

COMMISSION REGULATION (EU) 2022/1104
of 1 July 2022
amending Regulation (EU) No 68/2013 on the Catalogue of feed materials
(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 767/2009 of the European Parliament and of the Council of 13 July 2009 on the placing on the market and use of feed, amending European Parliament and Council Regulation (EC) No 1831/2003 and repealing Council Directive 79/373/EEC, Commission Directive 80/511/EEC, Council Directives 82/471/EEC, 83/228/EEC, 93/74/EEC, 93/113/EC and 96/25/EC and Commission Decision 2004/217/EC ⁽¹⁾, and in particular Article 26 (3) thereof,

Whereas:

- (1) Since the last revision of the Catalogue of feed materials pursuant to Commission Regulation (EU) No 68/2013 ⁽²⁾ published 2017, the appropriate representatives of the European feed business sectors have, in consultation with other parties concerned, in collaboration with the competent national authorities and taking into account relevant experience from opinions issued by the European Food Safety Authority and scientific or technological developments, developed amendments to the Catalogue of feed materials.
- (2) Those amendments concern clarifications of the general provisions, new entries for treatment processes and for feed materials and adaptations of existing entries. In particular, specific provisions concerning the description, maximum contents of chemical impurities and particulars concerning the compulsory declarations, as referred to in Article 16(1)(b) of Regulation (EC) No 767/2009, should be established for certain emerging feed materials in order to provide for more detailed information on the respective products' properties. In order to foster the valorisation of certain feed materials originating from the bio-economy, food or biofuel sector, such feed materials should rather have the denominator "co-product" than "by-product", as the latter has a depreciative character. However, this rewording should not apply to animal by-products falling within the scope of Regulation (EC) No 1069/2009 ⁽³⁾. Moreover, the provisions of the Annex to Regulation (EU) No 68/2013 concerning the products and co-products obtained by fermentation should be amended, in order to better reflect the different kinds of fermentation products.
- (3) The amendments to the Catalogue of feed materials should take into account the provisions laid down in Commission Implementing Regulation (EU) 2021/758 ⁽⁴⁾, with regard to the status of certain products, including the transitional measures specified therein. In particular, Implementing Regulation (EU) 2021/758 provides that the products sodium citrates, potassium citrates, sorbitol, mannitol and calcium hydroxide are feed additives to be withdrawn from the market under Article 10(5) of Regulation (EC) No 1831/2003 ⁽⁵⁾, whilst they were also included in the Catalogue of feed materials. In order to take account of the legal uncertainty about the classification of those additives, Implementing Regulation (EU) 2021/758 provides for a transitional period until 30 May 2028 for their withdrawal from the market and use. This should allow interested parties to submit new applications for authorisation of those feed additives in accordance with Regulation (EC) No 1831/2003. The consequential removal of the said products from the Catalogue of feed materials should therefore be accompanied by a similar transitional period, as far as their placing on the market and use as feed materials are concerned.

⁽¹⁾ OJ L 229, 1.9.2009, p. 1.

⁽²⁾ Commission Regulation (EU) No 68/2013 of 16 January 2013 on the Catalogue of feed materials (OJ L 29, 30.1.2013, p. 1).

⁽³⁾ Regulation (EC) No 1069/2009 of the European Parliament and of the Council of 21 October 2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002 (OJ L 300, 14.11.2009, p. 1).

⁽⁴⁾ Commission Implementing Regulation (EU) of 2021/758 of 7 May 2021 on the status of certain products as feed additives within the scope of Regulation (EC) No 1831/2003 of the European Parliament and of the Council and on the withdrawal from the market of certain feed additives (OJ L 162, 10.5.2021, p. 5).

⁽⁵⁾ Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 on additives for use in animal nutrition (OJ L 268, 18.10.2003, p. 29).

- (4) Furthermore, Implementing Regulation (EU) 2021/758 provides that the products xylitol, ammonium lactate and ammonium acetate, respectively included in the Catalogue of feed materials, are feed additives within the scope of Regulation (EC) No 1831/2003. As a result of the classification of those products as feed additives in accordance with Implementing Regulation (EU) 2021/758, it is appropriate to provide for a transitional period as the one laid down in that Implementing Regulation, in order to allow interested parties to adapt to the new status of those products and to submit a new application for authorisation of those feed additives under the procedures set out in Regulation (EC) No 1831/2003.
- (5) The conditions set out in Article 26(4) of Regulation (EC) No 767/2009 are fulfilled.
- (6) Given the very high number of amendments to be made to Regulation (EU) No 68/2013, it is appropriate, for reasons of coherence, clarity and simplification, to replace the Annex to that Regulation.
- (7) It is appropriate to reduce the administrative burden on the operators by providing a sufficient period of time allowing a smooth conversion of labelling to avoid unnecessary disruption to commercial practices.
- (8) The measures provided for in this Regulation are in accordance with the opinion of the Standing Committee on Plants, Animals, Food and Feed,

HAS ADOPTED THIS REGULATION:

Article 1

The Annex to Regulation (EU) No 68/2013 is replaced by the Annex to this Regulation.

Article 2

Feed materials which have been labelled before 24 July 2023 in accordance with Regulation (EU) No 68/2013 as it stood before being amended by this Regulation may continue to be placed on the market and used until stocks are exhausted.

Article 3

The feed additives sodium citrates, potassium citrates, sorbitol, mannitol, calcium hydroxide, xylitol, ammonium lactate and ammonium acetate may continue to be placed on the market and used as feed materials until 30 May 2028 at the latest.

Article 4

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 1 July 2022.

For the Commission
The President
Ursula VON DER LEYEN

ANNEX

CATALOGUE OF FEED MATERIALS

PART A

General provisions:

- (1) The use of this Catalogue by the feed business operators shall be voluntary. However, the name of a feed material listed in Part C may be used only for a feed material complying with the requirements of the entry concerned.
- (2) All entries in the list of feed materials in Part C shall comply with the restrictions on the use of feed materials in accordance with the relevant legislation of the Union; particular attention shall be paid to compliance with Regulation (EC) No 1829/2003 of the European Parliament and of the Council ⁽¹⁾ for feed materials that are or are produced from genetically modified organisms, or result from a fermentation process involving genetically modified micro-organisms. Feed materials consisting of or containing animal by-products shall fulfil the requirements of Regulation (EC) No 1069/2009 of the European Parliament and of the Council ⁽²⁾ and of Commission Regulation (EU) No 142/2011 ⁽³⁾ and their use may be subject to restrictions pursuant to Regulation (EC) No 999/2001 of the European Parliament and of the Council ⁽⁴⁾. Feed business operators using a feed material entered in the Catalogue shall ensure that it complies with Article 4 of Regulation (EC) No 767/2009.
- (3) 'Former foodstuffs' means foodstuffs, other than catering reflux, which were manufactured for human consumption in full compliance with the Union food law but which are no longer intended for human consumption for practical or logistical reasons or due to problems of manufacturing or packaging defects or other defects and which do not present any health risks when used as feed. The setting of maximum contents as referred to in point 1 of Annex I to Regulation (EC) No 767/2009 shall not be applicable to former foodstuffs and catering reflux. It shall apply when further processed as feed.
- (4) In accordance with good practice as referred to in Article 4 of Regulation (EC) No 183/2005 of the European Parliament and of the Council ⁽⁵⁾, feed materials shall be free from chemical impurities resulting from their manufacturing process and from processing aids, unless a specific maximum content is fixed in the Catalogue. Substances prohibited for use in feed shall not be present and for those substances such maximum contents shall not be fixed. In the interest of transparency, feed materials with tolerated residues are complemented with relevant information provided by feed business operators in the context of usual commercial transactions.

⁽¹⁾ Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed (OJ L 268, 18.10.2003, p. 1).

⁽²⁾ Regulation (EC) No 1069/2009 of the European Parliament and of the Council of 21 October 2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002 (OJ L 300, 14.11.2009, p. 1).

⁽³⁾ Commission Regulation (EC) No 142/2011 of 25 February 2011 implementing Regulation (EC) No 1069/2009 of the European Parliament and of the Council laying down health rules as regards animal by-products and derived products not intended for human consumption and implementing Council Directive 97/78/EC as regards certain samples and items exempt from veterinary checks at the border under that Directive (OJ L 54, 26.2.2011, p. 1).

⁽⁴⁾ Regulation (EC) No 999/2001 of the European Parliament and of the Council of 22 May 2001 laying down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies (OJ L 147, 31.5.2001, p. 1).

⁽⁵⁾ Regulation (EC) No 183/2005 of the European Parliament and of the Council of 12 January 2005 laying down requirements for feed hygiene (OJ L 35, 8.2.2005, p. 1).

- (5) In accordance with good practice as referred to in Article 4 of Regulation (EC) No 183/2005, application of the ALARA ⁽⁶⁾ principle and without prejudice to the application of Regulation (EC) No 183/2005, Directive 2002/32/EC of the European Parliament and of the Council ⁽⁷⁾, Regulation (EC) No 396/2005 of the European Parliament and of the Council ⁽⁸⁾ and Regulation (EC) No 1831/2003 of the European Parliament and of the Council ⁽⁹⁾, it is appropriate to specify in the Catalogue of feed materials the maximum contents for chemical impurities resulting from the manufacturing process or from processing aids that are present at levels of 0,1 % or above. Maximum contents may also be set in the Catalogue for chemical impurities and processing aids present at levels lower than 0,1 % if deemed suitable for good trading practices. Unless otherwise specified in Part B or C of this Annex, any maximum content is expressed on a weight/weight basis ⁽¹⁰⁾.

The specific maximum contents for chemical impurities and processing aids are set either in the description of the process in Part B, in the description of the feed material in Part C or at the end of a category in Part C. Unless a specific maximum content is set in Part C, any maximum content set in Part B for a given process is applicable to any feed material listed in Part C in so far as the description of the feed material makes reference to this process and in so far as the process at stake meets the description given in Part B.

- (6) Feed materials not listed in Chapter 12 of Part C which have been manufactured by fermentation and/or which have a natural presence of microorganisms may be placed on the market with live microorganisms as long as the intended use of the feed materials and compound feed containing them is
- (a) not the multiplication of the microorganisms; and
 - (b) not linked to a function exerted by microorganism(s) according to Annex I of Regulation (EC) No 1831/2003.

The presence of micro-organisms, as well as any function resulting thereof shall not be claimed on the feed materials and the compound feed containing them.

- (7) The botanical purity of a feed material shall not be less than 95 %. However, botanical impurities such as residues of other oil seeds or oil fruits derived from a previous manufacturing process shall not exceed 0,5 % for each type of oil seed or fruit. Derogating from these general rules a specific level shall be set in the list of feed materials in Part C.
- (8) The common name/qualifier of one or more of the processes, as listed in the last column of the glossary of processes in Part B, shall ⁽¹¹⁾ be included, if applicable, in the name of the feed material as laid down in Part C to indicate that it has undergone the respective process or processes, unless this process is provided for in the respective description of the feed material in Part C. A feed material whose name is a combination of a name listed in Part C with the common name/qualifier of one or more of the processes listed in Part B shall be considered as included in the Catalogue and its label shall bear the compulsory declarations applicable for this feed material as set out in the last columns of Parts B and C, as applicable. Whenever set out in the last column of Part B, the specific method used for the process shall be specified in the name of the feed material. If the combination of the name of the feed material and the qualifier relating to the production process exists in part C, the declarations set out in the last columns of part C apply exclusively. The name of the feed material as referred to in Article 24(1a) of Regulation (EC) No 767/2009 shall be the name listed in Part C together with the common name/qualifier of one or more of the processes listed in Part B, as appropriate.

⁽⁶⁾ As Low As Reasonably Achievable.

⁽⁷⁾ Directive 2002/32/EC of the European Parliament and of the Council of 7 May 2002 on undesirable substances in animal feed - Council statement (OJ L 140, 30.5.2002, p. 10).

⁽⁸⁾ 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).

⁽⁹⁾ Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 on additives for use in animal nutrition (OJ L 268, 18.10.2003, p. 29).

⁽¹⁰⁾ The provisions concerning chemical impurities and processing aids established in this paragraph shall not apply to feed materials listed in the Register of feed materials as referred to in Article 24(6) of Regulation (EC) No 767/2009.

⁽¹¹⁾ By derogation from this obligation, for the process 'drying' the common name/qualifier may be added.

- (9) If the manufacturing process for a feed material differs from the description of the process concerned, as set out in the glossary of processes in Part B, the manufacturing process shall be set out in the description of the feed material concerned.
- (10) For a number of feed materials, synonyms may be used. Such synonyms are included in square brackets in the column 'name' of the entry for the feed material concerned in the list of feed materials in Part C.
- (11) In the list of feed materials in Part C, apart from animal by-products, the word 'product' or 'co-product', as appropriate, is used instead of the word 'by-product' to reflect the market situation and the language used in practice by feed business operators to highlight the commercial value of feed materials.
- (12) The botanical name of a plant is only given in the description of the first entry in the list of feed materials in Part C concerning that plant.
- (13) The underlying principle for the compulsory labelling of analytical constituents of a certain feed material in the Catalogue is, whether a certain product contains high concentrations of a specific constituent, or the manufacturing process has changed the nutritional characteristics of the product.
- (14) Article 15(g) of Regulation (EC) No 767/2009 in conjunction with point 6 of Annex I to that Regulation lays down labelling requirements as regards the moisture content. Article 16(1)(b) of that Regulation in conjunction with its Annex V lays down labelling requirements as regards other analytical constituents. In addition, point 5 of Annex I to Regulation (EC) No 767/2009 requires the declaration of the level of ash insoluble in hydrochloric acid if it exceeds 2,2 % in general or for certain feed material if it exceeds the level set in the relevant section of Annex V to that Regulation. However, some entries in the list of feed materials in Part C deviate from those rules as follows:
- (a) compulsory declarations regarding analytical constituents in the list of feed materials in Part C replace the compulsory declarations as set out in the relevant section of Annex V to Regulation (EC) No 767/2009;
 - (b) if the column relating to compulsory declarations in the list of feed materials in Part C is left blank with respect to the analytical constituents that would have to be declared in accordance with the relevant section of Annex V to Regulation (EC) No 767/2009, none of those constituents need be labelled. For ash insoluble in hydrochloric acid, however, where no level is set in the list of feed materials in Part C, the level shall be declared if it exceeds 2,2 %;
 - (c) where one or more specific moisture levels are set in the column 'compulsory declarations' of the list of feed materials in Part C, those levels shall apply instead of the levels in point 6 of Annex I to Regulation (EC) No 767/2009. However, if the moisture content is below 14 % its declaration is not compulsory. Where no specific moisture level is set in that column, point 6 of Annex I to Regulation (EC) No 767/2009 shall apply.
- (15) A feed business operator, who claims a feed material has more properties than those specified in the column 'description' of the list of feed materials in Part C, or refers to a process listed in Part B that can be assimilated to a claim (e.g. rumen protection), shall comply with Article 13 of Regulation (EC) No 767/2009. Furthermore, feed materials may meet a particular nutritional purpose in accordance with Articles 9 and 10 of Regulation (EC) No 767/2009.

- (16) If a feed material listed in part C, for which it is required in a footnote that the name shall be supplemented with the species, consists of several species, it can only be considered as a feed material, when the characteristics and the origin of the plants or the animals used for the feed materials, or parts thereof, are the same.

PART B

Glossary of processes

	Process	Definition	Common name/qualifier
1	Air fractionation	Separation of particles by means of an air stream	Air fractionated
2	Aspiration	Process to remove dust, fine particles and other particulates with suspended grain fines from bulk grain during transfer by means of an air-flow	Aspirated
3	Blanching	Process consisting of heat treatment of an organic substance by boiling or steaming in order to denature natural enzymes, soften tissue and remove raw flavouring, followed by immersion in cold water to halt the cooking process	Blanched
4	Bleaching	Removing naturally occurring colour by chemical or physical processes or by the use of bleaching earth	Bleached
5	Chilling	Lowering the temperature below ambient but above freezing point to aid preservation.	Chilled
6	Chopping	Reduction of particle size using one or more knives	Chopped
7	Cleaning	Removal of objects (contaminants, e.g. stones) or vegetative parts of the plant e.g. unattached particles of straw or husks or weeds	Cleaned/sorted
8	Concentration ⁽¹⁾	Removal of water and/or other constituents ⁽²⁾	Concentrate
9	Condensation	Transition of a substance from a gaseous to a liquid phase	Condensed
10	Cooking	The application of heat to change the physical and chemical characteristics of feed materials	Cooked
11	Crushing	Reduction of particle size using a crusher	Crushed
12	Crystallisation	Purification by the formation of solid crystals from a liquid solution. Impurities in the liquid are usually not incorporated into the lattice structure of the crystal	Crystallised
13	Decortication ⁽³⁾	Complete or partial removal of outer layers from grains, seeds, fruits, nuts and others	Decorticated, partially decorticated
14	Dehulling/dehusking	Removal of the outer skins of beans, grains and seeds usually by physical means	Dehulled or dehusked ⁽⁴⁾

15	Depectinising	Extraction of pectins from a feed material	Depectinised
16	Desiccation	Process of extracting moisture	Desiccated or dehydrated
17	Desliming	Process used to remove the slime layer on a surface	Deslimed
18	Desugaring	Complete or partial removal of mono- and disaccharides from molasses and other material containing sugar by chemical or physical means	Desugared, partially desugared
19	Detoxification	Process by which toxic contaminants are destroyed or reduced in concentration	Detoxified
20	Distillation	Fractionation of liquids by boiling and collecting condensed vapour into a separate container	Distilled
21	Drying	Dehydration by artificial or natural processes	Naturally dried or artificially dried, as appropriate
22	Ensiling	Process by which natural deterioration of feed materials is controlled by acidification in anaerobic condition resulting from natural fermentation or/and addition of silage additives	Ensiled
23	Evaporation	Reducing water content	Evaporated
24	Expansion	Thermal process, during which the product's internal water content, abruptly steamed, leads to the breaking-up of the product	Expanded or puffed
25	Expelling	Removal of oil/fat by pressing	Expeller/cake and oil/fat
26	Extraction	Removal by partial or total separation of soluble constituents from a raw material with water or another solvent into liquid and solid phases, the resulting materials being an extract ^(?) and one or several co-products of extraction ⁽⁶⁾	Extract/oil/sugar or co-product of extraction/meal/molasses/pulp, as appropriate
27	Extrusion	Thermal process during which the product's internal water content is rapidly evaporated leading to the breaking-down of the product, combined with specific shaping of the product by passing through a defined orifice	Extruded
28	Fermentation	Process in which micro-organisms such as bacteria, fungi or yeasts either are produced or used on materials to modify their chemical composition or properties	Fermented
29	Filtration	The process of passing a liquid through a porous media or membrane filter in order to remove solid particles, resulting in the filtered feed material and the filter residue ²	Filtered
30	Flaking	Rolling of moist heat-treated material to generate thin pieces of material	Flakes

31	Flour milling	Reduction of particle size of dry grain and to facilitate separation into constituent fractions (principally flour, bran and middlings)	Flour, bran, middlings (?) or feed, as appropriate
32	Winterisation	Cooling of oils separates the more saturated parts of the oils and the more unsaturated parts of the oil. The more saturated parts of the oil congeal by cooling, while the more unsaturated parts of the oil are liquid and may e.g. be decanted. The winterized product is the congealed oil	Winterised
33	Fragmentation	Process of breaking a feed material into fragments	Fragmented
34	Frying	Process of cooking feed materials in an oil or fat	Fried
35	Gelling	Process to form a gel, a solid, jelly-like material that can have properties ranging from soft and weak to hard and tough usually using gelling agents	Gelled
36	Granulation	Treatment of feed materials to obtain a specific particle size and consistency	Granulated
37	Grinding/milling	Reducing the particle size of solid feed materials in a dry or wet process	Ground or milled
38	Heating	Heat treatments carried out under specific conditions such as pressure and moisture	Heated / Heat treated
39	Hydrogenation	Catalytic process aimed at saturating double bonds of oils/fats/fatty acids, carried out at high temperature under hydrogen pressure, in order to obtain partially or fully saturated triglycerides/fatty acids, or polyols by reduction of carbonyl groups of carbohydrates to hydroxyl groups	Hydrogenated, partially hydrogenated
40	Hydrolysis	Reduction of molecular size by appropriate treatment with water and either heat/pressure, enzymes or acid/alkali. For hydrolysed feed materials covered by Regulation (EC) No 1069/2009, the definition laid down therein applies	Hydrolysed
41	Liquefying	Transition from a solid or a gas phase into a liquid	Liquefied
42	Maceration	Process of placing either a raw material proposed for a feed material, or a feed material itself, in a liquid in order to solubilize its compounds, using mechanical methods. This results in a reduction of the size of the feed material ²	Macerated
43	Malting	Allowing grain to commence germination to activate naturally occurring enzymes that are able to break down starch to fermentable carbohydrates and proteins to amino acids and peptides	Malted
44	Melting	Transition from a solid to a liquid phase by the application of heat	Melted

45	Micronisation	Process of reducing the average diameter of a solid material's particles to the micrometre scale	Micronised
46	Parboiling	Process of soaking in water and subjecting to a heat treatment so that starch is fully gelatinised, followed by a drying process	Parboiled
47	Pasteurisation	Heating to a critical temperature for a specified time to eliminate harmful micro-organisms, followed by rapid cooling	Pasteurised
48	Peeling	Removal of the skin/peel from fruit and vegetables	Peeled
49	Pelleting	Shaping by compression through a die	Pellet, pelleted
50	Rice milling	Removal of almost all or part of the bran and embryo from husked rice	Milled
51	Pregelatinisation	Modification of starch to significantly improve its swelling properties in cold water	Pregelatinised ⁽⁸⁾
52	Pressing ⁽⁹⁾	Partial or total separation of liquid and solid phases by mechanical forces	Pressed
53	Refining	Complete or partial removal of impurities or unwanted components by chemical/physical treatment	Refined, partially refined
54	Roasting	Heating of feed materials into a dry state to improve digestibility, increase colour and/or reduce naturally occurring anti-nutritive factors	Roasted
55	Rolling	Reduction of particle size by passing the material, e.g. grains, between pairs of rollers	Rolled
56	Rumen protection	Process which, either by physical treatment with use of heat, pressure, steam and combination of such conditions and/or through the action of e.g. lignosulfonates, sodium hydroxide or organic acids (such as propionic or tannic acid) aims to protect the nutrients from degradation in the rumen. Feed materials shall not be rumen protected by formaldehyde	Rumen protected through the action of [insert as applicable]
57	Sieving/Screening	Separation of particles of different sizes by passing feed materials through screen(s) whilst being shaken or poured	Sieved, sifted, screened
58	Skimming	Separating the top floating layer of a liquid by mechanical means, e.g. milk fat	Skimmed
59	Slicing	Cutting feed materials into flat pieces	Sliced
60	Soaking/Steeping	Moistening and softening of feed materials, usually seeds, to reduce cooking time, aid seed coat removal and facilitate water uptake to activate the germination process or reduce concentration of naturally occurring anti-nutritive factors	Steeped

61	Spray-drying	Reducing the moisture content of a liquid by creating a spray or mist of feed material to increase the surface area to weight ratio through which warm air is blown	[Spray-]dried, powder
62	Steaming	Process using pressurised steam for heating and cooking to increase digestibility	Steamed
63	Toasting	Heating using dry heat usually applied to oilseeds, e.g. to reduce or remove naturally occurring anti-nutritive factors	Toasted
64	Ultra-filtration	Filtration of liquids through a fine membrane permeable to small molecules only	Ultra-filtered
65	Degermination	Process of complete or partial removal of germ from crushed cereal grain	Degermed, degerminated
66	Infra-red micronisation	Thermal process using infrared heat for cooking and roasting cereals, roots, seeds or tubers, or their co-products, usually followed by flaking	Infrared micronised
67	Oil/fats and hydrogenated oils/fats splitting	Chemical process of hydrolysis of fats/oils. The reaction of fats/oils with water, carried out at high temperatures and pressures, allows obtaining crude fatty acids in the hydrophobic phase and sweet waters (crude glycerol) in the hydrophilic phase	Split
68	Ultrasound sonication	Release of soluble compounds by mechanical processing with power ultrasound and heat in water	Sonicated
69	Mechanical food packaging removal	Mechanical removal of packaging material	Mechanically unpacked
70	Alkali treatment [soda treatment]	Applying sodium hydroxide ⁽¹⁰⁾ on a feed material rich in fiber to improve its digestibility	Soda treated

⁽¹⁾ In German 'Konzentrieren' may be replaced by 'Eindicken' where appropriate, in which case the common qualifier should be 'eingedickt'.

⁽²⁾ The principal purpose of the resulting feed materials is to supply proteins, carbohydrates, fats, energy, minerals or dietary fibres.

⁽³⁾ 'Decortication' may be replaced by 'dehulling' or 'dehusking' where appropriate, in which case the common qualifier should be 'dehulled' or 'dehusked'.

⁽⁴⁾ In the case of rice, this process is referred to as 'husking' and the common qualifier as 'husked'.

⁽⁵⁾ Extract refers to the liquid phase containing the solubles (e.g. fat/oil, sugar or other soluble components). The principal purpose of these extracts as feed materials is to supply proteins, carbohydrates, fats, energy, minerals or dietary fibres. The fact that extraction is listed as a process for feed materials does not preclude that extracts can be classified as feed additives.

⁽⁶⁾ Co-product of extraction refers to the remaining fraction of the extraction process other than the extract, e.g. meal or pulp. The principal purpose of these co-products of extraction as feed materials is to supply proteins, carbohydrates, fats, energy, minerals or dietary fibres.

⁽⁷⁾ In French the name 'issues' may be used.

⁽⁸⁾ In German the qualifier 'aufgeschlossen' and the name 'Quellwasser' (referring to starch) may be used. In Danish the qualifier 'Kvældning' and the name 'Kvældet' (referring to starch) may be used.

⁽⁹⁾ In French 'Pressage' may be replaced by 'Extraction mécanique' where appropriate.

⁽¹⁰⁾ Instructions for proper and safe use shall be respected.

PART C

List of feed materials

1. Cereal grains and products derived thereof

Number	Name ⁽¹⁾	Description	Compulsory declarations
1.1.1	Barley	Grains of <i>Hordeum vulgare</i> L.	
1.1.2	Barley, puffed	Product obtained from milled or broken barley by means of a treatment in humid, warm conditions and under pressure	Starch
1.1.3	Barley, roasted	Product of barley roasting process which is partially roasted with low colour	Starch, if > 10 % Crude protein, if > 15 %
1.1.4	Barley flakes	Product obtained by steaming or infrared micronisation and rolling dehusked barley. It may contain a small proportion of barley husks	Starch
1.1.5	Barley fibre	Product of barley starch manufacture. It consists of particles of endosperm and principally of fibre	Crude fibre Crude protein, if > 10 %
1.1.6	Barley hulls	Product obtained after dry milling, screening and dehulling of barley grains	Crude fibre Crude protein, if > 10 %
1.1.7	Barley middlings	Product obtained during the processing of screened, dehusked barley into pearl barley, semolina or flour. It consists principally of particles of endosperm with fine fragments of outer skins and some grain screenings.	Crude fibre Starch
1.1.8	Barley protein	Product from barley obtained after starch and bran separation. It consists principally of protein.	Crude protein
1.1.9	Barley protein feed	Product from barley obtained after starch separation. It consists principally of protein and particles of endosperm.	Moisture, if < 45 % or > 60 % If moisture < 45 %: — Crude protein — Starch
1.1.10	Barley solubles	Product from barley obtained after wet protein and starch extraction	Crude protein
1.1.11	Barley bran	Product of flour manufacture, obtained from screened grains of dehusked barley. It consists principally of fragments of the outer skins and of particles of grain from which the greater part of the endosperm has been removed.	Crude fibre
1.1.12	Liquid barley starch	Secondary starch fraction from the production of starch from barley	If moisture < 50 %: — Starch

1.1.13	Malting barley screenings	Product from mechanical screening (size fractionation) consisting of undersized barley kernels and fractions of barley kernels separated before the malting process	Crude fibre Crude ash if > 2,2 %
1.1.14	Malting barley and malt fines	Product consisting of fractions of barley kernels and malt separated during the production of malt	Crude fibre
1.1.15	Malting barley husks	Product from malting barley cleaning consisting of fractions of husk and fines	Crude fibre
1.1.16	Barley distillers solids, wet	Product of ethanol manufacture from barley. It contains solid feed fraction from distillation	Moisture, if < 65 % or > 88 % If moisture < 65 %: — Crude protein
1.1.17	Barley distillers solubles, wet	Product of ethanol manufacture from barley. It contains soluble feed fraction from distillation	Moisture, if < 45 % or > 70 % If moisture < 45 %: — Crude protein
1.1.18	Malt ⁽²⁾	Product from germinated cereals, dried, milled and/or extracted	
1.1.19	Malt rootlets ⁽²⁾	Product from malting cereals germination and malt cleaning consisting of rootlets, cereal fines, husks and small broken malted cereal grains	
1.2.1	Maize ⁽³⁾	Grains of <i>Zea mays</i> L. ssp. <i>mays</i>	
1.2.2	Maize flakes ⁽³⁾	Product obtained by steaming or infrared micronising and rolling dehusked maize. It may contain a small proportion of maize husks	Starch
1.2.3	Maize middlings ⁽³⁾	Product of the manufacture of flour or semolina from maize. It consists principally of fragments of the outer skins and of particles of grain from which less of the endosperm has been removed than in maize bran. It may contain some maize germ fragments.	Crude fibre Starch Crude fat if > 5 %
1.2.4	Maize bran ⁽³⁾	Product of the manufacture of flour or semolina from maize. It consists principally of outer skins and some maize germ fragments, with some endosperm particles	Crude fibre
1.2.5	Maize cobs ⁽³⁾	Central core of a maize ear. It may include small quantities of maize and spathes which might not have been removed during mechanical harvesting	Crude fibre Starch

1.2.6	Maize screenings ⁽³⁾	Fraction of maize kernels separated by the screening process at product intake	
1.2.7	Maize fibre ⁽³⁾	Product from the manufacture of maize starch. It consists principally of fibre	Moisture, if < 50 % or > 70 % If moisture < 50 %: — Crude fibre
1.2.8	Maize protein [Maize gluten] ⁽³⁾	Product from the manufacture of maize starch. It consists principally of protein (prolamins) obtained during separation of starch	Moisture, if < 70 % or > 90 % If moisture < 70 %: — Crude protein
1.2.9	Maize protein feed [Maize gluten feed] ⁽³⁾	Product obtained during the manufacture of maize starch. It is composed of bran and maize solubles. The product may also include broken maize and co-products from oil extraction of maize germs. Other products derived from starch and from the refining or fermentation of starch products may be added. May contain up to 2 % sodium and 2 % chloride	Moisture, if < 40 % or > 65 % If moisture < 40 %: — Crude protein — Crude fibre — Starch
1.2.10	Maize germ ⁽³⁾	Product of the manufacture of semolina, flour or starch from maize. It consists predominately of maize germ, outer skins and parts of the endosperm	Moisture, if < 40 % or > 60 % If moisture < 40 %: — Crude protein — Crude fat
1.2.11	Maize germ expeller ⁽³⁾	Product of oil manufacture obtained by pressing processed maize germ to which parts of the endosperm and testa may still adhere	Crude protein Crude fat
1.2.12	Maize germ meal ⁽³⁾	Product of oil manufacture, obtained by extraction of processed maize germ	Crude protein
1.2.13	Crude maize germ oil ⁽³⁾	Oil and fat obtained either by pressing and/or extraction of maize germs	Moisture, if > 1 %
1.2.14	Maize, puffed ⁽³⁾	Product obtained from milled or broken maize by means of a treatment in humid, warm conditions and under pressure	Starch
1.2.15	Maize steep liquor ⁽³⁾	Concentrated liquid fraction from the steeping process of corn	Moisture, if < 45 % or > 65 % If moisture < 45 %: — Crude protein
1.2.16	Sweet maize silage ⁽³⁾	Co-product of the sweet corn processing industry, composed of centre cobs, husks, base of the kernels, chopped and drained or pressed. Generated by chopping sweet corn cobs, husks and leaves, with presence of sweet corn kernels	Crude fibre

1.2.17	Crushed degerminated (degermed) maize ⁽³⁾	Product obtained by degermination of crushed maize. It consists principally of endosperm fragments and may contain some maize germ and outer skin particles	Crude fibre Starch
1.2.18	Maize grits ⁽³⁾	Hard, flinty portions of ground maize containing little or no bran or germs	Crude fibre Starch
1.2.19	Maize germ meal feed ⁽³⁾	Product of oil manufacture, obtained by extraction of processed maize germ. Only when produced at an integrated crushing and refining site, the product may contain up to: — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % of crude lecithins — 2 % of soap stocks	Crude protein
1.2.20	Corn cob mix	Grains and cobs of maize	
1.2.21	Corn cob mix with husks	Grains, cobs and husks of maize	
1.3.1	Millet	Grains of <i>Panicum miliaceum</i> L.	
1.4.1	Oats	Grains of <i>Avena sativa</i> L. and other cultivars of oats	
1.4.2	Dehulled oats	Dehulled grains of oats	
1.4.3	Oat flakes	Product obtained by steaming or infra red micronising and rolling dehusked oats. It may contain a small proportion of oat husks.	Starch
1.4.4	Oat middlings	Product obtained during the processing of screened, dehusked oats into oat groats and flour. It consists principally of oat bran and some endosperm	Crude fibre Starch
1.4.5	Oat bran	Product of flour manufacture, obtained from screened grains of dehusked oat. It consists principally of fragments of the outer skins and particles of grain from which the greater part of the endosperm has been removed.	Crude fibre
1.4.6	Oat hulls	Product obtained during dehulling of oat grains	Crude fibre
1.4.7	Oat, puffed	Product obtained from milled or broken oat by means of a treatment in humid, warm conditions and under pressure	Starch
1.4.8	Oat groats	Cleaned oats with the hull removed	Crude fibre Starch
1.4.9	Oat flour	Product obtained by milling of oat grains	Crude fibre Starch

1.4.10	Fodder oat flour	Oats product with high content in starch, after decortication	Crude fibre
1.4.11	Oat feed	Product obtained during the processing of screened, dehusked oats into oat groats and flour. It consists principally of oat bran and some endosperm	Crude Fibre
1.5.1	Quinoa seed, extracted	Cleaned whole seed of the quinoa plant (<i>Chenopodium quinoa</i> Willd.) from which the saponin contained in the seeds outer layer has been removed	
1.6.1	Broken rice	Part of rice kernel of <i>Oryza sativa</i> L. with a length less than three-quarters of a whole kernel. The rice may have been parboiled	Starch
1.6.2	Milled rice	Husked rice from which almost all the bran and embryo have been removed during rice milling. The rice may have been parboiled	Starch
1.6.3	Pre-gelatinised rice	Product obtained from milled or broken rice by pre-gelatinisation	Starch
1.6.4	Extruded rice	Product obtained by extruding rice flour	Starch
1.6.5	Rice flakes	Product obtained by flaking pre-gelatinised rice kernels or broken kernels	Starch
1.6.6	Husked rice	Paddy (<i>Oryza sativa</i> L.) from which the husk only has been removed. The processes of husking and handling may result in some loss of bran	Starch Crude fibre
1.6.7	Ground fodder rice	Product obtained by grinding fodder rice, consisting either of green, chalky or unripe grains, sifted out during the milling of husked rice, or of normal husked grains which are yellow or spotted	Starch
1.6.8	Rice flour	Product obtained by grinding milled rice. The rice may have been parboiled	Starch
1.6.9	Husked rice, flour	Product obtained by grinding husked rice. The rice may have been parboiled	Starch Crude fibre
1.6.10	Rice bran	Product obtained during rice milling, mainly consisting of the outer layers of the kernel (pericarp, seed coat, nucleus, aleurone) with part of the germ. The rice may have been parboiled or extruded	Crude fibre
1.6.11	Rice bran with calcium carbonate	Product obtained during rice milling, mainly consisting of the outer layers of the kernel (pericarp, seed coat, nucleus, aleurone) with part of the germ. It may contain up to 23 % of calcium carbonate used as processing aid. The rice may have been parboiled	Crude fibre Calcium carbonate

1.6.12	Defatted rice bran	Rice bran resulting from oil extraction	Crude fibre
1.6.13	Rice bran oil	Oil extracted from stabilised rice bran	
1.6.14	Rice middlings	Product of rice flour and starch production, obtained by dry or wet milling and sieving. It consists principally of starch, protein, fat and fibre. The rice may have been parboiled. May contain up to 0,25 % sodium and up to 0,25 % sulphate	Starch, if > 20 % Crude protein, if > 10 % Crude fat, if > 5 % Crude fibre
1.6.15	Rice middlings with calcium carbonate	Product obtained during rice milling, mainly consisting of particles of aleurone layer and endosperm. It may contain up to 23 % of calcium carbonate used as processing aid. The rice may have been parboiled	Starch Crude protein Crude fat Crude fibre Calcium carbonate
1.6.16	Rice	Grains of <i>Oryza sativa</i> L.	
1.6.17	Rice germ	Product obtained during rice milling, mainly consisting of the embryo	Crude fat Crude protein
1.6.18	Rice germ expeller⁵	Product remaining after rice germ has been crushed to expel the oil	Crude protein Crude fat Crude fibre
1.6.20	Rice protein	Product of rice starch production, obtained by wet milling sieving, separation, concentration and drying	Crude protein
1.6.21	Liquid rice feed	Concentrated liquid product of wet milling and sieving rice	Starch
1.6.22	Rice, puffed	Product obtained by expanding rice kernels or broken kernels	Starch
1.6.23	Rice, fermented	Product obtained by fermentation of rice	Starch
1.6.24	Malformed rice, milled/chalky rice, milled	Product obtained during rice milling, mainly consisting of malformed kernels and/or chalky kernels and/or damaged kernels and/or naturally coloured kernel (green, red, yellow), and/or normal husked grain, whole or broken	Starch
1.6.25	Immature rice, milled	Product obtained during rice milling, mainly consisting of immature and/or chalky kernels	Starch
1.7.1	Rye	Grains of <i>Secale cereale</i> L.	
1.7.2	Rye middlings	Product of flour manufacture, obtained from screened rye. It consists principally of particles of endosperm, with fine fragments of the outer skins and some miscellaneous parts of the grain	Starch Crude fibre
1.7.3	Rye feed	Product of flour manufacture, obtained from screened rye. It consists principally of fragments of the outer skins, and of particles of grain from which less of the endosperm has been removed than in rye bran	Starch Crude fibre

1.7.4	Rye bran	Product of flour manufacture, obtained from screened rye. It consists principally of fragments of the outer skins, and of particles of grain from which most of the endosperm has been removed	Starch Crude fibre
1.8.1	Sorghum [Milo]	Grains/seeds of <i>Sorghum bicolor</i> (L.) Moench	
1.8.2	Sorghum white	Grains of specific cultivars of Sorghum with a white seed coat.	
1.8.3	Sorghum feed	Dried product obtained during the separation of sorghum starch. It consists principally of bran. The product may also include dried residues of maceration water and germs could be added	Crude protein
1.9.1	Spelt	Grains of spelt <i>Triticum spelta</i> L., <i>Triticum dicoccum</i> Schrank or <i>Triticum monococcum</i> L.	
1.9.2	Spelt bran	Product of the manufacture of spelt flour. It consists principally of outer skins and some spelt germ fragments, with some endosperm particles.	Crude fibre
1.9.3	Spelt hulls	Product obtained during dehulling of spelt grains	Crude fibre
1.9.4	Spelt middlings	Product obtained during the processing of screened, dehulled spelt into spelt flour. It consists principally of particles of endosperm with fine fragments of the outer skins and some grain screenings.	Crude fibre Starch
1.10.1	Triticale	Grains of <i>Triticum</i> × <i>Secale cereale</i> L. Hybrid	
1.11.1	Wheat	Grains of <i>Triticum aestivum</i> L., <i>Triticum durum</i> Desf. and other wheat cultivars.	
1.11.2	Wheat rootlets	Product from malting wheat germination and malt cleaning consisting of rootlets, cereal fines, husks and small broken malted wheat grains	
1.11.3	Wheat, pre-gelatinised	Product obtained from milled or broken wheat by means of a treatment in humid, warm conditions and under pressure	Starch
1.11.4	Wheat middlings	Product of flour manufacture obtained from screened grains of wheat or dehusked spelt. It consists principally of particles of endosperm with fine fragments of the outer skins and some grain screenings.	Crude fibre Starch
1.11.5	Wheat flakes	Product obtained by steaming or infrared micronising and rolling dehusked wheat. It may contain a small proportion of wheat husks.	Crude fibre Starch

1.11.6	Wheat feed	Product of flour or malting manufacture obtained from screened grains of wheat or dehusked spelt. It consists principally of fragments of the outer skins and of particles of grain from which less of the endosperm has been removed than in wheat bran.	Crude fibre
1.11.7	Wheat bran (*)	Product of flour or malting manufacture obtained from screened grains of wheat or dehusked spelt. It consists principally of fragments of the outer skins and of particles of grain from which the greater part of the endosperm has been removed	Crude fibre
1.11.8	Malted fermented wheat particles	Product obtained by the combined processes of malting and fermentation of wheat and wheat bran. The product is then dried and ground.	Starch Crude fibre
1.11.10	Wheat fibre	Fibre extracted from wheat processing. It consists principally of fibre	Moisture, if < 60 % or > 80 % If moisture < 60 %: — Crude fibre
1.11.11	Wheat germ	Product of flour milling consisting essentially of wheat germ, rolled or otherwise, to which fragments of endosperm and outer skin may still adhere	Crude protein Crude fat
1.11.12	Wheat germ, fermented	Product of fermentation of wheat germ	Crude protein Crude fat
1.11.13	Wheat germ expeller⁵	Product of oil manufacture, obtained by pressing wheat germ (<i>Triticum aestivum</i> L., <i>Triticum durum</i> Desf. and other wheat cultivars and dehusked spelt (<i>Triticum spelta</i> L., <i>Triticum dicoccum</i> Schrank, <i>Triticum monococcum</i> L.)) to which parts of the endosperm and testa may still adhere	Crude protein
1.11.15	Wheat protein	Wheat protein extracted during starch or ethanol production, maybe partially hydrolysed	Crude protein
1.11.16	Wheat gluten feed	Product from the manufacture of wheat starch and gluten. It consists of bran, from which the germ may have been partially removed. Wheat solubles, broken wheat and other products derived from starch and from the refining or fermentation of starch products may be added	Moisture, if < 45 % or > 60 % If moisture < 45 %: — Crude protein — Starch
1.11.18	Vital wheat gluten	Wheat protein characterised by high viscoelasticity as hydrated, with minimum 80 % protein (N × 6,25) and maximum 2 % ash on dry substance	Crude protein

1.11.19	Liquid wheat starch	Product obtained from the production of starch/glucose and gluten from wheat	Moisture, if < 65 % or > 85 % If moisture < 65 %: — Starch
1.11.20	Wheat starch containing protein, partially de-sugared	Product obtained during the production of wheat starch mainly comprising partially sugared starch, the soluble proteins and other soluble parts of the endosperm	Crude protein Starch Total sugars calculated as sucrose
1.11.21	Wheat solubles	Product of wheat obtained after wet protein and starch extraction. May be hydrolysed	Moisture if < 55 % or > 85 % If moisture < 55 %: — Crude protein
1.11.22	Wheat yeast concentrate	Wet co-product that is released after the fermentation of wheat starch for alcohol production	Moisture, if < 60 % or > 80 % If moisture < 60 %: — Crude protein
1.11.23	Malting wheat screenings	Product from mechanical screening (size fractionation) consisting of undersized wheat kernels and fractions of wheat kernels separated before the malting process	Crude fibre
1.11.24	Malting wheat and malt fines	Product consisting of fractions of wheat kernels and malt separated during the production of malt	Crude fibre
1.11.25	Malting wheat husks	Product from malting wheat cleaning consisting of fractions of husk and fines	Crude fibre
1.11.26	Wheat aleurone	Product obtained by splitting the layer of aleurone from wheat bran	Crude protein Crude fiber
1.12.2	Grain flour ⁽²⁾	Flour from milling grains	Starch Crude fibre
1.12.3	Grain protein concentrate ⁽²⁾	Concentrate and dried product obtained from grain after starch removal through yeast fermentation	Crude protein
1.12.4	Cereal grains screenings ⁽²⁾	Products from mechanical screening (size fractionation) consisting of small grains and fractions of grain kernels, which may be germinated, separated before further processing of the grain. The products contain more crude fibre (e. g. hulls) than the unfractionated cereals	Crude fibre
1.12.5	Grain germ ⁽²⁾	Product of flour milling and the manufacture of starch consisting principally of grain germ, rolled or otherwise, to which fragments of endosperm and outer skin may still adhere	Crude protein, Crude fat

1.12.6	Grain spent wash syrup ⁽²⁾	Product of grain obtained through the evaporation of the concentrate of the spent wash from the fermentation and distillation of grain used in the production of grain spirit	Moisture, if < 45 % or > 70 % If moisture < 45 %: — Crude protein
1.12.7	Moist distillers' grains ⁽²⁾	Moist product consisting in the solid fraction by centrifugation and/or filtration of spent wash from fermented and distilled grains used in the production of grain spirit	Moisture, if < 65 % or > 88 % If moisture < 65 %: — Crude protein
1.12.8	Concentrated distillers solubles ⁽²⁾	Moist product from production of alcohol by fermentation and distilling a mash of wheat and sugar syrup after previous separation of bran and gluten. It may contain dead cells and/or parts of the fermentation micro-organisms. May contain up to 4 % potassium at a moisture content of 12 %	Moisture, if < 65 % or > 88 % If moisture < 65 %: Crude protein, if > 10 %
1.12.9	Distillers' grains and solubles ⁽²⁾	Product obtained when producing alcohol by fermentation and distilling grain mash of cereals and/or other starchy and sugar containing products. They may contain dead cells and/or parts of the fermentation micro-organisms. May contain 2 % sulphate and/or up to 2 % potassium at a moisture content of 12 %	Moisture, if < 60 % or > 80 % If moisture < 60 %: — Crude protein
1.12.10	Distillers' dried grains ⁽²⁾	Product of alcohol distillation obtained by drying solid co-products of fermented grains. May contain up to 2 % potassium at a moisture content of 12 %	Crude protein
1.12.11	Distillers' dark grains ⁽²⁾ [Distillers' dried grains and solubles ⁽²⁾]	Product of alcohol distillation obtained by drying solid co-products of fermented grains to which pot ale syrup or evaporated spent wash has been added. May contain up to 2 % potassium at a moisture content of 12 %	Crude protein
1.12.12	Brewers' grains ⁽²⁾	Product of brewing composed of co-products from malted and unmalted cereals and other starchy products, which may contain hop materials. Typically marketed in a moist condition but may also be sold in a dried form. May contain up to 0,3 % dimethyl polysiloxane, may contain up to 1,5 % enzymes, may contain up to 1,8 % bentonite	Moisture, if < 65 % or > 88 % If moisture < 65 %: — Crude protein
1.12.13	Draff ⁽²⁾	Solid product of cereal whisky production. It consists of co-products from hot water extraction of malted cereal. Typically marketed in the moist form after the extract has been removed by gravity	Moisture, if < 65 % or > 88 % If moisture < 65 %: — Crude protein

1.12.14	Mash filter grains	Solid product obtained through the production of beer, malt extract and whisky spirit. It consists of the co-products of hot water extraction of ground malt and possibly other sugar or starch-rich adjuncts. Typically marketed in the moist form after the extract has been removed by pressing	Moisture, if < 65 % or > 88 % If moisture < 65 %: — Crude protein
1.12.15	Pot ale	The product remaining in the still from the first (wash) distillation of a malt distillery	Crude protein, if > 10 %
1.12.16	Pot ale syrup	Product from the first (wash) distillation of a malt distillery produced by evaporating the pot ale remaining in the still	Moisture, if < 45 % or > 70 % If moisture < 45 %: — Crude protein

(¹) The name may be replaced by the name in [...], as appropriate

(²) The name may be supplemented by the cereal species.

(³) 'maize' can either be referred to as such or as 'corn'.

(⁴) If this product has been subject to a finer milling the word 'fine' may be added to the name or the name may be replaced by a corresponding denomination.

2. Oil seeds, oil fruits, and products derived thereof

Number	Name ¹	Description	Compulsory declarations
2.1.1	Babassu expeller (¹)	Product of oil manufacture, obtained by pressing Babassu palm nuts <i>Orbignya</i> varieties	Crude protein Crude fat Crude fibre
2.2.1	Camelina seed	Seeds of <i>Camelina sativa</i> L. Crantz	
2.2.2	Camelina, expeller (¹)	Product of oil manufacture, obtained by pressing seeds of Camelina	Crude protein Crude fat Crude fibre
2.2.3	Camelina meal	Product of oil manufacture, obtained by extraction and appropriate heat treatment of Camelina seed expeller	Crude protein
2.3.1	Cocoa husks	Teguments of dried and roasted beans of <i>Theobroma cacao</i> L.	Crude fibre
2.3.2	Cocoa hulls	Product obtained from processing beans of <i>Theobroma cacao</i> L.	Crude fibre Crude protein
2.3.3	Cocoa bean meal, partially decorticated	Product of oil manufacture, obtained by extraction of dried and roasted beans of <i>Theobroma cacao</i> L. from which part of the husks has been removed	Crude protein Crude fibre
2.4.1	Copra expeller (¹)	Product of oil manufacture, obtained by pressing the dried kernel (endosperm) and outer husk (tegument) of the seed of the coconut palm <i>Cocos nucifera</i> L.	Crude protein Crude fat Crude fibre

2.4.2	Copra, hydrolysed expeller ⁽¹⁾	Product of oil manufacture, obtained by pressing and enzymatic hydrolysis of the dried kernel (endosperm) and outer husk (tegument) of the seed of the coconut palm <i>Cocos nucifera</i> L.	Crude protein Crude fat Crude fibre
2.4.3	Copra meal	Product of oil manufacture, obtained by extraction of the dried kernel (endosperm) and outer husk (tegument) of the seed of the coconut palm <i>Cocos nucifera</i> L.	Crude protein
2.5.1	Cotton seed	Seeds of <i>Gossypium</i> spp. from which the fibres have been removed	
2.5.2	Cotton seed meal, partially decorticated	Product of oil manufacture, obtained by extraction of seeds of cotton from which fibres and part of the husks have been removed. (Maximum crude fibre 22,5 % in the dry matter)	Crude protein Crude fibre
2.5.3	Cotton seed expeller ⁽¹⁾	Product of oil manufacture, obtained by pressing seeds of cotton from which fibres have been removed	Crude protein Crude fibre Crude fat
2.6.1	Groundnut ⁽²⁾ expeller ⁽¹⁾ , partially decorticated	Product of oil manufacture, obtained by pressing partially decorticated groundnuts <i>Arachis hypogaea</i> L. and other species of <i>Arachis</i> (Maximum crude fibre content 16 % in the dry matter)	Crude protein Crude fat Crude fibre
2.6.2	Groundnut ⁽²⁾ meal, partially decorticated	Product of oil manufacture, obtained by extraction of partially decorticated groundnut expeller (Maximum crude fibre content 16 % in the dry matter)	Crude protein Crude fibre
2.6.3	Groundnut ⁽²⁾ expeller ⁽¹⁾ , decorticated	Product of oil manufacture, obtained by pressing decorticated groundnuts	Crude protein Crude fat Crude fibre
2.6.4	Groundnut ⁽²⁾ meal, decorticated	Product of oil manufacture, obtained by extraction of decorticated groundnut expeller	Crude protein Crude fibre
2.6.5	Groundnut ⁽²⁾	Seeds from <i>Arachis hypogaea</i> and other species of <i>Arachis</i>	
2.7.1	Kapok expeller ⁽¹⁾	Product of oil manufacture obtained by pressing Kapok seeds (<i>Ceiba pentandra</i> L. Gaertn.)	Crude protein Crude fibre
2.8.1	Linseed	Seeds of linseed <i>Linum usitatissimum</i> L. (Minimum botanical purity 93 %) as whole, flattened or ground linseed	
2.8.2	Linseed expeller ⁽¹⁾	Product of oil manufacture, obtained by pressing linseed	Crude protein Crude fat Crude fibre
2.8.3	Linseed meal	Product of oil manufacture, obtained by extraction and appropriate heat treatment of linseed expeller	Crude protein

2.8.4	Linseed expeller⁽¹⁾ feed	Product of oil manufacture, obtained by pressing linseed. Only when produced at an integrated crushing and refining site, the product may contain up to: — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % of crude lecithins — 2 % of soap stocks	Crude protein Crude fat Crude fibre
2.8.5	Linseed meal feed	Product of oil manufacture, obtained by extraction and appropriate heat treatment of linseed expeller. Only when produced at an integrated crushing and refining site, the product may contain up to: — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 2 % soap stocks	Crude protein
2.9.1	Mustard bran	Product of the manufacture of mustard (<i>Brassica juncea</i> L.). It consists of fragments of the outer skins and particles of grain	Crude fibre
2.9.2	Mustard seed meal	Product obtained by the extraction of volatile mustard oil from mustard seeds	Crude protein
2.10.1	Niger seed	Seeds of the niger plant <i>Guizotia abyssinica</i> (L. F.) Cass	
2.10.2	Niger seed expeller⁵	Product of oil manufacture, obtained by pressing of seeds of the niger plant (Ash insoluble in HCl: maximum 3,4 %)	Crude protein Crude fat Crude fibre
2.11.1	Olive pulp	Product of oil manufacture, obtained by extraction of pressed olives <i>Olea europea</i> L. separated as far as possible from parts of the kernel	Crude protein Crude fibre Crude fat
2.11.2	Defatted olive meal feed	Product of olive oil manufacture, obtained by extraction and appropriate heat treatment of olive pulp expeller separated as far as possible from parts of the kernel. Only when produced at an integrated crushing and refining site, the product may contain up to: — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 2 % soap stocks	Crude protein Crude fibre

2.11.3	Defatted olive meal	Product of olive oil manufacture, obtained by extraction and appropriate heat treatment of olive pulp expeller separated as far as possible from parts of the kernel	Crude protein Crude fibre
2.12.1	Palm kernel expeller ⁽¹⁾	Product of oil manufacture, obtained by pressing of palm kernels <i>Elaeis guineensis</i> Jacq., <i>Corozo oleifera</i> (HBK) L. H. Bailey (<i>Elaeis melanococca</i> auct.) from which as much as possible of the hard shell has been removed	Crude protein Crude fibre Crude fat
2.12.2	Palm kernel meal	Product of oil manufacture, obtained by extraction of palm kernels from which as much as possible of the hard shell has been removed	Crude protein Crude fibre
2.13.1	Pumpkin and squash seed	Seeds of <i>Cucurbita pepo</i> L. and plants of the genus <i>Cucurbita</i>	
2.13.2	Pumpkin and squash seed, expeller ⁽¹⁾	Product of oil manufacture, obtained by pressing seeds of <i>Cucurbita pepo</i> and plants of the genus <i>Cucurbita</i>	Crude protein Crude fat
2.14.1	Rape seed ⁽³⁾	Seeds of rape <i>Brassica napus</i> L. ssp. <i>oleifera</i> (Metzg.) Sinsk. Indian sarson <i>Brassica napus</i> L. var. <i>glauca</i> (Roxb.) O.E. Schulz and <i>Brassica rapa</i> ssp. <i>oleifera</i> (Metzg.) Sinsk. Minimum botanical purity 94 %	
2.14.2	Rape seed ⁽³⁾ expeller ⁽¹⁾	Product of oil manufacture, obtained by pressing seeds of rape	Crude protein Crude fat Crude fibre
2.14.3	Rape seed ⁽³⁾ meal	Product of oil manufacture, obtained by extraction and appropriate heat treatment of rape seed expeller	Crude protein
2.14.4	Rape seed ⁽³⁾, extruded	Product obtained from whole rape by means of a treatment in humid, warm conditions and under pressure increasing starch gelatinisation	Crude protein Crude fat
2.14.5	Rape seed ⁽³⁾ protein concentrate	Product of oil manufacture, obtained by separation of protein fraction of rape seed expeller or rape seed	Crude protein
2.14.6	Rape seed ⁽³⁾ expeller ⁽¹⁾ feed	Product of oil manufacture, obtained by pressing seeds of rape. Only when produced at an integrated crushing and refining site, the product may contain up to: — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 2 % soap stocks	Crude protein Crude fat Crude fibre

2.14.7	Rape seed ⁽³⁾ meal feed	Product of oil manufacture, obtained by extraction and appropriate heat treatment of rape seed expeller. Only when produced at an integrated crushing and refining site, the product may contain up to: — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 2 % soap stocks	Crude protein
2.15.1	Safflower seed	Seeds of the safflower <i>Carthamus tinctorius</i> L.	
2.15.2	Safflower seed meal, partially decorticated	Product of oil manufacture, obtained by extraction of partially decorticated seeds of safflower	Crude protein Crude fibre
2.15.3	Safflower hulls	Product obtained during dehulling of safflower seeds	Crude fibre
2.16.1	Sesame seed	Seeds of <i>Sesamum indicum</i> L.	
2.17.1	Sesame seed, partially dehulled	Product of oil manufacture, obtained by removing part of the husks	Crude protein Crude fibre
2.17.2	Sesame hulls	Product obtained during dehulling of sesame seeds	Crude fibre
2.17.3	Sesame seed expeller ⁽¹⁾	Product of oil manufacture, obtained by pressing seeds of the sesame plant (Ash insoluble in HCl: maximum 5 %)	Crude protein Crude fibre Crude fat
2.18.1	Toasted soya (beans)	Soya beans (<i>Glycine max</i> L. Merr.) subjected to an appropriate heat treatment (Urease activity maximum 0,4 mg N/g × min.)	
2.18.2	Soya (bean) expeller ⁽¹⁾	Product of oil manufacture, obtained by pressing the seed of soya	Crude protein Crude fat Crude fibre
2.18.3	Soya (bean) meal	Product of oil manufacture, obtained from soya beans after extraction and appropriate heat treatment. (Urease activity maximum 0,4 mg N/g × min.)	Crude protein Crude fibre if > 8 % in dry matter
2.18.4	Soya (bean) meal, dehulled	Product of oil manufacture, obtained from dehulled soya beans after extraction and appropriate heat treatment. (Urease activity maximum 0,5 mg N/g × min.)	Crude protein
2.18.5	Soya (bean) hulls	Product obtained during dehulling of soya beans	Crude fibre
2.18.6	Soya beans, extruded	Product obtained from soya beans by means of a treatment in humid, warm conditions and under pressure increasing starch gelatinisation	Crude protein Crude fat

2.18.7	Soya (bean) protein concentrate	Product obtained from dehulled, fat extracted soya beans, after a second extraction or enzymatic treatment to reduce the level of nitrogen-free extract. May contain inactivated enzymes	Crude protein
2.18.8	Soya bean pulp [Soya bean paste]	Product obtained during extraction of soya beans for food preparation	Crude protein
2.18.9	Soya bean molasses	Product obtained during the processing of soya bean	Crude protein Crude fat
2.18.10	Co-product from soybean preparation	Products obtained when processing soybeans to obtain soybean food preparations	Crude protein
2.18.11	Soya (beans)	Soya beans (<i>Glycine max</i> L. Merr.)	Urease activity if > 0,4 mg N/g × min
2.18.12	Soybean, flakes	Product obtained by steaming or infrared micronising and rolling dehulled soya beans (Urease activity maximum 0,4 mg N/g × min.)	Crude protein
2.18.13	Soya (bean) meal feed	Product of oil manufacture, obtained from soya beans after extraction and appropriate heat treatment. (Urease activity maximum 0,4 mg N/g × min.). Only when produced at an integrated crushing and refining site, the product may contain up to: — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 1,5 % soap stocks	Crude protein Crude fibre if > 8 % in dry matter
2.18.14	Soya (bean) meal feed, dehulled	Product of oil manufacture, obtained from dehulled soya beans after extraction and appropriate heat treatment. (Urease activity maximum 0,5 mg N/g × min.). Only when produced at an integrated crushing and refining site, the product may contain up to: — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 1,5 % soap stocks	Crude protein
2.18.15	Fermented soya (bean) protein (concentrate)	Product obtained from dehulled, fat extracted soya beans, after microbial fermentation to reduce the level of nitrogen-free extract. It may also include dead cells and/or parts thereof of the fermentation micro-organisms used	Crude protein

2.18.16	Soy flour toasted or steamed	Soya beans which have been toasted or steamed and ground into a flour (Urease activity maximum 0,4 mg N/g × min.)	
2.19.1	Sunflower seed	Seeds of the sunflower <i>Helianthus annuus</i> L.	
2.19.2	Sunflower seed expeller ⁽¹⁾	Product of oil manufacture, obtained by pressing seeds of the sunflower	Crude protein Crude fat Crude fibre
2.19.3	Sunflower seed meal	Product of oil manufacture, obtained by extraction and appropriate heat treatment of sunflower seed expeller	Crude protein Crude fibre
2.19.4	Sunflower seed meal, dehulled	Product of oil manufacture, obtained by extraction and appropriate heat treatment of expeller of sunflower seeds from which part or all of the husks has been removed. Maximum crude fibre 27,5 % in the dry matter	Crude protein Crude fibre
2.19.5	Sunflower seed hulls	Product obtained during dehulling of sunflower seeds	Crude fibre
2.19.6	Sunflower seed meal feed	Product of oil manufacture, obtained by extraction and appropriate heat treatment of sunflower seed expeller. Only when produced at an integrated crushing and refining site, the product may contain up to: <ul style="list-style-type: none"> — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 2 % soap stocks 	Crude protein
2.19.7	Sunflower seed meal feed, dehulled	Product of oil manufacture, obtained by extraction and appropriate heat treatment of expeller of sunflower seeds from which part or all of the husks has been removed. Only when produced at an integrated crushing and refining site, the product may contain up to: <ul style="list-style-type: none"> — 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 2 % soap stocks. Maximum crude fibre: 27,5 % in the dry matter	Crude protein Crude fibre

2.19.8	High-protein low-cellulose fraction of sunflower meal	Product of the processing of sunflower meal, obtained by grinding and fractionation (sieving and air fractionation) of sunflower seed meal, dehulled. Minimum crude protein content: 45 % on 8 % moisture basis. Maximum crude fibre content: 8 % on 8 % moisture basis	Crude protein Crude fibre
2.19.9	High-cellulose fraction of sunflower meal	Product of the processing of sunflower meal, obtained by grinding and fractionation (sieving and air fractionation) of sunflower seed meal, dehulled. Minimum crude fibre content: 38 % on 8 % moisture basis. Minimum crude protein content: 17 % on 8 % moisture basis	Crude protein Crude fibre
2.19.10	High-protein low-cellulose fraction of sunflower meal feed	Product of the processing of sunflower meal, obtained by grinding and fractionation (sieving and air fractionation) of sunflower seed meal, dehulled. Only when produced at an integrated crushing and refining site, the product may contain up to 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres). Minimum crude protein content: 45 % on 9,5 % moisture basis. Maximum crude fibre content: 8 % on 10 % moisture basis	Crude protein, crude fibre
2.19.11	High-cellulose fraction of sunflower meal feed	Product of the processing of sunflower meal, obtained by grinding and fractionation (sieving and air fractionation) of sunflower seed meal, dehulled. Only when produced at an integrated crushing and refining site, the product may contain up to 1 % of the sum of used bleaching earth and filter aid (e.g. diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres). Minimum crude fibre content: 38 % on 10 % moisture basis. Minimum crude protein content: 17 % on 8 % moisture basis	Crude protein, crude fibre
2.20.1	Vegetable oil and fat (*)	Oil and fat obtained either by pressing and/or extraction from oilseeds or oil fruits (excluding castor oil from the ricinus plant)	Moisture, if > 1 %
2.21.1	Crude lecithins	Product obtained during degumming of crude oil from oilseeds and oil fruits with water. Citric acid, phosphoric acid, sodium hydroxide or enzymes may be added during degumming of the crude oil	

2.22.1	Hemp seed	Seeds from varieties of <i>Cannabis sativa</i> L. with a tetrahydrocannabinol content < 0,2 % according to the quantification method established in Regulation (EU) No 639/2014 ⁽⁵⁾	
2.22.2	Hemp expeller ⁽¹⁾	Product of oil manufacture obtained by pressing hemp seeds from varieties of <i>Cannabis sativa</i> L. with a tetrahydrocannabinol content < 0,2 % according to the quantification method established in Regulation (EU) No 639/2014	Crude protein Crude fibre
2.22.3	Hemp seed oil	Oil obtained by pressing of hemp seeds from varieties of <i>Cannabis sativa</i> L. with a tetrahydrocannabinol content < 0,2 % according to the quantification method established in Regulation (EU) No 639/2014	Moisture, if > 1 %
2.23.1	Poppy seed	Seeds of <i>Papaver somniferum</i> L.	
2.23.2	Poppy meal	Product of oil manufacture, obtained by extraction of expeller of poppy seeds	Crude protein
2.24.1	Chia seed	Seed of <i>Salvia hispanica</i> L.	

(1) The term "expeller" may be replaced by "cake"

(2) 'Groundnut' may be replaced by 'peanut' in case of *Arachis hypogaea*.

(3) The indication 'low in glucosinolate' as defined in Union legislation may be added, where appropriate..

(4) The name "vegetable oil and fat" may be replaced by the term "vegetable oil" or "vegetable fat", as appropriate. It shall be supplemented by the plant species and as appropriate by the part of the plant. It shall be specified whether the oil(s) and/or fat(s) is/are crude or refined.

(5) Commission Delegated Regulation (EU) No 639/2014 of 11 March 2014 supplementing Regulation (EU) No 1307/2013 of the European Parliament and of the Council establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy and amending Annex X to that Regulation (OJ L 181, 20.6.2014, p. 1).

3. Legume seeds and products derived thereof

Number	Name ¹	Description	Compulsory declarations
3.1.1	Beans, toasted	Seeds of <i>Phaseolus</i> spp. or <i>Vigna</i> spp. subjected to an appropriate heat treatment	
3.1.2	Bean protein concentrate	Product obtained from the separated bean fruit water, when producing starch	Crude protein
3.2.1	Carob pods	Dried fruits of the carob tree <i>Ceratonia siliqua</i> L. containing the carob seed	Crude fibre
3.2.3	Kibbled carob	Product obtained by crushing dried fruits (pods) of the carob tree and from which the carob seeds have been removed	Crude fibre
3.2.4	Carob powder; [carob flour]	Product obtained by micronisation of the dried fruits (pods) of the carob tree from which the carob seeds have been removed	Crude fibre Total sugars, calculated as sucrose
3.2.5	Carob germ	Germ of the carob seed of the carob tree	Crude protein
3.2.6	Carob germ, expeller⁵	Product of oil manufacture, obtained by pressing of germ of carob	Crude protein

3.2.7	Carob seed	Seed (kernel) obtained from the carob pod and consisting of endosperm, husk and germ	Crude fibre
3.2.8	Carob seed husk	Husk of the carob seed, obtained by decortication of seeds of the carob tree	Crude fibre
3.3.1	Chick peas	Seeds of <i>Cicer arietinum</i> L.	
3.4.1	Ervil	Seeds of <i>Ervum ervilia</i> L.	
3.5.1	Fenugreek seed	Seed of fenugreek (<i>Trigonella foenum-graecum</i>)	
3.6.1	Guar meal	Product obtained after extraction of mucilage from seeds of guar bean <i>Cyamopsis tetragonoloba</i> (L.) Taub	Crude protein
3.6.2	Guar germs meal	Product of mucilage extraction from the germ of seeds of guar bean	Crude protein
3.7.1	Horse beans	Seeds of <i>Vicia faba</i> L. ssp. <i>faba</i> var. <i>equina</i> Pers. and var. <i>minuta</i> (Alef.) Mansf.	
3.7.2	Horse bean flakes	Product obtained by steaming or infrared micronising and rolling dehusked horse beans.	Starch Crude protein
3.7.3	Film horse beans; [Faba bean hulls]	Product obtained during dehulling horse bean seeds, consisting mainly of external envelopes	Crude fibre Crude protein
3.7.4	Horse beans, dehulled	Product obtained during dehulling horse bean seeds, consisting mainly of bean kernels from horse beans	Crude protein Crude fibre
3.7.5	Horse bean protein	Product obtained by grinding and air fractionation of horse beans	Crude protein
3.8.1	Lentils	Seeds of <i>Lens culinaris</i> a.o. Medik.	
3.8.2	Lentil hulls	Product obtained during dehulling process of lentil seeds	Crude fibre
3.9.1	Sweet lupins	Seeds of <i>Lupinus</i> spp. with a maximum of 5 % bitter seeds	Crude protein
3.9.2	Sweet lupins, dehulled	Dehulled sweet lupin seeds	Crude protein
3.9.3	Film lupins; [lupin hulls]	Product obtained during dehulling of sweet lupin seeds, consisting mainly of external envelopes.	Crude protein Crude fibre
3.9.4	Lupin pulp	Product obtained after extraction of components of sweet lupins.	Crude fibre
3.9.5	Lupin middlings	Product obtained during the manufacture of flour from sweet lupin. It consists principally of particles of cotyledon, and to a lesser extent, of skins	Crude protein Crude fibre
3.9.6	Lupin protein	Product obtained from the separated sweet lupin fruit water when producing starch, or after grinding and air fractionation	Crude protein
3.9.7	Lupin protein meal	Product of sweet lupin processing to produce a high protein meal	Crude protein

3.10.1	Mung beans	Beans of <i>Vigna radiata</i> L.	
3.11.1	Peas	Seeds of <i>Pisum</i> spp.	
3.11.2	Pea bran	Product obtained during the manufacture of pea meal. It is composed mainly of skins removed during the skinning and cleaning of peas	Crude fibre
3.11.3	Pea flakes	Product obtained by steaming or infra red micronising and rolling dehulled seeds of peas	Starch
3.11.4	Pea flour	Product obtained during the grinding of peas	Crude protein
3.11.5	Pea hulls	Product obtained during the manufacture of pea meal from peas. It is mainly composed of skins removed during the skinning and cleaning and, to a lesser extent, of endosperm	Crude fibre
3.11.6	Peas, dehulled	Dehulled pea seeds	Crude protein Crude fibre
3.11.7	Pea middlings	Product obtained during the manufacture of pea flour. It consists principally of particles of cotyledon, and to a lesser extent, of skins	Crude protein Crude fibre
3.11.8	Pea screenings	Product from mechanical screening consisting of fractions of pea kernels separated before further processing	Crude fibre
3.11.9	Pea protein	Product obtained from the separated pea fruit water when producing starch, or after grinding and air fractionation, maybe partially hydrolysed	Crude protein
3.11.10	Pea pulp [internal pea fiber]	Product obtained from starch and protein wet extraction from peas. It is mainly composed of internal fibre and starch	Moisture if < 70 % or > 85 % Starch Crude fibre Ash insoluble in HCl, if > 3,5 % of dry matter
3.11.11	Pea solubles	Product obtained from starch and protein wet extraction from peas. It is mainly composed of soluble proteins and oligosaccharides	Moisture if < 60 % or > 85 % Total sugars, calculated as sucrose Crude protein
3.11.12	Pea fibre	Product obtained by extraction after grinding and sieving of dehulled peas	Crude fibre
3.11.13	Pea cream	Product obtained from starch and protein wet extraction from peas. It is mainly composed of soluble proteins, internal fibre, starch and oligosaccharides. It may contain up to 1 % organic acids	Moisture if < 50 % or > 85 % Crude Protein Crude Fiber Starch
3.12.1	Vetches	Seeds of <i>Vicia sativa</i> L. var. <i>sativa</i> and other varieties	

3.13.1	Chickling vetch	Seeds of <i>Lathyrus sativus</i> L. subjected to an appropriate heat treatment	Method of heat treatment
3.14.1	Monantha vetch	Seeds of <i>Vicia monanthos</i> Desf.	

4. Tubers, roots, and products derived thereof

Number	Name ¹	Description	Compulsory declarations
4.1.1	Sugar beet	Root of <i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>altissima</i> Doell	
4.1.2	Sugar beet tops and tails	Fresh product of the manufacture of sugar consisting mainly of cleaned pieces of sugar beet with or without parts of beet leaves	Ash insoluble in HCl, if > 5 % of dry matter Moisture if < 50 %
4.1.3	(Beet) sugar [sucrose]	Sugar extracted from sugar beets using water	
4.1.4	(Sugar) beet molasses	Syrupy product obtained during the manufacture or refining of sugar from sugar beets. May contain up to 0,5 % antifoaming agents, 0,5 % antiscaling agents, 2 % sulphate and 0,25 % sulphite	Total sugars, calculated as sucrose Moisture, if > 28 %
4.1.5	(Sugar) beet molasses, partially desugared and/or debetainised	Product obtained after further extraction using water of sucrose and/or betaine from sugar beet molasses. May contain up to 2 % sulphate and 0,25 % sulphite	Total sugars, calculated as sucrose Moisture, if > 28 %
4.1.6	Isomaltulose molasses	Non-crystallised fraction from the manufacture of isomaltulose by enzymatic conversion of sucrose from sugar beets	Moisture if > 40 %
4.1.7	Wet (sugar) beet pulp	Product of the manufacture of sugar consisting of slices of sugar beet that have had sugar extracted with water. Minimum moisture content: 82 %. Sugar content is low and declines towards zero due to (lactic acid) fermentation	Ash insoluble in HCl, if > 5 % of dry matter Moisture, if < 82 % or > 92 %
4.1.8	Pressed (sugar) beet pulp	Product of the manufacture of sugar consisting of slices of sugar beet that have had sugar extracted with water and have been mechanically pressed. Maximum moisture content: 82 %. Sugar content is low and declines towards zero due to (lactic acid) fermentation. May contain up to 1 % sulphate	Ash insoluble in HCl, if > 5 % of dry matter Moisture if < 65 % or > 82 %
4.1.9	Pressed (sugar) beet pulp, molassed	Product of the manufacture of sugar consisting of slices of sugar beet that have had sugar extracted with water, have been mechanically pressed, and with molasses added. Maximum moisture content: 82 %. Sugar content declines due to (lactic acid) fermentation. May contain up to 1 % sulphate	Ash insoluble in HCl, if > 5 % of dry matter Moisture if < 65 % or > 82 %

4.1.10	Dried (sugar) beet pulp	Product of the manufacture of sugar consisting of slices of sugar beet that have had sugar extracted with water, mechanically pressed and dried. May contain up to 2 % sulphate	Ash insoluble in HCl, if > 3,5 % of dry matter Total sugars, calculated as sucrose, if > 10,5 %
4.1.11	Dried (sugar) beet pulp, molassed	Product of the manufacture of sugar consisting of slices of sugar beet that have had sugar extracted with water, mechanically pressed, and dried, with molasses added. May contain up to 0,5 % antifoaming agents and 2 % sulphate	Ash insoluble in HCl, if > 3,5 % of dry matter Total sugars, calculated as sucrose
4.1.12	Sugar syrup	Product obtained by processing of sugar and/or molasses. May contain up to 0,5 % sulphate and 0,25 % sulphite	Total sugars, calculated as sucrose Moisture, if > 35 %
4.1.13	(Sugar) beet pieces, boiled	Product of the manufacture of edible syrup from sugar beet	If dried: ash insoluble in HCl, if > 3,5 % of dry matter If pressed: ash insoluble in HCl, if > 5 % of dry matter Moisture, if < 50 %
4.1.15	(Sugar) beet molasses, betaine rich, liquid / dried ⁽¹⁾	Product obtained after extraction of sugar by using water and further filtration of sugar beet molasses. The product thereof contains the constituents of molasses and a maximum of 20 % naturally occurring betaine. May contain up to 0,5 % antifoaming agents, 0,5 % antiscaling agents, 2 % sulphate and 0,25 % sulphite	Betaine content Total sugars, calculated as sucrose Moisture, if > 14 %
4.1.16	Isomaltulose	Isomaltulose as crystalline monohydrate substance. It is obtained by enzymatic conversion of sucrose from sugar beets	
4.2.1	Beetroot juice	Juice from pressing of red beet (<i>Beta vulgaris</i> convar. <i>crassa</i> var. <i>conditiva</i>) with subsequent concentration and pasteurisation, maintaining the typical vegetable-like taste and flavour	Moisture if < 50 % or > 60 % Ash insoluble in HCl, if > 3,5 % of dry matter
4.3.1	Carrots	Root of the yellow or red carrot <i>Daucus carota</i> L.	
4.3.2	Carrot peelings, steamed	Moist product from the carrot processing industry consisting of peelings removed from carrot roots by steam treatment to which auxiliary flows of gelatinous carrot starch may be added. Maximum moisture content: 97 %	Ash insoluble in HCl, if > 3,5 % of dry matter Moisture, if > 97 %

4.3.3	Carrot scrapings	Moist product obtained from mechanical separation in processing carrots and carrot remnants. The product may have been subject to heat treatment. Maximum moisture content: 97 %	Ash insoluble in HCl, if > 3,5 % of dry matter Moisture, if > 97 %
4.3.4	Carrot flakes	Product obtained by flaking roots of yellow or red carrots, which are subsequently dried	
4.3.5	Carrot, dried	Roots of yellow or red carrots regardless of their presentation, which are subsequently dried	Crude fibre
4.3.6	Carrot feed, dried	Product constituted of internal pulp and outer skins that are dried	Crude fibre
4.3.7	Carrot juice	Juice from pressing of carrot roots with subsequent concentration and pasteurisation	Moisture if < 40 % or > 60 %
4.4.1	Chicory roots	Roots of <i>Cichorium intybus</i> L.	
4.4.2	Chicory tops and tails	Fresh product from chicory processing. It consists predominantly of cleaned pieces of chicory and parts of leaves	Ash insoluble in HCl, if > 3,5 % of dry matter Moisture if < 50 %
4.4.3	Chicory seed	Seed of <i>Cichorium intybus</i> L.	
4.4.4	Pressed chicory pulp	Product of the manufacture of inulin from roots of <i>Cichorium intybus</i> L. consisting of extracted and mechanically pressed slices of chicory. The (soluble) chicory carbohydrates and water have been partly removed. May contain up to 1 % sulphate and 0,2 % sulphite	Crude fibre Ash insoluble in HCl, if > 3,5 % of dry matter Moisture if < 65 % or > 82 %
4.4.5	Dried chicory pulp	Product of the manufacture of inulin from roots of <i>Cichorium intybus</i> L. consisting of extracted and mechanically pressed slices of chicory and subsequent drying. The (soluble) chicory carbohydrates have been partly extracted. May contain up to 2 % sulphate and 0,5 % sulphite	Crude fibre Ash insoluble in HCl, if > 3,5 % of dry matter
4.4.6	Chicory roots powder	Product obtained by chopping, drying and grinding chicory roots. May contain up to 1 % of anticaking agents	Crude fibre Ash insoluble in HCl, if > 3,5 % of dry matter
4.4.7	Chicory molasses	Product of chicory processing, obtained during the production of inulin and oligofructose. Chicory molasses consists of organic plant material and minerals. May contain up to 0,5 % antifoaming agents	Crude protein Crude ash Moisture if < 20 % or > 30 %
4.4.8	Chicory vinasses	Co-product from chicory processing obtained after the separation of inulin and oligofructose and ion exchange elution. Chicory vinasses consists of organic plant material and minerals. May contain up to 1 % antifoaming agents	Crude protein Crude ash Moisture if < 30 % or > 40 %

4.4.9	Inulin (?)	Inulin is a fructan extracted from e.g. roots of <i>Cichorium intybus</i> L., <i>Inula helenium</i> or <i>Helianthus tuberosus</i> ; raw inulin may contain up to 1 % sulphate and 0,5 % sulphite	
4.4.10	Oligofructose syrup	Product obtained by partial hydrolysis of inulin from <i>Cichorium intybus</i> L.; raw oligofructose syrup may contain up to 1 % sulphate 0,5 % sulphite	Moisture if < 20 % or > 30 %
4.4.11	Oligofructose, dried	Product obtained by partial hydrolysis of inulin from <i>Cichorium intybus</i> L. and subsequent drying	
4.5.1	Garlic, dried	White to yellow powder of pure, ground garlic, <i>Allium sativum</i> L.	
4.6.1	Manioc [tapioca]; [cassava]	Roots of <i>Manihot esculenta</i> Crantz, regardless of their presentation	Moisture if < 60 % or > 70 %
4.6.2	Manioc, dried [tapioca, dried]	Roots of Manioc, regardless of their presentation, which are subsequently dried	Starch Ash insoluble in HCl, if > 3,5 % of dry matter
4.7.1	Onion pulp	Moist product obtained from processing onions (genus <i>Allium</i>) and consisting of both skins and whole onions. If obtained from the production process for onion oil, then it mostly consists of cooked remains of onions	Crude fibre Ash insoluble in HCl, if > 3,5 % of dry matter
4.7.2	Onions, fried	Skinned and crumbed onion pieces which are then fried	Crude fibre Ash insoluble in HCl, if > 3,5 % of dry matter Crude fat
4.7.3	Onions solubles, dried	Dry product obtained from processing fresh onions. It is obtained by alcoholic and/or water extraction, the water or alcoholic fraction is separated and spray dried. It consists mainly of carbohydrates	Crude fibre
4.8.1	Potatoes	Tubers of <i>Solanum tuberosum</i> L.	Moisture if < 72 % or > 88 %
4.8.2	Potatoes, peeled	Potatoes from which the skin is removed using steam treatment	Starch Crude fibre Ash insoluble in HCl, if > 3,5 % of dry matter
4.8.3	Potato peelings, steamed	Moist product from the potato processing industry consisting of peelings removed by steam treatment from potato tubers to which auxiliary flows of gelatinous potato starch may be added	Moisture if > 93 % Ash insoluble in HCl, if > 3,5 % of dry matter
4.8.4	Potato cuttings, raw	Product obtained from potatoes during the preparation of potato products for human consumption, which may have been peeled	Moisture if > 88 % Ash insoluble in HCl, if > 3,5 % of dry matter

4.8.5	Potato scrapings	Product obtained from mechanical separation in the processing of potatoes and potato remnants. The product may have been subject to heat treatment	Moisture if > 93 % Ash insoluble in HCl, if > 3,5 % of dry matter
4.8.6	Potato, mashed	Blanched or boiled and then mashed potato product	Starch Crude fibre Ash insoluble in HCl, if > 3,5 % of dry matter
4.8.7	Potato flakes	Product obtained by rotary drying of washed, peeled or unpeeled steamed potatoes	Starch Crude fibre Ash insoluble in HCl, if > 3,5 % of dry matter
4.8.8	Potato pulp	Product of the manufacture of potato starch consisting of extracted ground potatoes	Moisture, if < 77 % or > 88 %
4.8.9	Potato pulp, dried	Dried product of the manufacture of potato starch consisting of extracted ground potatoes	
4.8.10	Potato protein	Product of starch manufacture composed mainly of protein substances obtained after the separation of starch	Crude protein
4.8.11	Potato protein, hydrolysed	Protein obtained by a controlled enzymatic hydrolysis of potato proteins	Crude protein
4.8.12	Potato protein, fermented	Product obtained by fermentation of potato protein and subsequent spray-drying	Crude protein
4.8.13	Potato protein fermented, liquid	Liquid product obtained by fermentation of potato protein	Crude protein
4.8.14	Potato juice, concentrated	Concentrated product of the manufacture of potato starch, consisting of the remaining substance after partial removal of fibre, proteins and starch from the whole potato pulp and evaporation of part of the water	Moisture if < 50 % or > 60 % If moisture < 50 %: — Crude protein — Crude ash
4.8.15	Potato granules	Potatoes after washing, peeling, size reduction (cutting, flaking, etc.) and drying	
4.9.1	Sweet potato	Tubers of <i>Ipomoea batatas</i> L. regardless of their presentation	Moisture if < 57 % or > 78 %
4.10.1	Jerusalem artichoke [Topinambur]	Tubers of <i>Helianthus tuberosus</i> L. regardless of their presentation	Moisture if < 75 % or > 80 %
4.11.1	Red radish juice	Juice from pressing roots of Red Radish (<i>Raphanus sativus</i> L.) with subsequent drying and pasteurisation	Moisture if < 30 % or > 50 %

(¹) Expressions differ mainly in their moisture content and are to be used as appropriate.

(²) The name shall be supplemented by the plant species.

5. Other seeds and fruits, and products derived thereof

Number	Name ¹	Description	Compulsory declarations
5.1.1	Acorn	Whole fruits of the pendunculate oak <i>Quercus robur</i> L., the sessile oak <i>Quercus petraea</i> (Matt.) Liebl., the cork oak <i>Quercus suber</i> L., or other species of the <i>Quercus</i> gender	
5.1.2	Acorn, dehulled	Product obtained during dehulling of acorn	Crude protein Crude fibre
5.2.1	Almond	Whole or broken fruit <i>Prunus dulcis</i> , with or without hulls	
5.2.2	Almond hulls	Almond hulls obtained from dehusked almond seeds by physical separation from the kernels and ground	Crude fibre
5.2.3	Almond kernel expeller⁵	Product of oil manufacture obtained by pressing of almond kernels	Crude protein Crude fibre
5.3.1	Anise seed	Seeds of <i>Pimpinella anisum</i>	
5.4.1	Apple pulp, dried; [apple pomace, dried]	Product obtained from the production of juice of <i>Malus domestica</i> or cider production. It consists principally of internal pulp and outer skins that are dried	Crude fibre
5.4.2	Apple pulp, pressed; [apple pomace, pressed]	Moist product obtained from the production of apple juice or cider production. It consists principally of internal pulp and outer skins that are pressed	Crude fibre
5.4.3	Apple molasses	Product obtained after producing pectin from apple pulp	Crude protein Crude fibre Crude oils and fats, if > 10 %
5.5.1	Sugar beet seed	Seeds of sugar beet	
5.6.1	Buckwheat	Seeds of <i>Fagopyrum esculentum</i>	
5.6.2	Buckwheat hulls and bran	Product obtained during the milling of buckwheat grains	Crude fibre
5.6.3	Buckwheat middlings	Product of flour manufacture, obtained from screened buckwheat. It consists principally of particles of endosperm, with fine fragments of the outer and some miscellaneous parts of the grain. It must contain no more than 10 % crude fibre	Crude fibre Starch
5.7.1	Red cabbage seed	Seeds of <i>Brassica oleracea</i> var. <i>capitata</i> f. <i>Rubra</i>	
5.8.1	Canary grass seed	Seeds of <i>Phalaris canariensis</i>	
5.9.1	Caraway seed	Seeds from <i>Carum carvi</i> L.	

5.12.1	Whole or broken chestnuts	Product of the production of chestnut flour, consisting mainly of particles of endosperm, with fine fragments of envelopes and a few remnants of chestnut (<i>Castanea</i> spp.)	Crude protein Crude fibre
5.13.1	Citrus pulp ⁽¹⁾	Product obtained by pressing citrus fruits <i>Citrus</i> (L.) spp. or during the production of citrus juice. May contain collectively up to 1 % methanol, ethanol and propan-2-ol, on an anhydrous basis	Crude fibre
5.13.2	Citrus pulp ⁽¹⁾ , dried	Product obtained by pressing citrus fruits or during the production of citrus juice, which is subsequently dried. May contain collectively up to 1 % methanol, ethanol and propan-2-ol, on an anhydrous basis	Crude fibre
5.14.1	Red clover seed	Seeds of <i>Trifolium pratense</i> L.	
5.14.2	White clover seed	Seeds of <i>Trifolium repens</i> L.	
5.15.1	Coffee skins	Product obtained from dehusked seeds of the <i>Coffea</i> plant	Crude fibre
5.16.1	Cornflower seed	Seeds of <i>Centaurea cyanus</i> L.	
5.17.1	Cucumber seed	Seeds of <i>Cucumis sativus</i> L.	
5.18.1	Cypress seed	Seeds of <i>Cupressus</i> L.	
5.19.1	Date fruit	Fruits of <i>Phoenix dactylifera</i> L.	
5.19.2	Date seed	Whole seeds of <i>Phoenix dactylifera</i> L.	Crude fibre
5.20.1	Fennel seed	Seeds of <i>Foeniculum vulgare</i> Mill.	
5.21.1	Fig fruit	Fruits of <i>Ficus carica</i> L.	
5.22.1	Fruit kernels ¹¹ ⁽²⁾	Product consisting of the inner, edible seeds of a nut or fruit stone	
5.22.2	Fruit pulp ⁽²⁾	Product obtained during the production of fruit juice and fruit puree	Crude fibre
5.22.3	Fruit pulp, dried ⁽²⁾	Product obtained during the production of fruit juice and fruit puree which is subsequently dried	Crude fibre
5.23.1	Garden cress	Seeds from <i>Lepidium sativum</i> L.	Crude fibre
5.24.1	Graminaceous seeds	Seeds from graminoids of the families Poaceae, Cyperaceae and Juncaceae	
5.25.1	Grape pips	Pips from <i>Vitis</i> L. separated from grape pulp, from which the oil has not been removed	Crude fat Crude fibre
5.25.2	Grape pips meal	Product obtained during the extraction of oil from grape pips	Crude fibre
5.25.3	Grape pulp [grape marc]	Grape pulp dried rapidly after the extraction of alcohol from which as much as possible of the stalks and pips have been removed	Crude fibre
5.25.4	Grape pips soluble	Product obtained from grape pips after producing grape juice. It principally contains carbohydrates	Crude fibre

5.26.1	Hazelnut	Whole or broken fruit of <i>Corylus</i> (L.) spp., with or without hulls	
5.26.2	Hazelnut expeller⁵	Product of oil manufacture obtained by pressing hazelnut kernels	Crude protein Crude fibre
5.27.1	Pectin	Pectin is obtained by aqueous extraction (of natural strains) of appropriate plant material, usually citrus fruits or apples. No organic precipitant shall be used other than methanol, ethanol and propan-2-ol. May contain collectively up to 1 % methanol, ethanol and propan-2-ol, on an anhydrous basis. Pectin consists mainly of the partial methyl esters of polygalacturonic acid and their ammonium, sodium, potassium and calcium salts	
5.28.1	Perilla seed	Seeds of <i>Perilla frutescens</i> L. and its milling products	
5.29.1	Pine nut	Seeds from <i>Pinus</i> (L.) spp.	
5.30.1	Pistachio	Fruit of <i>Pistacia vera</i> L.	
5.31.1	Plantago seed	Seeds of <i>Plantago</i> (L.) spp.	
5.32.1	Radish seed	Seeds of <i>Raphanus sativus</i> L.	
5.33.1	Spinach seed	Seeds of <i>Spinacia oleracea</i> L.	
5.34.1	Thistle seed	Seeds from <i>Carduus marianus</i> L.	
5.35.1	Tomato pulp [tomato pomace]	Product obtained by pressing tomatoes <i>Solanum lycopersicum</i> L. during production of tomato juice. It consists principally of tomato peel and seeds	Crude fibre
5.36.1	Yarrow seed	Seeds of <i>Achillea millefolium</i> L.	
5.37.1	Apricot kernel expeller⁵	Product of oil manufacture obtained by pressing apricot kernels (<i>Prunus armeniaca</i> L.). It may contain hydrocyanic acid	Crude protein Crude fibre
5.38.1	Black cumin expeller⁵	Product of oil manufacture obtained by pressing black cumin seeds (<i>Bunium persicum</i> L.)	Crude protein Crude fibre
5.39.1	Borage seed expeller⁵	Product of oil manufacture obtained by pressing borage seeds (<i>Borago officinalis</i> L.)	Crude protein Crude fibre
5.40.1	Evening primrose expeller⁵	Product of oil manufacture obtained by pressing evening primrose seeds (<i>Oenothera</i> L.)	Crude protein Crude fibre
5.41.1	Pomegranate expeller⁵	Product of oil manufacture obtained by pressing pomegranate seeds (<i>Punica granatum</i> L.)	Crude protein Crude fibre
5.42.1	Walnut kernel expeller⁵	Product of oil manufacture obtained by pressing walnut kernels (<i>Juglans regia</i> L.)	Crude protein Crude fibre

(¹) The word "citrus" shall be replaced by the citrus species.

(²) The word "fruit" shall be replaced by the name of the fruit of the plant species, as appropriate.

6. Forages and roughage, and products derived thereof

Number	Name ¹	Description	Compulsory declarations
6.1.1	Beet leaves	Leaves of <i>Beta</i> spp.	
6.2.1	Cereal plants¹¹	Whole plants of cereal species or parts thereof	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.3.1	Cereals straw¹¹	Straw of cereals	
6.3.2	Cereal straw, treated¹¹	Product obtained by an appropriate treatment of cereal straw	Sodium, if treated with NaOH
6.4.1	Clover meal	Product obtained by drying and milling clover <i>Trifolium</i> spp. It may contain up to 20 % lucerne (<i>Medicago sativa</i> L. and <i>Medicago</i> var. <i>Martyn</i>) or other forage crops dried and milled at the same time as the clover	Crude protein Crude fibre Ash insoluble, in HCl, if > 3,5 % of dry matter
6.5.1	Forage meal⁽¹⁾ [grass meal⁽¹⁾]; [green meal⁽¹⁾]	Product obtained by drying and milling and in some cases compacting forage plants ⁽²⁾	Crude protein Crude fibre Ash insoluble, in HCl, if > 3,5 % of dry matter
6.6.1	Hay	Species of any grass or legume plants or herbs, field dried or artificially dried	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.6.2	Grass; herbs; legume plants, dried	Product obtained from grass, herbs or legume plants that has been artificially dehydrated (in any form)	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.6.3	Grass; herbs; legume plants; [green forage]	Fresh biomass consisting of grass, legume plants or herbs	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.6.4	Green silage	Ensiled biomass from arable land and grassland consisting of any grass, legume plants or herbs	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.6.5	Haylage	Ensiled or dried arable crops consisting of grass, legume plants or herbs with a minimum of 50 % dry matter content, wrapped in bales or stored in silos	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.7.1	Hemp flour	Flour ground from stems from hemp from varieties of <i>Cannabis sativa</i> L. with a tetrahydrocannabinol content < 0,2 % according to the quantification method established in Regulation (EU) No 639/2014	Crude protein
6.7.2	Hemp fibre	Product obtained during the mechanical processing of hemp stems from varieties of <i>Cannabis sativa</i> L. with a tetrahydrocannabinol content < 0,2 % according to the quantification method established in Regulation (EU) No 639/2014	Crude fibre
6.8.1	Horse bean straw	Straw of horse bean (<i>Vicia faba</i> L. ssp. <i>faba</i> var. <i>equina</i> Pers. and var. <i>minuta</i> (Alef.) Mansf.)	

6.9.1	Linseed straw	Straw of linseed (<i>Linum usitatissimum</i> L.)	
6.10.1	Lucerne [alfalfa]	<i>Medicago sativa</i> L. and <i>Medicago</i> var. Martyn plants or parts thereof	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.10.2	Lucerne, field dried; [alfalfa field dried]	Lucerne, field dried	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.10.3	Lucerne, high temperature dried [alfalfa, high temperature dried]; [dehydrated Lucerne]	Lucerne artificially dehydrated, in any form	Crude protein Crude fibre Ash insoluble, in HCl, if > 3,5 % of dry matter
6.10.4	Lucerne, extruded [alfalfa, extruded]	Alfalfa pellets that have been extruded	
6.10.5	Lucerne meal ⁽¹⁾ [alfalfa meal¹⁶]	Product obtained by drying and milling Lucerne. It may contain up to 20 % clover or other forage crop dried and milled at the same time as the lucerne	Crude protein Crude fibre Ash insoluble, in HCl, if > 3,5 % of dry matter
6.10.6	Lucerne pomace [alfalfa pomace]	Dried product obtained by pressing the juice from lucerne	Crude protein Crude fibre
6.10.7	Lucerne protein concentrate [alfalfa protein concentrate]	Product obtained by artificially drying fractions of lucerne press juice, which have been separated by centrifugation and heat treated to precipitate protein	Crude protein Carotene
6.10.8	Lucerne solubles	Product obtained after protein extraction from lucerne juice	Crude protein
6.11.1	Maize silage	Ensiled plants or parts thereof of <i>Zea mays</i> L. ssp. <i>Mays</i>	
6.12.1	Pea straw	Straw of <i>Pisum</i> spp.	
6.13.1	Rapeseed⁷ straw	Straw of <i>Brassica napus</i> L. ssp. <i>oleifera</i> (Metzg.) Sinsk., of Indian sarson <i>Brassica napus</i> L. var. <i>glauca</i> (Roxb.) O.E. Schulz and of rape <i>Brassica rapa</i> ssp. <i>oleifera</i> (Metzg.)	

⁽¹⁾ The species of plants may be added to the name.

⁽²⁾ With the exception of *Cannabis sativa* L.

⁽³⁾ The term 'meal' may be replaced by 'pellets'. The method of drying may be added to the name.

7. Other plants, algae, funghi and products derived thereof

Number	Name ¹	Description	Compulsory declarations
7.1.1	Algae ⁽¹⁾	Algae, live or processed, including fresh, chilled or frozen algae. May contain up to 0,1 % antifoaming agents	Crude protein Crude fat Crude ash Iodine if > 100 ppm

7.1.2	Algae ⁽¹⁾, dried	Product obtained by drying algae. This product may have been washed to reduce the iodine content and the algae have been inactivated. May contain up to 0,1 % antifoaming agents	Crude protein Crude fat Crude ash Iodine if > 100 ppm
7.1.3	Algae ⁽¹⁾ meal	Product of algae oil manufacture, obtained by extraction of algae. The algae have been inactivated. May contain up to 0,1 % antifoaming agents	Crude protein Crude fat Crude ash Iodine if > 100 ppm
7.1.4	Algal ⁽¹⁾ oil	Oil obtained by extraction from algae. May contain up to 0,1 % antifoaming agents	Crude fat Moisture if > 1 %
7.1.6	Seaweed ⁽¹⁾ meal	Product obtained by drying and crushing macro-algae, in particular red, brown or green algae. This product may have been washed to reduce the iodine content. May contain up to 0,1 % antifoaming agents	Crude protein Crude fat Crude ash Iodine if > 100 ppm
7.1.7	Algae meal from <i>Asparagopsis</i>	Product obtained by drying and crushing macro-algae of the genus <i>Asparagopsis</i> . May be washed to reduce iodine and bromine content	Crude protein Crude fat Crude ash Iodine if > 100 ppm
7.2.1	Fungi ⁽¹⁾, dried	Dried mushroom and/or mycelium derived from edible fungi, rich in fiber, amino-acids, and polysaccharides	Crude fibre Crude protein
7.3.1	Barks ⁽¹⁾	Cleaned and dried bark of trees or bushes	Crude fibre
7.4.1	Blossoms¹⁵, ⁽¹⁾, dried	All parts of dried blossoms of consumable plants and their fractions	Crude fibre
7.5.1	Broccoli, dried	Product obtained by drying the plant <i>Brassica oleracea</i> L. after washing, size reduction (cutting, flaking, etc.) and water content removal	
7.6.1	(Sugar) cane molasses	Syrupy product obtained during the manufacture or refining of sugar from <i>Saccharum</i> L. May contain up to 0,5 % antifoaming agents, 0,5 % antiscaling agents, 3,5 % sulphate and 0,25 % sulphite	Total sugars, calculated as sucrose Moisture, if > 30 %
7.6.2	(Sugar) cane Molasses, partially desugared	Product obtained after further extraction using water of sucrose from sugar cane molasses	Total sugars, calculated as sucrose Moisture, if > 28 %
7.6.3	(Cane) sugar [sucrose]	Sugar extracted from sugar cane using water	
7.6.4	Cane bagasse	Product obtained during extraction using water of sugar from sugar cane. It consists mainly of fibres	Crude fibre
7.7.1	Leaves¹⁵, ⁽¹⁾, dried	Dried leaves of consumable plants and their fractions	Crude fibre
7.8.1	Lignocellulose	Product obtained by means of mechanical processing of raw natural dried wood and which predominantly consists of lignocellulose	

7.8.2	Powdercellulose	Product obtained by decomposition, separation of lignin and further cleaning as cellulose from vegetable fibre ¹⁵ of untreated wood and which is modified by mechanical processing only. Neutral detergent fibre (NDF) minimum 87 %	
7.9.1	Liquorice root	Root of <i>Glycyrrhiza</i> L.	
7.10.1	Mint	Product obtained from drying aerial parts of the plants <i>Mentha apicata</i> , <i>Mentha piperita</i> or <i>Mentha viridis</i> (L.), regardless of their presentation.	
7.11.1	Spinach, dried	Product obtained from drying the plant <i>Spinacia oleracea</i> L., regardless of its presentation	
7.12.1	Mojave yucca	Pulverised product obtained from stems of <i>Yucca schidigera</i> Roezl	Crude fibre
7.12.2	Yucca [Schidigera] juice	Product obtained by cutting and pressing stems of <i>Yucca Schidigera</i> , composed mainly of carbohydrates	
7.13.1	Vegetable carbon; [charcoal]	Product obtained by carbonisation of organic vegetal material	
7.14.1	Wood ⁽¹⁾	Chemically untreated wood or wood fibres	Crude fibre
7.14.2	Wood molasses ⁽¹⁾	Product obtained by means of heating and pressing of raw, untreated wood and which predominantly consists of xylose	Total sugars, calculated as sucrose
7.15.1	Waxy-leaf nightshade meal	Product obtained by drying and grinding the leaves of <i>Solanum glaucophyllum</i>	Crude fibre Vitamin D ₃

⁽¹⁾ The name shall be supplemented, as appropriate, by the plant, fungus or algae species. If the obtained feed material contains other species above 5 %, these species shall be also indicated.

8. Milk products and products derived thereof

Feed materials in this chapter shall fulfil the requirements of Regulation (EC) No 1069/2009 and the specific requirements for milk, colostrum, and certain other products derived from milk according to Annex X to Regulation (EU) No 142/2011.

Number	Name ¹	Description	Compulsory declarations
8.1.1	Butter and butter products	Butter and products obtained by production or processing of butter (e.g. butter serum), unless listed separately	Crude protein Crude fat Lactose Moisture if > 6 %
8.2.1	Buttermilk/buttermilk powder ⁽¹⁾	Product obtained by churning butter out of cream or similar processes.	Crude protein Crude fat Lactose Moisture if > 6 %

		<p>Where specifically prepared as feed material, may contain:</p> <ul style="list-style-type: none"> — up to 0,5 % phosphates e.g. polyphosphates (e.g. sodium hexametaphosphate), diphosphates (e.g. tetrasodiumpyrophosphate), used to decrease the viscosity and to stabilise protein during processing; — up to 0,3 % inorganic acids: sulphuric acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % alkali e.g. sodium, potassium, calcium, magnesium hydroxides, used for pH adjustments in many stages of production processes; — up to 2 % free-flowing agents e.g. silicium dioxide, penta-sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties 	
8.3.1	Casein	Product obtained from skimmed or buttermilk by drying casein precipitated by means of acids or rennet	Crude protein Moisture if > 10 %
8.4.1	Caseinate	Product extracted from curd or casein through use of neutralising substances and drying	Crude protein Moisture if > 10 %
8.5.1	Cheese and cheese products	Cheese and products made of cheese and of milk based products	Crude protein Crude fat
8.6.1	Colostrum/colostrum powder ⁽¹⁾	The fluid secreted by the mammary glands of milk-producing animals up to five days post parturition	Crude protein
8.7.1	Dairy by-products	<p>Products obtained when producing dairy products, including centrifuge or separator sludge, white water, milk minerals.</p> <p>Where specifically prepared as feed material, may contain:</p> <ul style="list-style-type: none"> — up to 0,5 % phosphates e.g. polyphosphates (e.g. sodium hexametaphosphate), diphosphates (e.g. tetrasodiumpyrophosphate), used to decrease the viscosity and to stabilise protein during processing; — up to 0,3 % inorganic acids: sulphuric acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % alkali e.g. sodium, potassium, calcium, magnesium hydroxides, used for pH adjustments in many stages of production processes; 	Moisture Crude protein Crude fat Total sugars, calculated as sucrose

		— up to 2 % free-flowing agents e.g. silicium dioxide, penta-sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties	
8.8.1	Fermented milk products	Products obtained by fermentation of milk (e.g. yoghurt etc.)	Crude protein Crude fat
8.9.1	Lactose	The sugar separated from milk or whey by purification and drying	Moisture if > 5 %
8.10.1	Milk/milk powder¹⁸	Normal mammary secretion obtained from one or more milkings	Crude protein Crude fat Moisture if > 5 %
8.11.1	Skimmed milk/skimmed milk powder⁽¹⁾	Milk whose fat content has been reduced by separation	Crude protein Moisture if > 5 %
8.12.1	Milk fat	Product obtained by skimming milk	Crude fat
8.13.1	Milk protein powder⁽¹⁾	Product obtained by drying protein compounds extracted from milk by chemical or physical treatment	Crude protein Moisture if > 8 %
8.14.1	Condensed and evaporated milk and their products	Condensed and evaporated milk and products obtained by production or processing of these products	Crude protein Crude fat Moisture if > 5 %
8.15.1	Milk permeate/Milk permeate powder⁽¹⁾	Product obtained from the liquid phase of (ultra, nano or micro) filtration of milk and from which lactose may have been partly removed. Reverse osmosis may be applied	Crude ash Crude protein Lactose Moisture if > 8 %
8.16.1	Milk retentate/milk retentate powder⁽¹⁾	Product retained on the membrane from (ultra, nano or micro) filtration of milk	Crude protein Crude ash Lactose Moisture if > 8 %
8.17.1	Whey/whey powder⁽¹⁾	Product of cheese, quark or casein manufacturing or similar processes. Where specifically prepared as feed material, may contain: — up to 0,5 % phosphates e.g. polyphosphates (e.g. sodium hexametaphosphate), diphosphates (e.g. tetrasodiumpyrophosphate), used to decrease the viscosity and to stabilise protein during processing; — up to 0,3 % inorganic acids: sulphuric acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % alkali e.g. sodium, potassium, calcium, magnesium hydroxides, used for pH adjustments in many stages of production processes;	Crude protein Lactose Moisture if > 8 % Crude ash

		<ul style="list-style-type: none"> — up to 2 % free-flowing agents e.g. silicium dioxide, penta-sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties 	
8.18.1	Delactosed whey/delactosed whey powder ⁽¹⁾	<p>Whey from which the lactose has been partly removed.</p> <p>Where specifically prepared as feed material, may contain:</p> <ul style="list-style-type: none"> — up to 0,5 % phosphates e.g. polyphosphates (e.g. sodium hexametaphosphate), diphosphates (e.g. tetrasodiumpyrophosphate), used to decrease the viscosity and to stabilise protein during processing; — up to 0,3 % inorganic acids: sulphuric acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % alkali e.g. sodium, potassium, calcium, magnesium hydroxides, used for pH adjustments in many stages of production processes; — up to 2 % free-flowing agents e.g. silicium dioxide, penta-sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties 	<p>Crude protein</p> <p>Lactose</p> <p>Moisture if > 8 %</p> <p>Crude ash</p>
8.19.1	Whey protein/whey protein powder ⁽¹⁾	<p>Product obtained by drying whey protein compounds extracted from whey by chemical or physical treatment.</p> <p>Where specifically prepared as feed material, may contain:</p> <ul style="list-style-type: none"> — up to 0,5 % phosphates e.g. polyphosphates (e.g. sodium hexametaphosphate), diphosphates (e.g. tetrasodiumpyrophosphate), used to decrease the viscosity and to stabilise protein during processing; — up to 0,3 % inorganic acids: sulphuric acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % alkali e.g. sodium, potassium, calcium, magnesium hydroxides, used for pH adjustments in many stages of production processes; — up to 2 % free-flowing agents e.g. silicium dioxide, penta-sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties 	<p>Crude protein</p> <p>Moisture if > 8 %</p>

8.20.1	Demineralised, delactosed whey/ demineralised, delactosed whey powder ⁽¹⁾	<p>Whey from which lactose and minerals have been partly removed.</p> <p>Where specifically prepared as feed material, may contain:</p> <ul style="list-style-type: none"> — up to 0,5 % phosphates e.g. polyphosphates (e.g. sodium hexametaphosphate), diphosphates (e.g. tetrasodiumpyrophosphate), used to decrease the viscosity and to stabilise protein during processing; — up to 0,3 % inorganic acids: sulphuric acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % alkali e.g. sodium, potassium, calcium, magnesium hydroxides, used for pH adjustments in many stages of production processes; — up to 2 % free-flowing agents e.g. silicium dioxide, penta-sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties 	<p>Crude protein Lactose Crude ash Moisture if > 8 %</p>
8.21.1	Whey permeate/whey permeate powder ⁽¹⁾	<p>Product from the liquid phase of (ultra, nano or micro) filtration of whey and from which lactose may have been partly removed. Reverse osmosis may be applied.</p> <p>Where specifically prepared as feed material, may contain:</p> <ul style="list-style-type: none"> — up to 0,5 % phosphates e.g. polyphosphates (e.g. sodium hexametaphosphate), diphosphates (e.g. tetrasodiumpyrophosphate), used to decrease the viscosity and to stabilise protein during processing; — up to 0,3 % inorganic acids: sulphuric acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % alkali e.g. sodium, potassium, calcium, magnesium hydroxides, used for pH adjustments in many stages of production processes; — up to 2 % free-flowing agents e.g. silicium dioxide, penta-sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties 	<p>Crude ash Crude protein Lactose Moisture if > 8 %</p>
8.22.1	Whey retentate/whey retentate powder ⁽¹⁾	<p>Product retained on the membrane from (ultra, nano or micro) filtration of whey.</p>	<p>Crude protein Crude ash Lactose Moisture if > 8 %</p>

		<p>Where specifically prepared as feed material, may contain:</p> <ul style="list-style-type: none"> — up to 0,5 % phosphates e.g. polyphosphates (e.g. sodium hexametaphosphate), diphosphates (e.g. tetrasodiumpyrophosphate), used to decrease the viscosity and to stabilise protein during processing; — up to 0,3 % inorganic acids: sulphuric acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % alkali e.g. sodium, potassium, calcium, magnesium hydroxides, used for pH adjustments in many stages of production processes; — up to 2 % free-flowing agents e.g. silicium dioxide, penta-sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties 	
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(¹) Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate. The term "powder" implies a moisture content below 12 % and may replace the term "dried" or "concentrated and dried".

9. Land animal products and products derived thereof

Feed materials in this chapter shall fulfil the requirements of Regulation (EC) No 1069/2009. The name of the feed materials shall be supplemented with the indication according to Annex X or Annex XIII to Regulation (EU) No 142/2011 or Annex IV to Regulation (EC) No 999/2001 for clarifying the specific requirements and a clear identification regarding restrictions to use according to Regulation (EC) No 999/2001.

Number	Name ¹	Description	Compulsory declarations
9.1.1	Animal by-products (¹)	Whole or parts of warm-blooded land animals, fresh, frozen, cooked, acid treated or dried	Crude protein Crude fat Moisture if > 8 %
9.2.1	Animal fat (²)	Product composed of fat from land animals, including invertebrates other than species pathogenic to humans and animals in all their life stages. If extracted with solvents, may contain up to 0,1 % hexane	Crude fat Moisture if > 1 %
9.3.1	Apiculture by-products (³)	Honey, beeswax, royal jelly, propolis, pollen, processed or unprocessed	Total sugars, calculated as sucrose
9.4.1	Processed animal protein (²)	Product obtained by heating, drying and grinding whole or parts of land animals, including invertebrates in all their life stages from which the fat may have been partially extracted or physically removed. If extracted with solvents, may contain up to 0,1 % hexane	Crude protein Crude fat Crude ash Moisture if > 8 %

9.5.1	Gelatine process derived proteins ⁽²⁾	Dried animal proteins derived from the production of gelatine obtained from raw materials pursuant to Regulation (EC) No 853/2004	Crude protein Crude fat Crude ash Moisture if > 8 %
9.6.1	Hydrolysed animal proteins ⁽²⁾	Polypeptides, peptides and amino acids, and mixtures thereof, obtained by hydrolysis of animal by-products, which can be concentrated by drying	Crude protein Moisture if > 8 %
9.7.1	Blood meal ⁽²⁾	Product derived from the heat treatment of blood of slaughtered warm-blooded animals	Crude protein Moisture if > 8 %
9.8.1	Blood products ⁽¹⁾	Products derived from blood or fractions of blood of slaughtered warm-blooded animals; they include dried/frozen/liquid plasma, dried whole blood, dried/frozen/liquid red cells or fractions thereof and mixtures	Crude protein Moisture if > 8 %
9.9.1	Catering reflux [catering recycling]	All waste food containing material of animal origin including used cooking oil originating in restaurants, catering facilities and kitchens, including central kitchens and household kitchens	Crude protein Crude fat Crude ash Moisture if > 8 %
9.10.1	Collagen ⁽²⁾	Protein-based product derived from animal bones, hides, skins and tendons	Crude protein Moisture if > 8 %
9.11.1	Feather meal	Product obtained by drying and grinding feathers of slaughtered animals	Crude protein Moisture if > 8 %
9.12.1	Gelatine ⁽²⁾	Natural, soluble protein, gelling or non-gelling, obtained by the partial hydrolysis of collagen produced from bones, hides and skins, tendons and sinews of animals	Crude protein Moisture if > 8 %
9.13.1	Greaves ⁽²⁾	Product obtained from the manufacture of tallow, lard and other extracted or physically removed fats of animal origin, fresh, frozen or dried. If extracted with solvents, may contain up to 0,1 % hexane	Crude protein Crude fat Crude ash Moisture if > 8 %
9.14.1	Products of animal origin ⁽¹⁾	Former foodstuff containing animal products; with or without treatment such as fresh, frozen, dried	Crude protein Crude fat Moisture if > 8 %
9.15.1	Eggs	Whole eggs of <i>Gallus gallus</i> L. with or without shells	
9.15.2	Albumen	Product obtained from eggs after the separation of shells and yolk, pasteurised and possibly denatured	Crude protein Method of denaturation, if applicable
9.15.3	Egg products, dried	Products consisting of pasteurised dried eggs, without shells or a mixture of different proportions of dried albumen and dried egg yolk	Crude protein Crude fat Moisture if > 5 %

9.15.4	Egg powder, sugared	Dried whole or parts of eggs, sugared	Crude protein Crude fat Moisture if > 5 % Total sugars, calculated as sucrose
9.15.5	Egg shells, dried	Product obtained from poultry eggs, after the content (yolk and albumen) has been removed. Shells are dried	Crude ash
9.16.1	Terrestrial invertebrates ⁽¹⁾, live	Live terrestrial invertebrates, in all their life stages, other than species having adverse effects on plant, animals and human health	
9.16.2	Terrestrial invertebrates ⁽¹⁾, dead	Dead terrestrial invertebrates, other than species having adverse effects on plant, animals and human health, in all their life stages, with or without treatment but not processed as referred to in Regulation (EC) No 1069/2009	Crude protein Crude fat Crude ash
9.17.1	Cholesterol from woolgrease	Product obtained from woolgrease (lanolin) by saponification, separations and crystallization. Minimum content of (3 β)-cholest-5-en-3-ol, C ₂₇ H ₄₆ O: 90 %	

⁽¹⁾ Without prejudice to mandatory requirements concerning labelling, commercial documents and health certificates for animal by-products and derived products as laid down in Commission Regulation (EU) No 142/2011 (Annex VIII, Chapter III) and if the Catalogue is used for labelling purposes, the name shall be replaced as appropriate to provide adequate information, by:

- the animal species and
- the part of the animal product (e.g. liver, meat (only if skeletal muscle)), and/or
- the life stage (e.g. larvae) and/or
- the naming of the animal species not used in respect of the ban on intra-species recycling (e.g. poultry-free)

or supplemented as appropriate to provide adequate information, by:

- the animal species and/or
- the part of the animal product (e.g. liver, meat (only if skeletal muscle)), and/or
- the life stage (e.g. larvae) and/or
- the naming of the animal species not used in respect of the ban on intra-species recycling.

⁽²⁾ Without prejudice to mandatory requirements concerning labelling, commercial documents and health certificates for animal by-products and derived products as laid down in Regulation (EU) No 142/2011 (Annex VIII, Chapter III) and Regulation 999/2001, Annex IV, and if the Catalogue is used for labelling purposes, the name shall be supplemented as appropriate to provide adequate information, by:

- the animal species processed (e.g. porcine, ruminant, avian, insect) and/or
- the life stage (e.g. larvae) and/or
- the material processed (e.g. bone) and/or
- the process used (e.g. defatted, refined) and/or
- the naming of the animal species not used in respect of the ban on intra-species recycling (e.g. poultry-free).

⁽³⁾ The name shall be replaced by the name of the specific product, as appropriate.

10. Fish, other aquatic animals and products derived thereof

Feed materials in this chapter shall fulfil the requirements of Regulation (EC) No 1069/2009 and Regulation (EU) No 142/2011 and may be subject to restrictions in use according to Regulation (EC) No 999/2001.

Number	Name ¹	Description	Compulsory declarations
10.1.1	Aquatic invertebrates ⁽¹⁾	Whole or parts of marine or freshwater invertebrates, in all their life stages, other than species pathogenic to humans and animals	Crude protein Crude fat Crude ash
10.2.1	By-products from aquatic animals ⁽¹⁾	Originating from establishments or plants preparing or manufacturing products for human consumption	Crude protein Crude fat Crude ash
10.3.1	Crustacea meal ⁽²⁾	Product obtained by heating, pressing and drying whole or parts of crustacean including wild and farmed shrimp	Calcium Ash insoluble in HCl if > 5 %
10.4.1	Fish ⁽²⁾	Whole or parts of fish: fresh, frozen, cooked, acid treated or dried	Crude protein Moisture if > 8 %
10.4.2	Fish meal ⁽²⁾	Product obtained by heating, pressing and drying whole or parts of fish and to which fish solubles may have been re-added prior to drying	Crude protein Crude fat Crude ash, if > 20 % Moisture if > 8 %
10.4.3	Fish solubles	Condensed product obtained during manufacture of fishmeal which has been separated and stabilised by acidification or drying	Crude protein Crude fat Moisture if > 5 %
10.4.4	Fish protein, hydrolysed	Proteins obtained by hydrolysis of whole or parts of fish, which can be concentrated by drying	Crude protein Crude fat Crude ash, if > 20 % Moisture if > 8 %
10.4.5	Fishbone meal	Product obtained by heating, pressing and drying parts of fish. It consists principally of fishbone	Crude ash
10.4.6	Fish oil	Oil obtained from fish or parts of fish followed by centrifugation to remove water (may include species specific details e.g. cod liver oil)	Crude fat Moisture if > 1 %
10.4.7	Fish oil, hydrogenated	Oil obtained from hydrogenation of fish oil	Moisture if > 1 %
10.4.8	Fish oil stearine [Winterized fish oil]	Fraction of fish oil with a high content of saturated fats obtained during the refining of crude fish oil to refined fish oil using the process winterization in which the saturated fats are congealed and subsequently collected	Crude fat Moisture if > 1 %
10.5.1	Krill oil	Oil obtained from cooked and pressed marine planktonic krill followed by centrifugation to remove water	Moisture if > 1 %

10.5.2	Krill protein concentrate, hydrolysed	Product obtained by the enzymatic hydrolysis of whole or parts of krill, often concentrated by drying	Crude protein Crude fat Crude ash, if > 20 % Moisture if > 8 %
10.6.1	Marine annelid meal	Product obtained by heating and drying whole or parts of marine annelids, including <i>Nereis virens</i> M. Sars	Crude fat Ash if > 20 % Moisture if > 8 %
10.7.1	Marine zooplankton meal	Product obtained by heating, pressing and drying marine zooplankton e.g. krill	Crude protein Crude fat Crude ash, if > 20 % Moisture if > 8 %
10.7.2	Marine zooplankton oil	Oil obtained from cooked and pressed marine zooplankton followed by centrifugation to remove water	Moisture if > 1 %
10.8.1	Mollusc meal	Product obtained by heating and drying whole or parts of molluscs including squid and bi-valves	Crude protein Crude fat Crude ash, if > 20 % Moisture if > 8 %
10.9.1	Squid meal	Product obtained by heating, pressing and drying whole squid or parts of squid	Crude protein Crude fat Crude ash, if > 20 % Moisture if > 8 %
10.10.1	Starfish meal [sea star meal]	Product obtained by heating, pressing and drying whole <i>Asteroidea</i> or parts of <i>Asteroide</i>	Crude protein Crude fat Crude ash, if > 20 % Moisture if > 8 %
10.11.1	Marine invertebrates ⁽¹⁾ meal	Product obtained by heating, pressing and drying whole or parts of marine invertebrates	Crude protein Crude fat Crude ash, if > 20 % Moisture if > 8 %

(¹) The name shall be supplemented by the animal species.

(²) The name shall be supplemented by the animal species, when produced from farmed fish/crustacean, as relevant.

11. Minerals and products derived thereof

Feed materials in this chapter containing animal by-products shall fulfil the requirements of Regulation (EC) No 1069/2009 and Regulation (EU) No 142/2011 and may be subject to restrictions in use according to Regulation (EC) No 999/2001.

Number	Name ¹	Description	Compulsory declarations
11.1.1	Calcium carbonate ⁽¹⁾ [limestone]	Product obtained by grinding sources of calcium carbonate (CaCO ₃), such as limestone or by precipitation from acid solution. May contain up to 0,25 % propylene glycol. May contain up to 0,1 % grinding aids	Calcium Ash insoluble in HCl if > 5 %
11.1.2	Calcareous marine shells	Product of natural origin, obtained from marine shells, ground or granulated, such as oyster shells or seashells	Calcium Ash insoluble in HCl if > 5 %
11.1.3	Calcium and magnesium carbonate	Natural mixture of calcium carbonate (CaCO ₃) and magnesium carbonate (MgCO ₃). May contain up to 0,1 % grinding aids	Calcium Magnesium Ash insoluble in HCl if > 5 %
11.1.4	Maerl	Product of natural origin obtained from calcareous marine algae, ground or granulated	Calcium Ash insoluble in HCl if > 5 %
11.1.5	Lithothamn	Product of natural origin obtained from calcareous marine algae (<i>Phymatolithon calcareum</i> (Pall.)), ground or granulated	Calcium Ash insoluble in HCl if > 5 %
11.1.6	Calcium chloride	Calcium chloride (CaCl ₂) and its hydrate forms. May contain up to 0,2 % barium sulphate	Calcium Ash insoluble in HCl if > 5 %
11.1.7	Calcium hydroxide ⁽²⁾	Calcium hydroxide (Ca(OH) ₂). May contain up to 0,1 % grinding aids	Calcium Ash insoluble in HCl if > 5 %
11.1.8	Calcium sulphate anhydrous	Calcium sulphate anhydrous (CaSO ₄) obtained by grinding calcium sulphate anhydrous or dehydration of calcium sulphate dihydrate	Calcium Ash insoluble in HCl if > 5 %
11.1.9	Calcium sulphate hemihydrate	Calcium sulphate hemihydrate (CaSO ₄ × ½ H ₂ O) obtained by partially dehydrating calcium sulphate dihydrate	Calcium Ash insoluble in HCl if > 5 %
11.1.10	Calcium sulphate dihydrate	Calcium sulphate dihydrate (CaSO ₄ × 2H ₂ O) obtained by grinding calcium sulphate dihydrate or hydration of calcium sulphate hemihydrate	Calcium Ash insoluble in HCl if > 5 %

11.1.11	Calcium salts of organic acids ⁽³⁾	Calcium salts of edible organic acids with at least 4 carbon atoms ⁽⁴⁾	Calcium Organic acid
11.1.12	Calcium oxide	Calcium oxide (CaO) obtained from calcination of naturally occurring limestone. May contain up to 0,1 % grinding aids	Calcium Ash insoluble in HCl if > 5 %
11.1.13	Calcium gluconate	Calcium salt of gluconic acid generally expressed as $\text{Ca}(\text{C}_6\text{H}_{11}\text{O}_7)_2$ and its hydrated forms	Calcium Ash insoluble in HCl if > 5 %
11.1.14	Calcium chelates ⁽⁵⁾	$\text{Ca}(x)_{1-3} \times n\text{H}_2\text{O}$ (x) = anion of amino acids from soya protein hydrolysate or synthetic amino acids authorised as feed additive. The chelation of the cation is proven by a maximum of 10 % molecules exceeding 1 500 Daltons and adequate analytical method proving the chelated structure of the feed material. May contain up to 40 % chloride	Calcium Ash insoluble in HCl if > 5 %
11.1.15	Calcium sulphate/carbonate	Product obtained during the manufacturing of sodium carbonate	Calcium Ash insoluble in HCl if > 5 %
11.1.16	Calcium pidolate	Calcium L-pidolate ($\text{C}_{10}\text{H}_{12}\text{CaN}_2\text{O}_6$). May contain up to 5 % glutamic acid	Calcium Ash insoluble in HCl if > 5 %
11.1.17	Calcium carbonate-magnesium oxide	Product obtained by heating of natural calcium and magnesium containing substances like dolomite. May contain up to 0,1 % grinding aids	Calcium Magnesium
11.1.18	Calcium nitrate double salt	$5 \text{Ca}(\text{NO}_3)_2 \times \text{NH}_4\text{NO}_3 \times 10 \text{H}_2\text{O}$. Derives from a chemical synthesis of calcium carbonate rock and nitric acid	Calcium Nitrogen
11.2.1	Magnesium oxide	Calcined magnesium oxide (MgO), not less than 70 % MgO	Magnesium Ash insoluble in HCl if > 15 %, Iron content as Fe_2O_3 if > 5 %.
11.2.2	Magnesium sulphate heptahydrate	Magnesium sulphate ($\text{MgSO}_4 \times 7 \text{H}_2\text{O}$)	Magnesium Sulphur Ash insoluble in HCl if > 15 %
11.2.3	Magnesium sulphate monohydrate	Magnesium sulphate ($\text{MgSO}_4 \times \text{H}_2\text{O}$)	Magnesium Sulphur Ash insoluble in HCl if > 15 %
11.2.4	Magnesium sulphate anhydrous	Anhydrous magnesium sulphate (MgSO_4)	Magnesium Sulphur Ash insoluble in HCl if > 10 %

11.2.5	Magnesium propionate	Magnesium propionate ($C_6H_{10}MgO_4$)	Magnesium
11.2.6	Magnesium chloride	Magnesium chloride ($MgCl_2$) or solution obtained by natural concentration of sea water after deposit of sodium chloride	Magnesium Chlorine Ash insoluble in HCl if > 10 %
11.2.7	Magnesium carbonate	Natural magnesium carbonate ($MgCO_3$)	Magnesium Ash insoluble in HCl if > 10 %
11.2.8	Magnesium hydroxide	Magnesium hydroxide ($Mg(OH)_2$)	Magnesium Ash insoluble in HCl if > 10 %
11.2.9	Magnesium potassium sulphate	Magnesium potassium sulphate ($K_2Mg(SO_4)_2 \times nH_2O$, n= 4,6)	Magnesium Potassium Ash insoluble in HCl if > 10 %
11.2.10	Magnesium salts of organic acids ⁽³⁾	Magnesium salts of edible organic acids with at least 4 carbon atoms ⁽⁴⁾	Magnesium Organic acid
11.2.11	Magnesium gluconate	Magnesium salt of gluconic acid generally expressed as $Mg(C_6H_{11}O_7)_2$ and its hydrated forms	Magnesium Ash insoluble in HCl if > 5 %
11.2.12	Magnesium chelates ⁽⁵⁾	formula $Mg(x)_{1-3} \times nH_2O$ (x) = anion of amino acids from soya protein hydrolysate or synthetic amino acids authorised as feed additive. The chelation of the cation is proven by a maximum of 10 % molecules exceeding 1 500 Daltons and adequate analytical method proving the chelated structure of the feed material. May contain up to 55 % chloride and/or sulphate	Magnesium Ash insoluble in HCl if > 5 %
11.2.13	Magnesium pidolate	Magnesium L-pidolate ($C_{10}H_{12}MgN_2O_6$). May contain up to 5 % glutamic acid	Magnesium Ash insoluble in HCl if > 5 %
11.3.1	Dicalcium phosphate ⁽⁶⁾ ⁽⁷⁾ [calcium hydrogen orthophosphate]	Calcium monohydrogen phosphate obtained from bones or inorganic sources ($CaHPO_4 \times nH_2O$, n = 0 or 2). Ca/P > 1,2. May contain up to 3 % chloride expressed as NaCl	Calcium Total phosphorus P insoluble in 2 % citric acid if > 10 % Ash insoluble in HCl if > 5 %
11.3.2	Monodicalcium phosphate	Product composed of dicalcium phosphate and monocalcium phosphate ($CaHPO_4 \times Ca(H_2PO_4)_2 \times nH_2O$, n = 0 or 1) $0,8 < Ca/P < 1,3$	Total phosphorus, Calcium P insoluble in 2 % citric acid if > 10 %
11.3.3	Monocalcium phosphate; [calcium tetrahydrogen diorthophosphate]	Calcium-bis dihydrogenphosphate (Ca $(H_2PO_4)_2 \times nH_2O$, n=0 or 1) Ca/P < 0,9	Total phosphorus Calcium P insoluble in 2 % citric acid if > 10 %

11.3.4	Tricalcium phosphate (?) [tricalcium orthophosphate]	Tricalcium phosphate from bones or inorganic sources ($\text{Ca}_3(\text{PO}_4)_2 \times \text{H}_2\text{O}$) or hydroxyl apatite ($\text{Ca}_5(\text{PO}_4)_3\text{OH}$) $\text{Ca/P} > 1,3$	Calcium Total phosphorus P insoluble in 2 % citric acid if > 10 % Ash insoluble in HCl if > 5 %
11.3.5	Calcium-magnesium phosphate	Calcium-magnesium phosphate ($\text{Ca}_3\text{Mg}_3(\text{PO}_4)_4$).	Calcium Magnesium Total phosphorus P insoluble in 2 % citric acid if > 10 %
11.3.6	Defluorinated phosphate	Product obtained from inorganic sources, calcined and further heat treated.	Total phosphorus Calcium Sodium P insoluble in 2 % citric acid if > 10 % Ash insoluble in HCl if > 5 %
11.3.7	Dicalcium pyrophosphate; [Dicalcium diphosphate]	Dicalcium pyrophosphate ($\text{Ca}_2\text{P}_2\text{O}_7$) from bones or inorganic sources.	Total phosphorus Calcium P insoluble in 2 % citric acid if > 10 %
11.3.8	Magnesium phosphate	Product consisting of monobasic and/or di-basic and/or tri-basic magnesium phosphate.	Total phosphorus Magnesium P insoluble in 2 % citric acid if > 10 % Ash insoluble in HCl if > 10 %
11.3.9	Sodium-calcium-magnesium phosphate	Product consisting of sodium-calcium-magnesium phosphate.	Total phosphorus Magnesium Calcium Sodium P insoluble in 2 % citric acid if > 10 %
11.3.10	Monosodium phosphate; [Sodium dihydrogen orthophosphate]	Monosodium phosphate. ($\text{NaH}_2\text{PO}_4 \times n\text{H}_2\text{O}$; $n = 0, 1$ or 2)	Total phosphorus Sodium P insoluble in 2 % citric acid if > 10 %
11.3.11	Disodium phosphate; [Disodium hydrogen orthophosphate]	Disodium phosphate ($\text{Na}_2\text{HPO}_4 \times n\text{H}_2\text{O}$; $n = 0, 2, 7$ or 12)	Total phosphorus Sodium P insoluble in 2 % citric acid if > 10 %
11.3.12	Trisodium Phosphate; [Trisodium orthophosphate]	Trisodium phosphate ($\text{Na}_3\text{PO}_4 \times n\text{H}_2\text{O}$; $n = 0, 1/2, 1, 6, 8$ or 12)	Total phosphorus Sodium P insoluble in 2 % citric acid if > 10 %

11.3.13	Sodium pyrophosphate; [Tetrasodium diphosphate]	Sodium pyrophosphate ($\text{Na}_4\text{P}_2\text{O}_7 \times n\text{H}_2\text{O}$; $n = 0$ or 10)	Total phosphorus Sodium P insoluble in 2 % citric acid if > 10 %
11.3.14	Monopotassium phosphate; [Potassium dihydrogen orthophosphate]	Monopotassium phosphate (KH_2PO_4)	Total phosphorus Potassium P insoluble in 2 % citric acid if > 10 %
11.3.15	Dipotassium phosphate; [Di-potassium hydrogen orthophosphate]	Dipotassium phosphate ($\text{K}_2\text{HPO}_4 \times n\text{H}_2\text{O}$; $n = 0, 3$ or 6)	Total phosphorus Potassium P insoluble in 2 % citric acid if > 10 %
11.3.16	Calcium sodium phosphate	Calcium sodium phosphate (CaNaPO_4)	Total phosphorus Calcium Sodium P insoluble in 2 % citric acid if > 10 %
11.3.17	Monoammonium phosphate; [Ammonium dihydrogen orthophosphate]	Monoammonium phosphate ($\text{NH}_4\text{H}_2\text{PO}_4$)	Total nitrogen Total phosphorus P insoluble in 2 % citric acid if > 10 %
11.3.18	Diammonium phosphate; [Diammonium hydrogen orthophosphate]	Diammonium phosphate ($(\text{NH}_4)_2\text{HPO}_4$)	Total nitrogen Total phosphorus P insoluble in 2 % citric acid if > 10 %
11.3.19	Sodium tripolyphosphate; [Penta sodium triphosphate]	Sodium tripolyphosphate ($\text{Na}_5\text{P}_3\text{O}_{10} \times n\text{H}_2\text{O}$; $n = 0$ or 6)	Total phosphorus Sodium P insoluble in 2 % citric acid if > 10 %
11.3.20	Sodium magnesium phosphate	Sodium-magnesium phosphate (MgNaPO_4)	Total phosphorus Magnesium Sodium P insoluble in 2 % citric acid if > 10 %
11.3.21	Magnesium hypophosphite	Magnesium hypophosphite (Mg (H_2PO_2) $_2 \times 6\text{H}_2\text{O}$)	Magnesium Total phosphorus P insoluble in 2 % citric acid if > 10 %
11.3.22	Degelatinised bone meal	Degelatinised, sterilised and ground bones from which the fat has been removed.	Total phosphorus Calcium Ash insoluble in HCl if > 10 %
11.3.23	Bone ash	Mineral residues from the incineration, combustion or gasification of animal by-products.	Total phosphorus Calcium Ash insoluble in HCl if > 10 %

11.3.24	Calcium polyphosphate	Heterogeneous mixtures of calcium salts of condensed polyphosphoric acids of general formula $H_{(n+2)}P_nO_{(3n+1)}$ where 'n' is not less than 2.	Total phosphorus Calcium P insoluble in 2 % citric acid if > 10 %
11.3.25	Calcium dihydrogen diphosphate	Monocalcium dihydrogen pyrophosphate ($CaH_2P_2O_7$)	Total phosphorus Calcium P insoluble in 2 % citric acid if > 10 %
11.3.26	Magnesium acid pyrophosphate	Magnesium acid pyrophosphate ($MgH_2P_2O_7$). Produced from purified phosphoric acid and purified magnesium hydroxide or magnesium oxide by evaporation of water and condensation of the orthophosphate to diphosphate.	Total phosphorus Magnesium P insoluble in 2 % citric acid if > 10 %
11.3.27	Disodium dihydrogen diphosphate	Disodium dihydrogen diphosphate ($Na_2H_2P_2O_7$)	Total phosphorus Sodium P insoluble in 2 % citric acid if > 10 %
11.3.28	Trisodium diphosphate	Trisodium monohydrogen diphosphate (anhydrous: $Na_3HP_2O_7$; monohydrate: $Na_3HP_2O_7 \times nH_2O$; n = 0, 1 or 9)	Total phosphorus Sodium P insoluble in 2 % citric acid if > 10 %
11.3.29	Sodium polyphosphate; [Sodium hexametaphosphate]	Heterogeneous mixtures of sodium salts of linear condensed polyphosphoric acids of general formula $H_{(n+2)}P_nO_{(3n+1)}$ where 'n' is not less than 2.	Total phosphorus Sodium P insoluble in 2 % citric acid if > 10 %
11.3.30	Tripotassium phosphate	Tripotassium monophosphate ($K_3PO_4 \times nH_2O$; n = 0, 1, 3, 7 or 9)	Total phosphorus Potassium P insoluble in 2 % citric acid if > 10 %
11.3.31	Tetrapotassium di-phosphate	Tetrapotassium pyrophosphate ($K_4P_2O_7 \times nH_2O$; n = 0, 1 or 3)	Total phosphorus Potassium P insoluble in 2 % citric acid if > 10 %
11.3.32	Pentapotassium tri-phosphate	Pentapotassium tri-polyphosphate ($K_5P_3O_{10}$)	Total phosphorus Potassium P insoluble in 2 % citric acid if > 10 %
11.3.33	Potassium polyphosphate	Heterogeneous mixtures of potassium salts of linear condensed polyphosphoric acids of general formula $H_{(n+2)}P_nO_{(3n+1)}$ where 'n' is not less than 2	Total phosphorus Potassium P insoluble in 2 % citric acid if > 10 %

11.3.34	Calcium sodium polyphosphate	Calcium sodium polyphosphate	Total phosphorus Sodium Calcium P insoluble in 2 % citric acid if > 10 %
11.4.1	Sodium chloride ⁽¹⁾	Sodium chloride (NaCl) or product obtained by evaporative crystallisation from brine (saturated or depleted in another process) (vacuum salt) or evaporation of seawater (marine salt and solar salt) or grinding rock salt	Sodium Ash insoluble in HCl if > 10 %
11.4.2	Sodium bicarbonate [sodium hydrogencarbonate]	Sodium bicarbonate (NaHCO ₃)	Sodium Ash insoluble in HCl if > 10 %
11.4.3	Sodium/ammonium (bi) carbonate [sodium/ammonium (hydrogen) carbonate]	Product obtained during the production of sodium carbonate and sodium bicarbonate, with traces of ammonium bicarbonate (ammonium bicarbonate max. 5 %)	Sodium Ash insoluble in HCl if > 10 %
11.4.4	Sodium carbonate	Sodium carbonate (Na ₂ CO ₃)	Sodium Ash insoluble in HCl if > 10 %
11.4.5	Sodium sesquicarbonate [trisodium hydrogencarbonate]	Sodium sesquicarbonate (Na ₃ H(CO ₃) ₂)	Sodium Ash insoluble in HCl if > 10 %
11.4.6	Sodium sulphate	Sodium sulphate (Na ₂ SO ₄) May contain up to 0,3 % methionine	Sodium Ash insoluble in HCl if > 10 %
11.4.7	Sodium salts of organic acids ⁽³⁾ · ⁽⁸⁾	Sodium salts of edible organic acids with at least 4 carbon atoms ²⁷	Sodium Organic acid
11.4.8	Sodium gluconate	Sodium salt of gluconic acid generally expressed as Na(C ₆ H ₁₁ O ₇) and its hydrated forms.	Sodium Ash insoluble in HCl if > 10 %
11.5.1	Potassium chloride	Potassium chloride (KCl) or product obtained by evaporation of seawater or grinding natural sources of potassium chloride	Potassium Ash insoluble in HCl if > 10 %
11.5.2	Potassium sulphate	Potassium sulphate (K ₂ SO ₄)	Potassium Ash insoluble in HCl if > 10 %
11.5.3	Potassium carbonate	Potassium carbonate (K ₂ CO ₃)	Potassium Ash insoluble in HCl if > 10 %
11.5.4	Potassium bicarbonate [potassium hydrogen carbonate]	Potassium bicarbonate (KHCO ₃)	Potassium Ash insoluble in HCl if > 10 %
11.5.5	Potassium salts of organic acids ⁽³⁾ · ⁽⁹⁾	Potassium salts of edible organic acids with at least 4 carbon atoms ⁽⁴⁾	Potassium Organic acid

11.5.6	Potassium pidolate	Potassium L-pidolate ($C_5H_6KNO_3$). May contain up to 5 % glutamic acid	Potassium Ash insoluble in HCl if > 5 %
11.6.1	Flower of sulphur	Powder obtained from natural deposits of the mineral. Also, product obtained from oil refinery production as practised by sulphur manufacturers	Sulphur
11.7.1	Attapulgit	Natural magnesium-aluminium-silicon mineral	Magnesium
11.7.2	Quartz	Naturally occurring mineral obtained by grinding sources of quartz. May contain up to 0,1 % grinding aids	
11.7.3	Cristobalite	Silicon dioxide (SiO_2) obtained from the re-crystallisation of quartz May contain up to 0,1 % grinding aids	
11.8.1	Ammonium sulphate	Ammonium sulphate ($(NH_4)_2SO_4$) obtained by chemical synthesis. May be presented in the form of an aqueous solution	Nitrogen Sulphur
11.8.3	Ammonium salts of organic acids ⁽³⁾	Ammonium salts of edible organic acids with at least 4 carbon atoms ⁽⁴⁾	Nitrogen Organic acid
11.8.4	Ammonium lactate ⁽²⁾	Ammonium lactate ($CH_3CHOHCOONH_4$). Includes the Ammonium lactate produced by fermentation with <i>Lactobacillus delbrueckii ssp. bulgaricus</i> , <i>Lactococcus lactis ssp.</i> , <i>Leuconostoc mesenteroides</i> , <i>Streptococcus thermophilus</i> , <i>Lactobacillus spp.</i> , or <i>Bifidobacterium spp.</i> , containing not less than 7 % nitrogen. May contain up to 2 % phosphorus, 2 % potassium, 0,7 % magnesium, 2 % sodium, 2 % sulphates 0,5 % chlorides, 5 % sugars and 0,1 % silicone antifoam	Nitrogen Crude ash Potassium if > 1,5 % Magnesium if > 1,5 %, sodium if > 1,5 %
11.8.5	Ammonium acetate ⁽²⁾	Ammonium acetate (CH_3COONH_4) in aqueous solution, containing not less than 55 % Ammonium acetate	Nitrogen
11.9.1	Flint grit (gizzard)	Product obtained by crushing naturally occurring mineral in the form of gravel	Particle size
11.9.2	Redstone (gizzard)	Product obtained by crushing and milling of products derived from the burning of clay	Particle size Moisture if > 2 %

⁽¹⁾ The nature of the source may be indicated additionally in the name or replace it.

⁽²⁾ May be placed on the market and used until 30 May 2028 in accordance with Article 3 of Regulation (EU) 2022/1104.

⁽³⁾ The name shall be amended or supplemented to specify the fatty and/or organic acid, as appropriate

⁽⁴⁾ This does not preclude that specific salts of organic acids are classified as feed additives

- (⁵) The name shall be supplemented by the amino acid or the source of amino acids used.
- (⁶) The manufacturing process may be included in the name.
- (⁷) The name shall be supplemented by “from bones”, where appropriate.
- (⁸) Sodium citrates may be placed on the market and used until 30 May 2028 in accordance with Article 3 of Regulation (EU) 2022/1104.
- (⁹) Potassium citrates may be placed on the market and used until 30 May 2028 in accordance with Article 3 of Regulation (EU) 2022/1104.

12. Products and co-products obtained by fermentation using microorganisms

Feed materials whose number starts with ‘12.1’ are fermentation products obtained from whole micro-organisms or their parts. Feed materials whose number starts with ‘12.2’ are fermentation co-products mainly consisting of microbial biomass and those whose number starts with ‘12.3’ are other fermentation co-products.

Feed materials whose number starts with ‘12.1’ or ‘12.2’ may contain up to 0,3 % antifoaming agents, 1,5 % filtration/clarifying agents and 2,9 % propionic acid. Feed materials whose number starts with ‘12.3’ may contain up to 0,6 % antifoaming agents, 0,5 % antiscaling agents and 0,2 % sulphites.

All microorganisms (including germinable spores) used for fermentation shall be inactivated resulting in absence of viable micro-organisms in the feed materials.

Feed materials in this chapter produced from genetically modified micro-organisms shall be compliant with Regulation (EC) No 1829/2003 on genetically modified food and feed.

Number	Name ¹	Description	Compulsory declarations
12.1.5	Yeasts, inactivated [brewers’ yeast, inactivated, if appropriate]	Whole yeasts (¹) and parts (²) thereof obtained from <i>Saccharomyces bayanus</i> , <i>Saccharomyces cerevisiae</i> , <i>Saccharomyces pastorianus</i> , <i>Saccharomyces carlsbergensis</i> , <i>Kluyveromyces lactis</i> , <i>Kluyveromyces marxianus</i> , <i>Metschnikowia pulcherrima</i> , <i>Metschnikowia fructicola</i> , <i>Torulaspora delbrueckii</i> , <i>Cyberlindnera jadinii</i> (³), <i>Saccharomyces ludwigii</i> , <i>Wickerhamomyces anomalus</i> , <i>Debaryomyces hansenii</i> , <i>Pichia guilliermondii</i> , <i>Yarrowia lipolytica</i> or <i>Brettanomyces</i> ssp. on substrate/culture medium consisting of a carbon source mostly of vegetal origin, a nitrogen source of vegetal or chemical origin, vitamins and minerals	Moisture if < 75 % or > 97 % If moisture < 75 %: Crude protein Propionic acid if > 0,5 %
12.1.9	Single cell proteins from fungi (⁴)	Fermentation product obtained from culture of <i>Aspergillus oryzae</i> , <i>Paecilomyces varioti</i> or <i>Trichoderma viride</i> on substrates mostly of vegetable origin such as molasses, sugar syrup, alcohol, distillery residues, cereals and products containing starch, fruit juice, whey, lactic acid, sugar, hydrolysed vegetable fibres and fermentation nutrients such as ammonia or mineral salts	Crude protein Crude ash Propionic acid if > 0,5 %
12.1.10	Product from <i>Bacillus subtilis</i> rich in protein	Fermentation product obtained from culture of <i>Bacillus subtilis</i> on substrates mostly of vegetable origin such as molasses, sugar syrup, alcohol, distillery residues, cereals and products containing starch, fruit juice, whey, lactic acid, sugar, hydrolysed vegetable fibres and fermentation nutrients such as ammonia or mineral salts	Crude protein Crude ash Propionic acid if > 0,5 %

12.1.12	Yeasts products	All yeasts ³² and parts ⁽¹⁾ thereof obtained by cracking and/or fractionation of yeast cells from <i>Saccharomyces bayanus</i> , <i>Saccharomyces cerevisiae</i> , <i>Saccharomyces pastorianus</i> , <i>Saccharomyces carlsbergensis</i> , <i>Kluyveromyces lactis</i> , <i>Kluyveromyces marxianus</i> , <i>Metschnikowia pulcherrima</i> , <i>Metschnikowia fructicola</i> , <i>Torulaspora delbrueckii</i> , <i>Cyberlindnera jadinii</i> ⁽²⁾ , <i>Saccharomyces ludwigii</i> , <i>Wickerhamomyces anomalus</i> , <i>Debaryomyces hansenii</i> , <i>Pichia guilliermondii</i> , <i>Yarrowia lipolytica</i> or <i>Brettanomyces</i> ssp. on substrate/culture medium consisting of a carbon source mostly of vegetal origin, a nitrogen source of vegetal or chemical origin, vitamins and minerals	Moisture if < 75 % or > 97 %
12.1.13	Single cell proteins from bacteria ⁽⁴⁾	Protein products obtained by fermentation with bacteria on a substrate/culture medium consisting of methanol (fermented with <i>Methylophilus methylotrophus</i>) or natural gas (fermented with <i>Methylococcus capsulatus</i> , <i>Alcaligenes acidovorans</i> , <i>Aneurinibacillus danicus</i> (previously known as <i>Bacillus brevis</i>) and/or <i>Bacillus firmus</i>) as carbon source, a nitrogen source of vegetal or chemical origin, vitamins and minerals	Crude protein Crude ash
12.1.14	Inactivated bacteria and parts thereof ⁽⁴⁾	Whole bacteria or their parts ⁽¹⁾ obtained from <i>Bifidobacterium</i> spp., <i>Lactobacillus acidophilus</i> , <i>Lactobacillus delbrueckii</i> ssp. <i>bulgaricus</i> , <i>Lactocaseibacillus casei</i> , <i>Limosilactobacillus fermentum</i> (formerly known as <i>Lactobacillus fermentum</i>), <i>Lactocaseibacillus paracasei</i> (formerly known as <i>Lactobacillus paracasei</i>), <i>Lactiplantibacillus plantarum</i> (formerly known as <i>Lactobacillus plantarum</i>), <i>Limosilactobacillus reuteri</i> (formerly known as <i>Lactobacillus reuteri</i>), <i>Lactocaseibacillus rhamnosus</i> (formerly known as <i>Lactobacillus rhamnosus</i>), <i>Lactobacillus helveticus</i> or <i>Streptococcus thermophilus</i> or other species of bacteria authorised as feed additives fermented on substrate/culture medium consisting of a carbon source mostly of vegetal origin, a nitrogen source of vegetal or chemical origin, vitamins and minerals	Crude ash
12.2.8	Bacterial biomass rich in protein ⁽⁴⁾	Protein rich co-products obtained from the production of amino acids, vitamins, organic acids, enzymes and/or their salts obtained by fermentation with <i>Bacillus coagulans</i> , <i>Bacillus subtilis</i> , <i>Bacillus velezensis</i> , <i>Bacillus licheniformis</i> , <i>Bacillus smithii</i> , <i>Corynebacterium casei</i> , <i>Corynebacterium glutamicum</i> , <i>Corynebacterium melassecola</i> , <i>Ensifer adhaerens</i> , <i>Enterococcus faecium</i> , <i>Escherichia coli</i> K12 or <i>Lactobacillaceae</i> on substrate/culture medium consisting of a carbon source mostly of vegetal origin, a nitrogen source of vegetal or chemical origin, vitamins and minerals. The product may be hydrolysed	Crude protein Crude ash

12.2.9	Fungal biomass ⁽⁴⁾	Protein rich co-products obtained from the production of products such as enzymes, vitamins and/or organic acids obtained by fermentation with <i>Ashbya gossypii</i> , <i>Aspergillus niger</i> , <i>Aspergillus tubingensis</i> , <i>Aspergillus sojae</i> , <i>Neurospora intermedia</i> , <i>Neurospora tetrasperma</i> , <i>Trichoderma viride</i> , <i>Trichoderma longibrachiatum</i> or <i>Trichoderma reesei</i> on substrate/culture medium consisting of a carbon source mostly of vegetal origin, a nitrogen source of vegetal or chemical origin, vitamins and minerals	Crude protein Crude ash
12.3.1	Vinasses [condensed molasses soluble]	Co-products derived from the industrial processing of musts/worts issued from microbial fermentation processes such as alcohol, organic acids or yeast manufacture. They are composed of the liquid/paste fraction obtained after the separation of the fermentation musts/worts. They may also include dead cells and/or parts ⁽¹⁾ thereof of the fermentation micro-organisms used	Crude protein Substrate and indication of production process as appropriate
12.3.2	Co-products of (salts of) amino-acids production ⁽⁴⁾	Co-products from the production of amino acids and their salts by fermentation with <i>Escherichia coli</i> K12, <i>Corynebacterium casei</i> , <i>Corynebacterium glutamicum</i> or <i>Corynebacterium melassecola</i> on substrate/culture medium consisting of a carbon source mostly of vegetal origin, a nitrogen source of vegetal or chemical origin, vitamins and minerals	Crude protein Crude ash
12.3.3	Co-products of enzymes production ⁽⁴⁾	Co-products from the production of enzymes by fermentation with <i>Aspergillus niger</i> , <i>Aspergillus tubingensis</i> , <i>Aspergillus oryzae</i> , <i>Aspergillus sojae</i> , <i>Neurospora intermedia</i> , <i>Trichoderma longibrachiatum</i> , <i>Trichoderma viride</i> or <i>Trichoderma reesei</i> on substrate/culture medium consisting of a carbon source of vegetal origin, a nitrogen source of vegetal or chemical origin, vitamins and minerals	Crude protein Crude ash
12.3.4	Bacterial product rich in polyhydroxybutyrate	Product containing 3-hydroxybutyrate and 3-hydroxyvalerate, produced via fermentation with <i>Cupriavidus necator</i> , and non-viable bacterial protein meal remaining from the producing bacteria and fermentation broth	Butyrate
12.3.5	Bacterial product rich in ammonium lactate ⁽⁴⁾	Ammonium lactate ($\text{CH}_3\text{CHOHCOONH}_4$) rich product from fermentation with <i>Lactobacillus delbrueckii</i> ssp. <i>bulgaricus</i> and other <i>Lactobacillaceae</i> , <i>Lactococcus lactis</i> , <i>Leuconostoc mesenteroides</i> , <i>Streptococcus thermophiles</i> or <i>Bifidobacterium</i> spp., containing not less than 5,6 % nitrogen	Nitrogen Crude ash Potassium if > 1,5 % Magnesium if > 1,5 % sodium if > 1,5 %

12.3.6	Co-product from the production of glucono-delta-lactone, rich in gluconic acid ⁽¹⁾	Liquid co-product from the crystallisation of food grade glucono-delta-lactone obtained by fermentation with <i>Gluconobacter oxydans</i> or <i>Aspergillus niger</i> . It contains a minimum of 50 % of gluconic acid	Gluconic acid
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(¹) The used name of the yeast strains may vary from the scientific taxonomy. Therefore, synonyms of the yeast strains listed could also be used.

(²) Parts means any soluble and insoluble fractions of the microorganism including from the membrane or the inner parts of the cell.

(³) Shall not be cultivated on n-alkanes (Annex III to Regulation (EU) No 767/2009, as amended).

(⁴) The species of microorganism(s) shall be indicated with the name of the feed material, and the term 'inactivated' may be added (i.e. 'name as in the catalogue' + 'name of the species'; examples (i) "Single cell proteins from *Methylococcus capsulatus*", (ii) "Inactivated *Lactobacillus acidophilus*").

13. Miscellaneous

Feed materials in this chapter containing animal by-products shall fulfil the requirements of Regulation (EC) No 1069/2009 and Regulation (EU) No 142/2011 and may be subject to restrictions in use according to Regulation (EC) No 999/2001.

Number	Name ¹	Description	Compulsory declarations
13.1.1	Products from the bakery and pasta industry	Products obtained during and from the production of bread, biscuits, wafers or pasta	Starch Total sugars, calculated as sucrose, Crude fat, if > 5 %
13.1.2	Products from the pastry industry	Products obtained during and from the production of pastry and cakes	Starch Total sugars, calculated as sucrose, Crude fat, if > 5 %
13.1.3	Products of the breakfast cereal manufacture	Substances or products that are intended or where it is reasonable to expect that they can be consumed by humans in their processed, partially processed or unprocessed forms	Crude protein, if > 10 % Crude fibre Crude oils/fats, if > 10 %, Starch, if > 30 % Total sugars, calculated as sucrose, if > 10 %
13.1.4	Products from the confectionery industry	Products obtained during and from the production of sweets, including chocolate goods	Starch Crude fat, if > 5 % Total sugars, calculated as sucrose
13.1.5	Products of the ice-cream industry	Products obtained during the production of ice-cream	Starch Total sugars, calculated as sucrose, Crude fat
13.1.6	Products and co-products from processing fresh fruits and vegetables ¹⁷	Products obtained when processing fresh fruit and vegetables (including peel, whole pieces of fruit/vegetables, and mixtures thereof). They may have been frozen	Starch Crude fibre Crude fat, if > 5 % Ash insoluble in HCl, if > 3,5 %

13.1.7	Products from the processing of plants¹⁷	Products obtained from freezing or drying whole plants ¹⁵ or their parts	Crude Fibre
13.1.8	Products from processing of spices and seasonings¹⁷	Products obtained from freezing or drying spices and seasonings or their parts	Crude protein, if > 10 % Crude fibre Crude oils/fats, if > 10 %, Starch, if > 30 % Total sugars, calculated as sucrose, if > 10 %
13.1.9	Products from the processing of herbs¹⁷	Products obtained from crushing, grinding, freezing or drying herbs or their parts	Crude Fibre
13.1.10	Products from the potato processing industry	Products obtained when processing potatoes. They may have been frozen	Starch Crude fibre Crude fat, if > 5 % Ash insoluble in HCl, if > 3,5 %
13.1.11	Products and co-products of the sauces production	Substances from the sauces-production that are intended or where it is reasonable to expect that they can be consumed by humans in their processed, partially processed or unprocessed forms	Crude fat
13.1.12	Products and co-products from the savoury snacks industry	Products and co-products of the savoury snacks industry obtained during and from the production of savoury snacks — potato chips, potato and/or cereal based snacks (direct extruded, dough based and pelleted snacks) and nuts	Crude fat
13.1.13	Products from the ready-to-eat food industry	Products obtained during the production of ready-to-eat food (1)	Crude fat, if > 5 %
13.1.14	Plants co-products from spirits production	Solid products from plants (including berries and seeds such as anise) obtained after maceration of these plants in an alcoholic solution or after alcoholic evaporation/distillation, or both, in the elaboration of flavourings for the spirits production. These products must be distilled to eliminate the alcoholic residue	Crude protein, if > 10 % Crude fibre Crude oils/fats, if > 10 %
13.1.15	Feed beer	Product of the brewing process which is not marketable as a human beverage	Alcohol content Moisture if < 75 %
13.1.16	Sweet flavored drink	Products from the soft drink industry obtained from the production of sweet flavoured soft drinks or from unpacked non-marketable sweet-flavoured soft drinks	Total sugars, calculated as sucrose. Moisture if > 30 %

13.1.17	Fruit Syrup	Products from the fruit syrup industry obtained from the manufacture of fruit syrup for human consumption	Total sugars, calculated as sucrose Moisture if > 30 %
13.1.18	Sweet flavored syrup	Products from the sweet flavored syrup industry obtained from the production of syrup or from unpacked non-marketable syrup	Total sugars, calculated as sucrose. Moisture if > 30 %
13.1.19	Used food factory vegetable oils	Vegetable oils having been used by food business operators in accordance with Regulation (EC) No 852/2004 for cooking purposes and which have not been in contact with meat, animal fats, fish or aquatic animals	Moisture, if > 1 %
13.2.1	Caramelised sugars	Product obtained by the controlled heating of any sugar	Total sugars, calculated as sucrose
13.2.2	Dextrose	Dextrose is obtained after hydrolysis of starch and consists of purified, crystallised glucose, with or without crystal water	
13.2.3	Fructose	Fructose as purified crystalline powder. It is obtained from glucose in glucose syrup by the use of glucose isomerase and from sucrose inversion	
13.2.4	Glucose syrup	Glucose syrup is a purified and concentrated aqueous solution of nutritive saccharides obtained through hydrolysis from starch	Moisture if > 30 %
13.2.5	Glucose molasses	Product produced during refining process of glucose syrups	Total sugars, calculated as sucrose
13.2.6	Xylose	Sugar extracted from wood	
13.2.7	Lactulose	Semi-synthetic disaccharide (4-O-D-Galactopyranosyl-D-fructose) obtained from lactose through the isomerisation of glucose to fructose. Present in heat treated milk and milk products	
13.2.8	Glucosamine (Chitosamine) (?)	Amino sugar (monosaccharide) being part of the structure of the polysaccharides chitosan and chitin. Produced by the hydrolysis of crustacean and other arthropod exoskeletons or by fermentation of grain such as corn or wheat	Sodium or Potassium, as applicable
13.2.9	Xylo-oligosaccharide	Chains of xylose molecules linked with β 1-4 bonds with degree of polymerization ranging from 2 to 10 and produced from enzymatic hydrolysis of various feedstocks rich in hemicellulose	Moisture if > 5 %
13.2.10	Gluco-oligosaccharide	Product obtained by either fermentation or hydrolysis and/or physical thermal treatment of glucose polymers, glucose, sucrose and maltose	Moisture if > 28 %

13.2.11	Fructo-oligosaccharides	Product obtained from sugar from sugar beet or sugar cane through an enzymatic process or from physical treatment of fresh cultivated pasture grass	Moisture if > 28 %
13.2.12	Trehalose	Non-reducing disaccharide consisting in two glucose moieties linked by an α -1,1-glucosidic bond. It is produced from liquefied starch further to multistep enzymatic process.	trehalose if < 98,0 % (on anhydrous base), moisture if > 11,0 %
13.3.1	Starch ⁽³⁾	Starch	Starch
13.3.2	Starch ⁽³⁾ , pre-gelatinised	Product consisting of starch expanded by heat treatment	Starch
13.3.3	Starch ⁽³⁾ mixture	Product consisting of native and/or modified food starch obtained from different botanical sources	Starch
13.3.4	Starch ⁽³⁾ hydrolysates cake	Product from starch hydrolysis liquor filtration which consists of the following: protein, starch, polysaccharides, fat, oil and filter aid (e.g. diatomaceous earth, wood fibre)	Moisture if < 25 % or > 45 % If moisture < 25 %: — Crude fat — Crude protein
13.3.5	Dextrin	Dextrin is partially acid hydrolysed starch.	
13.3.6	Maltodextrin	Maltodextrin is the partially hydrolysed starch	
13.4.1	Polydextrose	Randomly bonded bulk polymer of glucose produced by thermal polymerisation of D-Glucose	
13.5.1	Polyols ⁽⁴⁾	Product obtained by hydrogenation or fermentation and consisting of reduced mono, di- or oligosaccharides or polysaccharides	
13.5.2	Isomalt	Sugar alcohol obtained from sucrose after enzymatic conversion and hydrogenation	
13.5.3	Mannitol ²⁵	Product obtained by hydrogenation or fermentation and consisting of reduced glucose and/or fructose	
13.5.4	Xylitol ²⁵	Product obtained by hydrogenation and fermentation of xylose	
13.5.5	Sorbitol ²⁵	Product obtained by hydrogenation of glucose	
13.6.1	Acid oils from chemical refining ⁽³⁾	Product obtained during the deacidification of oils and fats of vegetable or animal origin by means of alkali, followed by an acidulation with subsequent separation of the aqueous phase, containing free fatty acids, oils or fats and natural components of seeds, fruits or animal tissues such as mono- and diglycerides, crude lecithin and fibres	Crude fat Moisture if > 1 %
13.6.2	Fatty acids esterified with glycerol ²⁶	Glycerides obtained by esterification of fatty acids with glycerol. May contain up to 50 ppm nickel from hydrogenation	Moisture if > 1 % Crude fat Nickel if > 20 ppm

13.6.3	Mono di and tri glycerides of fatty acids ²⁶	Product consisting of reaction mass of mono-, di- and triesters of glycerol with fatty acids. They may contain small amounts of free fatty acids and up to 7 % glycerol. May contain up to 50 ppm Nickel from hydrogenation	Crude fat Nickel if > 20 ppm
13.6.4	Salts of fatty acids ²⁶	Product obtained by reaction of fatty acids with at least 4 carbon atoms with calcium, magnesium, sodium or potassium hydroxides, oxides or salts. May contain up to 50 ppm nickel from hydrogenation	Crude fat (after hydrolysis) Moisture Ca or Na or K or Mg (when appropriate) Nickel if > 20 ppm
13.6.5	Fatty acid distillates from physical refining ⁽³⁾	Product obtained during the deacidification of oils and fats of vegetable or animal origin by means of distillation containing free fatty acids, oils or fats and natural components of seeds, fruits or animal tissues such as mono- and diglycerides, sterols and tocopherols	Crude fat Moisture if > 1 %
13.6.6	Crude fatty acids ⁽³⁾ ⁽⁴⁾	Product obtained by fermentation of organic matter, by enzymatic interesterification of oil or by oil/fat splitting. By definition it consists of crude fatty acids C ₄ -C ₂₄ , aliphatic, linear, monocarboxylic, saturated and unsaturated. May contain up to 50 ppm nickel in case it has undergone hydrogenation	Crude fat Moisture if > 1 % Nickel if > 20 ppm
13.6.7	Pure distilled fatty acids ⁽³⁾ ⁽⁴⁾	Product obtained by the distillation of crude fatty acids produced by fermentation of organic matter, by enzymatic interesterification of oil or by oil/fat splitting potentially plus hydrogenation. By definition it consists of pure distilled fatty acids C ₄ -C ₂₄ , aliphatic, linear, monocarboxylic, saturated and unsaturated. May contain up to 50 ppm Nickel in case it has undergone hydrogenation	Crude fat Moisture if > 1 % Nickel if > 20 ppm
13.6.8	Soap stocks ⁽³⁾	Product obtained during the deacidification of vegetable oils and fats by means of aqueous calcium, magnesium, sodium or potassium hydroxide solution, containing salts of fatty acids, oils or fats and natural components of seeds, fruits or animal tissues such as mono- and diglycerides, crude lecithin and fibres	Moisture if < 40 and > 50 % Ca or Na or K or Mg, as appropriate
13.6.9	Mono- and diglycerides of fatty acids esterified with organic acids ²⁶	Mono- and diglycerides of fatty acids with at least 4 carbon atoms esterified with organic acids	Crude fat

13.6.10	Sucrose esters of fatty acids²⁶	Esters of saccharose and fatty acids	Total sugars, calculated as sucrose Crude fat
13.6.11	Sucroglycerides of fatty acids²⁶	Mixture of esters of saccharose and mono and di-glycerides of fatty acids	Total sugars, calculated as sucrose Crude fat
13.6.12	Palmitoylglucosamine	Lipid organic compound present in the roots of many plants and particularly in most leguminous plants. Palmitoylglucosamine (C ₂₂ H ₄₃ NO ₆) is produced by acylation of D-glucosamine with palmitic acid. May contain up to 0,5 % acetone	Crude fat Moisture if > 2 %
13.6.13	Salt of lactylates of fatty acids	Non-glyceride ester of fatty acids. The product can be a calcium, magnesium, sodium or potassium salt of fatty acids esterified with lactic acid. It may contain the salts of free fatty acids and lactic acid	Crude fat Moisture if > 1 % Nickel if > 20 ppm Ca or Na or K or Mg as appropriate
13.6.14	Palmitoylethanolamide	Lipid organic compound present in soy lecithin, eggs and other feed sources. Palmitoylethanolamide (C ₁₈ H ₃₇ NO ₂) is produced by synthesis from the reaction of palmitic acid with ethanolamine	Crude fat Moisture if > 2 %
13.8.1	Glycerine, crude [Glycerol, crude]	Co-product obtained from: <ul style="list-style-type: none"> — the oleochemical process of oil/fat splitting to obtain fatty acids and sweet water, followed by concentration of the sweet water to get crude glycerol or by transesterification (may contain up to 0,5 % methanol) of natural oils/fats to obtain fatty acid methyl esters and sweet water, followed by concentration of the sweet water to get crude glycerol; — the production of biodiesel (methyl or ethyl esters of fatty acids) by transesterification of oils and fats of unspecified vegetable and animal origin. Mineral and organic salts might remain in the glycerine (up to 7,5 %). May contain up to 0,5 % methanol and up to 4 % of matter organic non glycerol (MONG) comprising of fatty acid methyl esters, fatty acid ethyl esters, free fatty acids and glycerides; — saponification of oils/fats of vegetable or animal origin, normally with alkali/alkaline earths, to obtain soaps. May contain up to 50 ppm nickel from hydrogenation	Glycerol Potassium if > 1,5 % Sodium if > 1,5 % Nickel if > 20 ppm

13.8.2	Glycerine [Glycerol]	Product obtained from: — the oleochemical process of (a) oil/fat splitting followed by concentration of sweet waters and refining by distillation (see part B, glossary of processes, entry 20) or ion-exchange process; (b) transesterification of natural oils/fats to obtain fatty acid methyl esters and crude sweet water, followed by concentration of the sweet water to get crude glycerol and refining by distillation or ion-exchange process; — the production of biodiesel (methyl or ethyl esters of fatty acids) by transesterification of oils and fats of unspecified vegetable and animal origin with subsequent refining of the glycerine. Minimum glycerol content: 99 % of dry matter; — saponification of oils/fats of vegetable or animal origin, normally with alkali/alkaline earths, to obtain soaps, followed by refining of crude glycerol and distillation. May contain up to 50 ppm nickel from hydrogenation	Glycerol if < 99 % on dry matter basis Sodium if > 0,1 % Potassium if > 0,1 % Nickel if > 20 ppm
13.9.1	Methyl sulphonyl methane	Organo-sulfur compound ((CH ₃) ₂ SO ₂) obtained by chemical synthesis which is identical to the naturally occurring source in plants	Sulphur
13.10.1	Peat	Product from the natural decomposition of plant (mainly sphagnum) in anaerobic and oligotrophic environment	Crude Fibre
13.10.2	Leonardite	Product that is a naturally occurring mineral complex of phenolic hydrocarbons, also known as humate, which originates from the decomposition of organic matter over the course of millions of years	Crude Fibre
13.11.1	Propylene glycol; [1,2-propanediol]; [propane-1,2-diol]	Organic compound (a diol or double alcohol) with formula C ₃ H ₈ O ₂ . It is a viscous liquid with a faintly sweet taste, hygroscopic and miscible with water, acetone, and chloroform. May contain up to 0,3 % di-propylene glycol	
13.11.2	Mono-esters of propylene glycol and fatty acids²⁶	Mono-esters of propylene glycol and fatty acids, alone or in mixtures with di-esters	Propylene glycol Crude fat
13.12.1	Hyaluronic acid³⁶	Glucosamineglucan (polysaccharide) with repeating unit consisting of an amino sugar (N-acetyl-D-glucosamine) and D-glucuronic acid present in the skin, synovial fluid and the umbilical cord, produced, for example, from animal tissue or by bacterial fermentation	Sodium or Potassium, as applicable

13.12.2	Chondroitin sulphate ³⁶	Product obtained by extraction from tendons, bones and other animal tissues containing cartilage and soft connective tissues, or by sulphation of chondroitin isolated from microbial fermentation	Sodium
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(¹) As defined in Article 2(g) of Commission Regulation (EC) No 2073/2005 of 15 November 2005 on microbiological criteria for foodstuffs (OJ L 338, 22.12.2005, p. 1).

(²) The name shall be supplemented by the words 'from animal tissues' or 'from fermentation', as appropriate.

(³) The name shall be supplemented by the indication of the botanical origin.

(⁴) With the exception of mannitol, sorbitol and xylitol.

(⁵) The name shall be supplemented by the indication of the botanical or animal origin, as appropriate.

(⁶) The name of the feed materials shall be supplemented by the words "from splitting", "from fermentation" or "from enzymatic transesterification", as appropriate.