Feed materials of mineral origin</b> with the exception of:	2
	— phosphates.	10
	<b>Feed additives belonging to the functional group of compounds of trace elements</b> with the exception of:	10
	— cupric oxide, manganous oxide, zinc oxide and manganous sulphate monohydrate.	30
	<b>Feed additives belonging to the functional groups of binders and anti-caking agents</b>	2
<b>Premixtures<sup>(3)</sup></b>	15	
<b>Complementary feed</b> with the exception of:	0.5	
— mineral feed;		
—containing < 7% phosphorus <sup>(4)</sup> ;	5	

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
	<ul style="list-style-type: none"> <li>—containing <math>\geq 7\%</math> phosphorus<sup>(4)</sup>;</li> <li>— complementary feed for pet animals;</li> <li>— 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.</li> </ul>	0.75 per 1% phosphorus <sup>(4)</sup> with a maximum of 7.5  2  15
	<b>Complete feed</b> with the exception of: <ul style="list-style-type: none"> <li>— complete feed for cattle (except calves), sheep (except lambs), goats (except kids) and fish;</li> <li>— complete feed for pet animals.</li> </ul>	0.5  1  2
<b>3. Fluorine<sup>(5)</sup></b>	<b>Feed materials</b> with the exception of: <ul style="list-style-type: none"> <li>— feed materials of animal origin except marine crustaceans such as marine krill; calcareous marine shells;</li> <li>— marine crustaceans such as marine krill;</li> <li>— phosphates;</li> <li>— calcium carbonate, calcium and magnesium carbonate<sup>(2)</sup>;</li> <li>— magnesium oxide;</li> <li>— calcareous marine algae.</li> </ul>	150  500  3,000  2,000  350  600  1,250
	<b>Vermiculite (E 561)</b>	3,000
	<b>Complementary feed</b> <ul style="list-style-type: none"> <li>— containing <math>\leq 4\%</math> phosphorus<sup>(4)</sup>;</li> <li>— containing <math>&gt; 4\%</math> phosphorus<sup>(4)</sup>.</li> </ul>	500  125 per 1% phosphorus <sup>(4)</sup>
	<b>Complete feed</b> with the exception of: <ul style="list-style-type: none"> <li>— complete feed for pigs;</li> <li>— complete feed for poultry (except chicks) and fish;</li> </ul>	150  100  350

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
	— complete feed for chicks; — complete feed for cattle, sheep and goats —in lactation; —otherwise.	250  30 50
<b>4. Lead<sup>(6)</sup></b>	<b>Feed materials</b> with the exception of: — forage <sup>(7)</sup> — phosphates, calcareous marine algae and calcareous marine shells; — calcium carbonate, calcium and magnesium carbonate <sup>(2)</sup> ; — yeasts.	10  30 15 20 5
	<b>Feed additives belonging to the functional group of compounds of trace elements</b> with the exception of: — zinc oxide; — manganous oxide, ferrous carbonate, cupric carbonate, copper (I) oxide.	100  400 200
	<b>Feed additives belonging to the functional groups of binders and anti-caking agents</b> with the exception of: — clinoptilolite of volcanic origin, natrolite-phonolite.	30  60
	<b>Premixtures<sup>(3)</sup></b>	200
	<b>Complementary feed</b> with the exception of: — mineral feed; — 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.	10  15 60
	<b>Complete feed</b>	5
<b>5. Mercury<sup>(8)</sup></b>	<b>Feed materials</b> with the exception of:	0.1

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
	<ul style="list-style-type: none"> <li>— fish, other aquatic animals and products derived from them intended for the production of compound feed for food producing animals;</li> <li>— fish, other aquatic animals and products derived from them intended for the production of compound feed for dogs, cats, ornamental fish and fur animals;</li> <li>— fish, other aquatic animals and products derived from them as canned wet feed material for direct feeding of dogs and cats;</li> <li>— calcium carbonate; calcium and magnesium carbonate<sup>(2)</sup>.</li> </ul>	<p>0.5</p> <p>1.0<sup>(9)</sup></p> <p>0.3</p> <p>0.3</p>
	<p><b>Compound feed</b> with the exception of:</p> <ul style="list-style-type: none"> <li>— mineral feed;</li> <li>— compound feed for fish;</li> <li>— compound feed for dogs, cats, ornamental fish and fur animals.</li> </ul>	<p>0.1</p> <p>0.2</p> <p>0.2</p> <p>0.3</p>
<b>6. Nitrite<sup>(10)</sup></b>	<p><b>Feed materials</b> with the exception of:</p> <ul style="list-style-type: none"> <li>— fishmeal;</li> <li>— silage;</li> <li>— products and by-products from sugar beet and sugarcane and from starch and alcoholic drink production.</li> </ul>	<p>15</p> <p>30</p> <p>—</p> <p>—</p>
	<p><b>Complete feed</b> with the exception of:</p> <ul style="list-style-type: none"> <li>— complete feed for dogs and cats with a moisture content exceeding 20%.</li> </ul>	<p>15</p> <p>—</p>
<b>7. Melamine<sup>(11)</sup></b>	<p><b>Feed</b> with the exception of:</p> <ul style="list-style-type: none"> <li>— canned pet food;</li> <li>— the following feed additives: <ul style="list-style-type: none"> <li>—guanidino acetic acid (GAA);</li> <li>—urea;</li> </ul> </li> </ul>	<p>2.5</p> <p>2.5<sup>(12)</sup></p> <p>20</p> <p>—</p>

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
	—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 1831/2003, 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 1N 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**

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
<b>1. Aflatoxin B<sub>1</sub></b>	<b>Feed materials</b>	0.02
	<b>Complementary and complete feed</b>	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 lambs), goats (except dairy goats and kids), pigs (except piglets) and poultry (except young animals).	0.02

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
<b>2. Rye ergot (<i>Claviceps purpurea</i>)</b>	<b>Feed materials and compound feed containing unground cereals</b>	1000

Table 3

## Inherent plant toxins

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
<b>1. Free gossypol</b>	<b>Feed materials</b>	20
	with the exception of:	
	— cottonseed;	6000
	— cottonseed cakes and cottonseed meal.	1200
	<b>Complete feed</b>	20
	with the exception of:	
— complete feed for cattle (except calves);	500	
— complete feed for sheep (except lambs) and goats (except kids);	300	
— complete feed for poultry (except laying hens) and calves;	100	
— complete feed for rabbits, lambs, kids and pigs (except piglets).	60	
<b>2. Hydrocyanic acid</b>	<b>Feed materials</b>	50
	with the exception of:	
	— linseed;	250
	— linseed cakes;	350
	— manioc products and almond cakes.	100
<b>Complete feed</b>	50	
with the exception of:		

(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 BS EN ISO 9167:2019 “*Rapeseed and rapeseed meals. Determination of glucosinolates content. Method using high-performance liquid chromatography*”. Published by the British Standards Institution on 30 June 2019 (ISBN 978 0 539 07739 1). Available from the British Standards Institution <https://knowledge.bsigroup.com>.

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to *The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016*. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
	— complete feed for young chickens (< 6 weeks).	10
<b>3. Theobromine</b>	<b>Complete feed</b>	300
	with the exception of:	
	— complete feed for pigs;	200
	— complete feed for dogs, rabbits, horses and fur animals.	50
<b>4. Vinyl thioxazolidone (5-vinyloxazolidine-2-thione)</b>	<b>Complete feed for poultry</b>	1000
	with the exception of:	
	— complete feed for laying hens.	500
<b>5. Volatile mustard oil<sup>(1)</sup></b>	<b>Feed materials</b>	100
	with the exception of:	
	— Camelina seed and products derived from it <sup>(2)</sup> , products derived from mustard seed <sup>(2)</sup> , rape seed and products derived from it.	4000
	<b>Complete feed</b>	150
	with the exception of:	
	— complete feed for cattle (except calves), sheep (except lambs) and goats (except kids);	1000
	— 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 BS EN ISO 9167:2019 “*Rapeseed and rapeseed meals. Determination of glucosinolates content. Method using high-performance liquid chromatography*”. Published by the British Standards Institution on 30 June 2019 (ISBN 978 0 539 07739 1). Available from the British Standards Institution <https://knowledge.bsigroup.com>.



**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

**Table 4**

**Organochlorine compounds (except dioxins and polychlorinated biphenyls (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>
<b>1. Aldrin<sup>(1)</sup></b>	<b>Feed materials and compound feed</b>	0.01 <sup>(2)</sup>
	with the exception of: —fats and oils;	0.1 <sup>(2)</sup>
	— compound feed for fish.	0.02 <sup>(2)</sup>
<b>2. Dieldrin<sup>(1)</sup></b>	<b>Feed materials and compound feed</b>	0.01 <sup>(2)</sup>
	with the exception of: — fats and oils;	0.1 <sup>(2)</sup>
	— compound feed for fish.	0.02 <sup>(2)</sup>
<b>3.Camphechlor (toxaphene) – sum of indicator congeners CHB 26, 50 and 62<sup>(3)</sup></b>	<b>Fish, other aquatic animals and products derived from them</b>	0.02
	with the exception of: — fish oil.	0.2
	<b>Complete feed for fish</b>	0.05
<b>4. Chlordane (sum of cis- and trans-isomers and of oxychlordane, expressed as chlordane)</b>	<b>Feed materials and compound feed</b>	0.02
	with the exception of: — fats and oils.	0.05
<b>5. DDT (sum of DDT-, DDD- (or TDE-) and DDE-isomers, expressed as DDT)</b>	<b>Feed materials and compound feed</b>	0.05
	with the exception of: — fats and oils.	0.5
<b>6. Endosulfan (sum of alpha- and beta-isomers and of endosulfansulphate expressed as endosulfan)</b>	<b>Feed materials and compound feed</b>	0.1
	with the exception of: — cotton seed and products derived from the processing of it, except crude cotton seed oil;	0.3

(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.

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<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>
	— soybean and products derived from the processing of it, except crude soybean oil;	0.5
	— crude vegetable oil;	1.0
	— complete feed for fish except for Salmonids;	0.005
	— complete feed for Salmonids.	0.05
<b>7. Endrin (sum of endrin and of delta-ketoi-endrin, expressed as endrin)</b>	<b>Feed materials and compound feed</b> with the exception of:	0.01
	— fats and oils.	0.05
<b>8. Heptachlor (sum of heptachlor and of heptachlorepoide, expressed as heptachlor)</b>	<b>Feed materials and compound feed</b> with the exception of:	0.01
	— fats and oils.	0.2
<b>9. Hexachlorobenzene (HCB)</b>	<b>Feed materials and compound feed</b> with the exception of:	0.01
	— fats and oils.	0.2
<b>10. Hexachlorocyclohexane (HCH)</b>		
— alpha-isomers	<b>Feed materials and compound feed</b> with the exception of:	0.02
	— fats and oils.	0.2
— beta-isomers	<b>Feed materials</b> with the exception of:	0.01
	— fats and oils.	0.1
	<b>Compound feed</b> with the exception of:	0.01
	— compound feed for dairy cattle.	0.005
— gamma-isomers	<b>Feed materials and compound feed</b>	0.2

(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.

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<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.	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 polychlorinated biphenyls (PCBs)**

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in ng WHO-PCDD/F-TEQ/kg (ppt)<sup>(1)</sup> relative to a feed with a moisture content of 12%</i>
<b>1. Dioxins (sum of polychlorinated dibenzo-<i>para</i>-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) expressed in World Health Organisation (WHO) toxic equivalents, using the WHO-TEFs (toxic equivalency factors, 2005)<sup>(2)</sup></b>	<b>Feed materials of plant origin</b>	0.75
	with the exception of: — vegetable oils and their by-products.	0.75
	<b>Feed materials of mineral origin</b>	0.75
	<b>Feed materials of animal origin:</b> — 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	1.25	

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<i>Undesirable substance</i>	<i>Products intended for animal feed</i>	<i>Maximum content in ng WHO-PCDD/F-TEQ/kg (ppt)<sup>(1)</sup> relative to a feed with a moisture content of 12%</i>
	containing more than 20% fat <sup>(3)</sup> and crustacea meal;	
	— Hydrolysed fish protein containing more than 20% fat and crustacea meal.	1.75
	<b>Feed additives belonging to the functional groups of binders and anti-caking agents<sup>(4)</sup></b>	0.75
	<b>Feed additives belonging to the functional group of compounds of trace elements</b>	1.0
	<b>Premixtures</b>	1.0
	<b>Compound feed</b> with the exception of: — compound feed for pet animals and fish; — compound feed for fur animals.	0.75  1.75 —
<b>2. Sum of dioxins and dioxin-like polychlorinated biphenyls (PCBs) (sum of polychlorinated dibenzo-<i>para</i>-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and polychlorinated biphenyls (PCBs) expressed in World Health Organisation (WHO) toxic equivalents, using the WHO-TEFs (toxic equivalency factors, 2005)<sup>(2)</sup></b>	<b>Feed materials of plant origin</b> with the exception of: — vegetable oils and their by-products.	1.25  1.5
	<b>Feed materials of mineral origin</b>	1.0
	<b>Feed materials of animal origin:</b> — 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; — Fish, other aquatic animals, and products derived from them with the exception of fish oil	20.0 4.0

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in ng WHO-PCDD/F-TEQ/kg (ppt)<sup>(1)</sup> relative to a feed with a moisture content of 12%</b>
	and hydrolysed fish protein containing more than 20% fat <sup>(3)</sup> ; — Hydrolysed fish protein containing more than 20% fat.	9.0
	<b>Feed additives belonging to the functional groups of binders and anti-caking agents<sup>(4)</sup></b>	1.5
	<b>Feed additives belonging to the functional group of compounds of trace elements</b>	1.5
	<b>Premixtures</b>	1.5
	<b>Compound feed</b> with the exception of: — compound feed for pet animals and fish; — compound feed for fur animals.	1.5  5.5 —
<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in µg/kg (ppb) relative to a feed with a moisture content of 12%<sup>(1)</sup></b>
<b>3. Non-dioxin-like polychlorinated biphenyls (PCBs) (sum of PCB 28, PCB 52, PCB 101, PCB 138, PCB 153 and PCB 180 (ICES – 6)<sup>(1)</sup>)</b>	<b>Feed materials of plant origin</b>	10
	<b>Feed materials of mineral origin</b>	10
	<b>Feed materials of animal origin:</b> — Animal fat, including milk fat and egg fat;	10
	— Other land animal products including milk and milk products and eggs and egg products; — Fish oil;	10 175
	— Fish, other aquatic animals and products derived from them	30

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in ng WHO-PCDD/F-TEQ/kg (ppt)<sup>(1)</sup> relative to a feed with a moisture content of 12%</b>
	with the exception of fish oil and hydrolysed fish protein containing more than 20% fat <sup>(5)</sup> ; — Hydrolysed fish protein containing more than 20% fat.	50
	<b>Feed additives belonging to the functional groups of binders and anti-caking agents<sup>(4)</sup></b>	10
	<b>Feed additives belonging to the functional group of compounds of trace elements</b>	10
	<b>Premixtures</b>	10
	<b>Compound feed</b> with the exception of: — compound feed for pet animals and fish; — compound feed for fur animals.	40 —

- (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) See Table 5 (Part 2) for TEFs (= toxic equivalency factors) for dioxins, furans and dioxin-like polychlorinated biphenyls (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 3.5ng WHO-PCDD/F-TEQ/kg product and 6.5ng WHO-PCDD/F-PCB-TEQ/kg product are applicable to fresh fish and 20.0ng 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 75µg/kg product are applicable to fresh fish and 200µg/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.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

**Table 5 (Part 2)**

**TEFs (= toxic equivalency factors) for dioxins, furans and dioxin-like polychlorinated biphenyls (PCBs), for the purposes of Table 5.1 footnote (2)**

<i>Congener</i>	<i>TEF value</i>
<b>Dibenzo-para-dioxins ('PCDDs') and Dibenzo-para-furans (PCDFs)</b>	
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
<b>'Dioxin-like' polychlorinated biphenyls (PCBs): Non-ortho PCBs + Mono-ortho PCBs</b>	
<b>Non-ortho PCBs</b>	
PCB 77	0.0001
PCB 81	0.0003
PCB 126	0.1
PCB 169	0.03
<b>Mono-ortho PCBs</b>	
PCB 105	0.00003
PCB 114	0.00003
PCB 118	0.00003
PCB 123	0.00003

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<b>Congener</b>	<b>TEF value</b>
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**

<b>Undesirable substance</b>	<b>Products intended for animal feed</b>	<b>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</b>
<b>1. Weed seeds and unground and uncrushed fruits containing alkaloids, glucosides or other toxic substances separately or in combination including:</b> — <i>Datura</i> sp.	<b>Feed materials and compound feed</b>	3000  1000
<b>2. <i>Crotalaria</i> spp.</b>	<b>Feed materials and compound feed</b>	100
<b>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<sup>(1)</sup>, separately or in combination</b>	<b>Feed materials and compound feed</b>	10 <sup>(2)</sup>
<b>4. Unhusked beech mast — <i>Fagus sylvatica</i> L.</b>	<b>Feed materials and compound feed</b>	Seeds and fruit as well as their processed derivatives may only be present in feed in trace amounts not quantitatively determinable.
<b>5. <i>Purghera</i> — <i>Jatropha curcas</i> L.</b>	<b>Feed materials and compound feed</b>	Seeds and fruit as well as their processed derivatives may only be present in feed in trace amounts not quantitatively determinable.
<b>6. Seeds from <i>Ambrosia</i> spp.</b>	<b>Feed materials<sup>(3)</sup></b> with the exception of: — Millet (grains of <i>Panicum miliaceum</i> L.) and sorghum (grains of <i>Sorghum bicolor</i>	50  200



**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<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>
	(L) Moench s.l.) not directly fed to animals <sup>(3)</sup> ; — Compound feed containing unground grains and seeds.	50
<b>7. Seeds from:</b>  <b>—Indian mustard —<i>Brassica juncea</i> (L.) Czern. and Coss. ssp.<i>integrifolia</i>(West.) Thell.</b>  <b>— Sareptian mustard —<i>Brassica juncea</i>(L.) Czern. and Coss. ssp.<i>juncea</i></b>  <b>—Chinese mustard —<i>Brassica juncea</i>(L.) Czern. and Coss. ssp.<i>juncea</i>var.<i>lutea</i>Batalin</b>  <b>—Black mustard —<i>Brassica nigra</i>(L.) Koch</b>  <b>—Ethiopian mustard —<i>Brassica carinata</i>A. Braun</b>	<b>Feed materials and compound feed</b>	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 clean the grains and seeds containing non-compliant levels of *Ambrosia* spp. seeds 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 level of *Ambrosia* spp. seeds in order to take additional prevention measures to avoid dissemination into the environment, and

-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.

Where these conditions are not fulfilled, the consignment must be cleaned before it is transported into Wales and the screenings must be appropriately destroyed.

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

**Table 7**

**Authorised feed additives in non-target feed following unavoidable carry-over**

<i>Coccidiostat</i>	<i>Products intended for animal feed<sup>(1)</sup></i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</i>
<b>1. Decoquinate</b>	<b>Feed materials</b>	0.4
	<b>Compound feed for:</b>	
	— laying birds and chickens reared for laying (> 16 weeks);	0.4
	— other animal species.	1.2
	<b>Premixtures for use in feed in which the use of decoquinate is not authorised</b>	<sup>(2)</sup>
<b>2. Diclazuril</b>	<b>Feed materials</b>	0.03
	<b>Compound feed for:</b>	
	— laying birds and chickens reared for laying (> 16 weeks);	0.03
	— rabbits for fattening and breeding for the period before slaughter in which the use of diclazuril is prohibited (withdrawal feed);	0.03
	— other animal species other than chickens reared for laying (< 16 weeks), chickens for fattening, guinea fowl and turkeys for fattening.	0.09
	<b>Premixtures for use in feed in which the use of diclazuril is not authorised</b>	<sup>(2)</sup>
<b>3. Halofuginone hydrobromide</b>	<b>Feed materials</b>	0.03
	<b>Compound feed for:</b>	
	— laying birds, chickens reared for laying and turkeys (> 12 weeks);	0.03
	— chickens for fattening and turkeys (< 12 weeks) for the period before slaughter in which the use of halofuginone hydrobromide is prohibited (withdrawal feed);	0.03
	— other animal species.	0.09
	<b>Premixtures for use in feed in which the use of halofuginone hydrobromide is not authorised</b>	<sup>(2)</sup>

(1) Without prejudice to the authorised levels pursuant to Regulation 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.]

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<i>Coccidiostat</i>	<i>Products intended for animal feed<sup>(1)</sup></i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</i>
<b>4. Lasalocid sodium</b>	<b>Feed materials</b>	1.25
	<b>Compound feed for:</b>	
	— 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	
	<b>Premixtures for use in feed in which the use of lasalocid A sodium is not authorised</b>	<sup>(2)</sup>
<b>5. Maduramicin ammonium alpha</b>	<b>Feed materials</b>	0.05
	<b>Compound feed for:</b>	
	— equine species, rabbits, turkeys (> 16 weeks), laying birds and chickens reared for laying (> 16 weeks);	0.05
	— 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
	<b>Premixtures for use in feed in which the use of maduramicin ammonium alpha is not authorised</b>	<sup>(2)</sup>
<b>6. Monensin sodium</b>	<b>Feed materials</b>	1.25
	<b>Compound feed for:</b>	
	— equine species, dogs, small ruminants (sheep and goat), ducks, bovine species, dairy cattle, laying birds, chickens reared for laying (> 16 weeks) and turkeys (> 16 weeks);	1.25

(1) Without prejudice to the authorised levels pursuant to Regulation 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.]

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<i>Coccidiostat</i>	<i>Products intended for animal feed<sup>(1)</sup></i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</i>
	— 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
	<b>Premixtures for use in feed in which the use of monensin sodium is not authorised</b>	<sup>(2)</sup>
<b>7. Narasin</b>	<b>Feed materials</b>	0.7
	<b>Compound feed for:</b>	
	— turkeys, rabbits, equine species, laying birds and chickens reared for laying (> 16 weeks);	0.7
	— other animal species.	2.1
	<b>Premixtures for use in feed in which the use of narasin is not authorised</b>	<sup>(2)</sup>
<b>8. Nicarbazin</b>	<b>Feed materials</b>	1.25
	<b>Compound feed for:</b>	
	— equine species, laying birds and chickens reared for laying (> 16 weeks);	1.25
	— other animal species.	1.25
	<b>Premixtures for use in feed in which the use of nicarbazin (alone or in combination with narasin) is not authorised</b>	<sup>(2)</sup>
<b>9. Robenidine hydrochloride</b>	<b>Feed materials</b>	0.7
	<b>Compound feed for:</b>	
	— 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
	<b>Premixtures for use in feed in which the use of robenidine hydrochloride is not authorised</b>	<sup>(2)</sup>

(1) Without prejudice to the authorised levels pursuant to Regulation 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.]

**Status:** Point in time view as at 31/12/2022.

**Changes to legislation:** There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations. (See end of Document for details)

<i>Coccidiostat</i>	<i>Products intended for animal feed<sup>(1)</sup></i>	<i>Maximum content in mg/kg (ppm) relative to a feed with a moisture content of 12%</i>
<b>10. Salinomycin sodium</b>	<b>Feed materials</b>	0.7
	<b>Compound feed for:</b>	
	— 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 use of salinomycin sodium is prohibited (withdrawal feed);	0.7
	— other animal species.	2.1
	<b>Premixtures for use in feed in which the use of salinomycin sodium is not authorised</b>	<sup>(2)</sup>
<b>11. Semduramicin sodium</b>	<b>Feed materials</b>	0.25
	<b>Compound feed for:</b>	
	— laying birds and chickens reared for laying (> 16 weeks);	0.25
	— chickens for fattening for the period before slaughter in which the use of semduramicin sodium is prohibited (withdrawal feed);	0.25
	— other animal species.	0.75
	<b>Premixtures for use in feed in which the use of semduramicin sodium is not authorised</b>	<sup>(2)</sup>

(1) Without prejudice to the authorised levels pursuant to Regulation 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.]

**Status:**

Point in time view as at 31/12/2022.

**Changes to legislation:**

There are outstanding changes not yet made by the legislation.gov.uk editorial team to The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016. Any changes that have already been made by the team appear in the content and are referenced with annotations.