Commission Regulation (EU) No 68/2013 of 16 January 2013 on the Catalogue of feed materials (Text with EEA relevance)

COMMISSION REGULATION (EU) No 68/2013

of 16 January 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(2) and (3) thereof,

Whereas:

(1) Commission Regulation (EU) No 575/2011 of 16 June 2011 on the Catalogue of feed materials[(2)] (the Catalogue) replaced the first version of the Catalogue of feed materials set out in Commission Regulation (EU) No 242/2010 of 19 March 2010 creating the Catalogue of feed materials[(3)].

(2) 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 Regulation (EU) No 575/2011.

(3) These amendments concern new entries of treatment processes and feed materials and improvements of existing entries, in particular for oil and fat derivatives.

(4) Furthermore, the amendments concern maximum contents of chemical impurities resulting from their manufacturing process or from processing aids to be set according to point 1 of Annex I to Regulation (EC) No 767/2009. Specific rules should apply to former foodstuff e.g. production surplus, misshapen products or food with expired use-by date that had been produced in compliance with EU food law.

(5) The conditions set out in Article 26 of Regulation (EC) No 767/2009 are fulfilled.

(6) Given the very high number of amendments to be made to Regulation (EU) No 575/2011, it is appropriate, for reasons of coherence, clarity and simplification, to repeal and replace that Regulation.

(7) It is appropriate to reduce the administrative burden on the operators by providing a 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 the Food Chain and Animal Health,

HAS ADOPTED THIS REGULATION:

Article 1

The Catalogue of feed materials referred to in Article 24 of Regulation (EC) No 767/2009 is established, as set out in the Annex to this Regulation.

Article 2

Regulation (EU) No 575/2011 is repealed.

References to the repealed Regulation shall be construed as references to this Regulation.

Article 3

Feed materials which have been labelled in accordance with Regulation (EU) No 575/2011 before 19 August 2013 may continue to be placed on the market and used until stocks are exhausted.

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.

[F1ANNEX

CATALOGUE OF FEED MATERIALS

Textual Amendments

F1 Substituted by Commission Regulation (EU) 2017/1017 of 15 June 2017 amending Regulation (EU) No 68/2013 on the Catalogue of feed materials (Text with EEA relevance).

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[(4)] 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[(5)] and of Commission Regulation (EU) No 142/2011[(6)] and their use may be subject to restrictions pursuant to Regulation (EC) No 999/2001 of the European Parliament and of the Council[(7)]. 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 EU 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[(8)], 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.

(5) In accordance with good practice as referred to in Article 4 of Regulation (EC) No 183/2005, application of the ALARA[(9)] 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[10], Regulation (EC) No 396/2005 of the European Parliament and of the Council[11] and Regulation (EC) No 1831/2003 of the European Parliament and of the Council[12], 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[13].

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[14] be added to the name of the feed material to indicate that it has undergone the respective process or processes. 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.

(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 description of the feed materials in the list of feed materials in Part C, the word ‘product’ 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.

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 cereal 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

a	In German ‘Konzentrieren’ may be replaced by ‘Eindicken’ where appropriate, in which case the common qualifier should be ‘eingedickt’.
b	‘Decortication’ may be replaced by ‘dehulling’ or ‘dehusking’ where appropriate, in which case the common qualifier should be ‘dehulled’ or ‘dehusked’.
c	In the case of rice, this process is referred to as ‘husking’ and the common qualifier as ‘husked’.
d	In French the name ‘issues’ may be used.
e	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.
f	In French ‘Pressage’ may be replaced by ‘Extraction mécanique’ where appropriate.

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[a]	Removal of water and/or other constituents	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[b]	Complete or partial removal of outer layers from grains,	Decorticated, partially decorticated

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		seeds, fruits, nuts and others	
14	Dehulling/dehusking	Removal of the outer skins of beans, grains and seeds usually by physical means	Dehulled or dehusked[c]
15	Depectinising	Extraction of pectins from a feed material	Depectinised
16	Desiccation	Process of extracting moisture	Desiccated
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	Storage of feed materials with or without the addition of preservatives, or	Ensiled

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		by using anaerobic conditions with or without silage additives	
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 either by organic solvent of fat/oil from certain materials or by aqueous solvent of sugar or other water-soluble components	Extracted/meal and fat/oil, molasses/pulp and sugar or other water-soluble components
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	Fermented

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		modify their chemical composition or properties	
29	Filtration	The process of passing a liquid through a porous media or membrane filter in order to remove solid particles	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[d] 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

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34	Frying	Process of cooking feed materials in a 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 of or fully saturated triglycerides/fatty acids, or polyols by reduction of carbonyl groups of carbohydrates to hydroxyl groups	Hydrogenated, partially hydrogenated

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40	Hydrolysis	Reduction of molecular size by appropriate treatment with water and either heat/pressure, enzymes or acid/ alkali	Hydrolysed
41	Liquefying	Transition from a solid or a gas phase into a liquid	Liquefied
42	Maceration	Reducing the size of feed materials using mechanical means often in the presence of water or other liquids	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	Par-boiled

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		so that starch is fully gelatinised, followed by a drying process	
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[e]
52	Pressing[f]	Physical removal of liquids like fat, oil, water or juice from solids	Expeller/cake (in case of oil-containing materials) Pulp, pomace (in case of fruits, etc.) Pressed pulp (in case of sugar beet)
53	Refining	Complete or partial removal of impurities or unwanted components by chemical/physical treatment	Refined, partially refined

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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. aldehydes, lignosulfonates, sodium hydroxide or organic acids (such as propionic or tannic acid) aims to protect the nutrients from degradation in the rumen Feed materials which are rumen protected by aldehydes may contain up to 0,12 % of free aldehydes.	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

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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
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

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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

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PART C

List of feed materials

1. *Cereal grains and products derived thereof*

Number	Name	Description	Compulsory declarations
1.1.1	Barley	Grains of *Hordeum vulgare* L. It may be rumen protected	
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 infra red micronisation and rolling dehusked barley. It may contain a small proportion of barley husks. It may be rumen protected.	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 of ethanol-starch manufacture 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,	Crude fibre Starch

a The name may be supplemented by the cereal species.

b Please note that ‘maize’ can either be referred to as such or as ‘corn’

c 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.

		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.	
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	Crude fibre Crude ash if > 2,2 %

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c 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.

		undersized barley kernels and fractions of barley kernels separated before the malting process	
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[a]	Product from germinated cereals, dried, milled and/or extracted	
1.1.19	Malt rootlets[a]	Product from malting cereals germination and malt cleaning consisting of rootlets, cereal fines, husks and small broken malted cereal grains. It may be milled.	
1.2.1	Maize[b]	Grains of *Zea mays* L. *ssp. mays*. It may be rumen protected.	
1.2.2	Maize flakes[b]	Product obtained by steaming or infra red micronising and rolling dehusked	Starch

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		maize. It may contain a small proportion of maize husks.	
1.2.3	Maize middlings[b]	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[b]	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[b]	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[b]	Fraction of maize kernels separated by the screening process at product intake	
1.2.7	Maize fibre[b]	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 gluten[b]	Product from the manufacture of maize	Moisture, if < 70 % or > 90 %

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		starch. It consists principally of gluten obtained during separation of starch.	If moisture < 70 %: — Crude protein
1.2.9	Maize gluten feed[b]	Product obtained during the manufacture of maize starch. It is composed of bran and maize solubles. The product may also include broken maize and residues from oil extraction of maize germs. Other products derived from starch and from the refining or fermentation of starch products may be added.	Moisture, if < 40 % or > 65 % If moisture < 40 %: — Crude protein — Crude fibre — Starch
1.2.10	Maize germ[b]	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[b]	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[b]	Product of oil manufacture, obtained by extraction of processed maize germ.	Crude protein
1.2.13	Crude maize germ oil[b]	Oil obtained from maize germ	Moisture, if > 1 %

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1.2.14	Maize, puffed[b]	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[b]	Concentrated liquid fraction from the steeping process of corn	Moisture, if < 45 % or > 65 % If moisture < 45 %: — Crude protein
1.2.16	Sweet corn silage[b]	By-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[b]	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[b]	Hard, flinty portions of ground maize containing little or no bran or germs.	Crude fibre Starch
1.3.1	Millet	Grains of *Panicum miliaceum* L.	
1.4.1	Oats	Grains of *Avena sativa* L. and other cultivars of oats	
1.4.2	Dehulled oats	Dehulled grains of oats. It may be steam treated.	

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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	Crude fibre

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		in starch, after decortication	
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 (*Chenopodium quinoa* Willd.) from which the saponin contained in the seeds outer layer has been removed	
1.6.1	Broken rice	Part of rice kernel of *Oryza sativa* 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

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1.6.6	Husked rice	Paddy (*Oryza sativa* L.) from which the husk only has been removed. It may be parboiled. 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	Crude fibre Calcium carbonate

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		of the germ. It may contain up to 23 % of calcium carbonate used as processing aid. The rice may have been parboiled.	
1.6.12	Defatted rice bran	Rice bran resulting from oil extraction. It may be rumen protected	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 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 *Oryza sativa* L. It may be rumen protected	
1.6.17	Rice germ	Product obtained during rice milling, mainly consisting of the embryo	Crude fat Crude protein

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1.6.18	Rice germ expeller	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. It may be parboiled.	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 *Secale cereale* L.	
1.7.2	Rye middlings	Product of flour manufacture, obtained from screened rye. It	Starch Crude fibre

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		consists principally of particles of endosperm, with fine fragments of the outer skins and some miscellaneous parts of the grain.	
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 *Sorghum bicolor* (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	Crude protein

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		maceration water and germs could be added	
1.9.1	Spelt	Grains of spelt *Triticum spelta* L., *Triticum dicoccum* Schrank, *Triticum monococcum*	
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 *Triticum* × *Secale cereale* L. Hybrid	
1.11.1	Wheat	Grains of *Triticum aestivum* L., *Triticum durum* Desf. and other wheat cultivars. It may be rumen protected.	
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	

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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. It may be rumen protected.	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[c]	Product of flour or malting manufacture obtained from screened grains of wheat or dehusked spelt. It consists	Crude fibre

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		principally of fragments of the outer skins and of particles of grain from which the greater part of the endosperm has been removed.	
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 expeller	Product of oil manufacture, obtained by pressing wheat germ (*Triticum aestivum* L., *Triticum durum* Desf. and other wheat cultivars and dehusked spelt (*Triticum spelta* L., *Triticum dicoccum* Schrank, *Triticum monococcum* L.)) to which parts of the	Crude protein

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		endosperm and testa may still adhere	
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	Moisture if < 55 % or > 85 %

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		protein and starch extraction. May be hydrolysed	If moisture < 55 %: — Crude protein
1.11.22	Wheat yeast concentrate	Wet by-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
1.12.2	Grain flour[a]	Flour from milling grains	Starch Crude fibre
1.12.3	Grain protein concentrate[a]	Concentrate and dried product obtained from grain after starch removal through yeast fermentation	Crude protein
1.12.4	Cereal grains screenings[a]	Products from mechanical screening (size fractionation) consisting of small grains and fractions of grain kernels, which may be germinated, separated before further	Crude fibre

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		processing of the grain. The products contain more crude fibre (e.g. hulls) than the unfractionated cereals.	
1.12.5	Grain germ[a]	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[a]	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[a]	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[a]	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	Moisture, if < 65 % or > 88 % If moisture < 65 %: — Crude protein, if > 10 %

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		fermentation micro-organisms.	
1.12.9	Distillers' grains and solubles[a]	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. It may be rumen protected.	Moisture, if < 60 % or > 80 % If moisture < 60 %: — Crude protein
1.12.10	Distillers' dried grains	Product of alcohol distillation obtained by drying solid residues of fermented grains. It may be rumen protected.	Crude protein
1.12.11	Distillers' dark grains[a]; [Distillers' dried grains and solubles][a]	Product of alcohol distillation obtained by drying solid residues of fermented grains to which pot ale syrup or evaporated spent wash has been added. It may be rumen protected.	Crude protein
1.12.12	Brewers' grains[a]	Product of brewing composed of residues 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	Moisture, if < 65 % or > 88 % If moisture < 65 %: — Crude protein

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		up to 0,3 % dimethyl polysiloxane, may contain up to 1,5 % enzymes, may contain up to 1,8 % bentonite	
1.12.13	Draff[a]	Solid product of cereal whisky production. It consists of residues 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 residues 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

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

Number	Name	Description	Compulsory declarations
2.1.1	Babassu expeller	Product of oil manufacture, obtained by pressing Babassu palm nuts *Orbignya* varieties	Crude protein Crude fat Crude fibre
2.2.1	Camelina seed	Seeds of *Camelina sativa* L. Crantz	
2.2.2	Camelina, expeller	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 *Theobroma cacao* L.	Crude fibre
2.3.2	Cocoa hulls	Product obtained from processing beans of *Theobroma cacao* 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 *Theobroma cacao* L. from which part of the husks has been removed	Crude protein Crude fibre
2.4.1	Copra expeller	Product of oil manufacture, obtained by pressing the dried kernel	Crude protein Crude fat Crude fibre

a The indication ‘low in glucosinolate’ as defined in Union legislation may be added, where appropriate. This is valid for all rape seed products.

b 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.

		(endosperm) and outer husk (tegument) of the seed of the coconut palm *Cocos nucifera* L.	
2.4.2	Copra, hydrolysed expeller	Product of oil manufacture, obtained by pressing and enzymatic hydrolisation of the dried kernel (endosperm) and outer husk (tegument) of the seed of the coconut palm *Cocos nucifera* 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 *Cocos nucifera* L.	Crude protein
2.5.1	Cotton seed	Seeds of *Gossypium* spp. from which the fibres have been removed. It may be rumen protected.	
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). It may be rumen protected.	Crude protein Crude fibre
2.5.3	Cotton seed expeller	Product of oil manufacture,	Crude protein Crude fibre

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b 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.

		obtained by pressing seeds of cotton from which fibres have been removed	Crude fat
2.6.1	Groundnut expeller, partially decorticated	Product of oil manufacture, obtained by pressing partially decorticated groundnuts *Arachis hypogaea* L. and other species of *Arachis* (Maximum crude fibre content 16 % in the dry matter)	Crude protein Crude fat Crude fibre
2.6.2	Groundnut 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 expeller, decorticated	Product of oil manufacture, obtained by pressing decorticated groundnuts	Crude protein Crude fat Crude fibre
2.6.4	Groundnut meal, decorticated	Product of oil manufacture, obtained by extraction of decorticated groundnut expeller	Crude protein Crude fibre
2.7.1	Kapok expeller	Product of oil manufacture obtained by pressing Kapok seeds (*Ceiba pentadra* L. Gaertn.)	Crude protein Crude fibre
2.8.1	Linseed	Seeds of linseed *Linum usitatissimum* L. (Minimum botanical purity 93 %) as whole,	

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b 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.

		flattened or ground linseed. It may be rumen protected.	
2.8.2	Linseed expeller	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. It may be rumen protected.	Crude protein
2.8.4	Linseed expeller 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

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b 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.

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. It may be rumen protected	Crude protein
2.9.1	Mustard bran	Product of the manufacture of mustard (*Brassica juncea* 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

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2.10.1	Niger seed	Seeds of the niger plant *Guizotia abyssinica* (L. F.) Cass	
2.10.2	Niger seed expeller	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 *Olea europea* 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	Crude protein Crude fibre

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b 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.

		and cellulosic or wood fibres) — 1,3 % crude lecithins. — 2 % soap stocks.	
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	Product of oil manufacture, obtained by pressing of palm kernels *Elaeis guineensis* Jacq., *Corozo oleifera* (HBK) L. H. Bailey (*Elaeis melanococca 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 *Cucurbita pepo* L. and plants of the genus *Cucurbita*	
2.13.2	Pumpkin and squash seed, expeller	Product of oil manufacture, obtained by pressing seeds of *Cucurbita*	Crude protein Crude fat

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		pepo and plants of the genus *Cucurbita*	
2.14.1	Rape seed[a]	Seeds of rape *Brassica napus* L. ssp. *oleifera* (Metzg.) Sinsk. Indian sarson *Brassica napus* L. var. *glauca* (Roxb.) O.E. Schulz and *Brassica rapa* ssp. *oleifera* (Metzg.) Sinsk. Minimum botanical purity 94 %. It may be rumen protected.	
2.14.2	Rape seed, expeller	Product of oil manufacture, obtained by pressing seeds of rape. It may be rumen protected.	Crude protein Crude fat Crude fibre
2.14.3	Rape seed meal	Product of oil manufacture, obtained by extraction and appropriate heat treatment of rape seed expeller. It may be rumen protected.	Crude protein
2.14.4	Rape seed, extruded	Product obtained from whole rape by means of a treatment in humid, warm conditions and under pressure increasing starch gelatinisation. It may be rumen protected.	Crude protein Crude fat
2.14.5	Rape seed 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 expeller feed	Product of oil manufacture,	Crude protein Crude fat

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		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. It may be rumen protected.	Crude fibre
2.14.7	Rape seed 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.	Crude protein

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		diatomaceous earth, amorphous silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 2 % soap stocks. It may be rumen protected.	
2.15.1	Safflower seed	Seeds of the safflower *Carthamus tinctorius* 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 *Sesamum indicum* 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	Product of oil manufacture, obtained by pressing seeds of the sesame plant (Ash insoluble in HCl: maximum 5 %).	Crude protein Crude fibre Crude fat

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2.18.1	Toasted soya (beans)	Soya beans (*Glycine max* L. Merr.) subjected to an appropriate heat treatment. (Urease activity maximum 0,4 mg N/g × min.). It may be rumen protected.	
2.18.2	Soya (bean) expeller	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.). It may be rumen protected.	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.). It may be rumen protected.	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

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		It may be rumen protected.	
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	By-product from soybean preparation	Products obtained when processing soybeans to obtain soybean food preparations	Crude protein
2.18.11	Soya (beans)	Soya beans (*Glycine max* 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	Crude protein Crude fibre if > 8 % in dry matter

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		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. It may be rumen protected.	
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	Crude protein

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		silicates and silica, phyllosilicates and cellulosic or wood fibres) — 1,3 % crude lecithins — 1,5 % soap stocks. It may be rumen protected.	
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
2.19.1	Sunflower seed	Seeds of the sunflower *Helianthus annuus* L. It may be rumen protected.	
2.19.2	Sunflower seed expeller	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. It may be rumen protected.	Crude protein Crude fibre
2.19.4	Sunflower seed meal, dehulled	Product of oil manufacture,	Crude protein Crude fibre

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		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	
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 — 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

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b 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.

		It may be rumen protected.	
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 — 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. It may be rumen protected.	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	Crude protein Crude fibre

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		(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 It may be rumen protected.	
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 It may be rumen protected.	Crude protein Crude fibre
2.20.1	Vegetable oil and fat[b]	Oil and fat obtained from oilseeds or oil fruits (excluding castor oil from the ricinus plant), it may be degummed, refined and/or hydrogenated.	Moisture, if > 1 %
2.20.2	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,	Moisture, if > 1 %

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		animal fats, fish or aquatic animals.	
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	Controlled seeds of varieties of *Cannabis sativa* L. with a maximum tetrahydrocannabinol content according to Regulation (EC) No 1782/2003.	
2.22.2	Hemp expeller	Product of oil manufacture obtained by pressing hemp seeds	Crude protein Crude fibre
2.22.3	Hemp oil	Oil obtained by pressing of hemp plants and seeds	Moisture, if > 1 %
2.23.1	Poppy seed	Seeds of *Papaver somniferum* L.	
2.23.2	Poppy meal	Product of oil manufacture, obtained by extraction of expeller of poppy seeds.	Crude protein

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3. *Legume seeds and products derived thereof*

Number	Name	Description	Compulsory declarations
3.1.1	Beans, toasted	Seeds of *Phaseolus* spp. or *Vigna* spp. subjected to an	

		appropriate heat treatment. It may be rumen protected.	
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 *Ceratonia siliqua* 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, expeller	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 *Cicer arietinum* L.	
3.4.1	Ervil	Seeds of *Ervum ervilia* L.	
3.5.1	Fenugreek seed	Seed of fenugreek (*Trigonella foenum-graecum*)	

3.6.1	Guar meal	Product obtained after extraction of mucilage from seeds of guar bean *Cyamopsis tetragonoloba* (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 *Vicia faba* L. *ssp. faba* var. *equina* Pers. and var. *minuta* (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 *Lens culinaris* 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 *Lupinus* spp. low in bitter seed content.	
3.9.2	Sweet lupins, dehulled	Dehulled lupin seeds.	Crude protein

3.9.3	Film lupins; [lupin hulls]	Product obtained during dehulling of lupin seeds, consisting mainly of external envelopes.	Crude protein Crude fibre
3.9.4	Lupin pulp	Product obtained after extraction of components of lupin.	Crude fibre
3.9.5	Lupin middlings	Product obtained during the manufacture of lupin flour from 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 lupin fruit water when producing starch, or after grinding and air fractionation.	Crude protein
3.9.7	Lupin protein meal	Product of lupin processing to produce a high protein meal.	Crude protein
3.10.1	Mung beans	Beans of *Vigna radiata* L.	
3.11.1	Peas	Seeds of *Pisum* spp. It may be rumen protected.	
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	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	Moisture if < 60 % or > 85 % Total sugars, calculated as sucrose

		mainly composed of soluble proteins and oligosaccharides.	Crude protein
3.11.12	Pea fibre	Product obtained by extraction after grinding and sieving of dehulled peas.	Crude fibre
3.12.1	Vetches	Seeds of *Vicia sativa* L. *var sativa* and other varieties.	
3.13.1	Chickling vetch	Seeds of *Lathyrus sativus* L. subjected to an appropriate heat treatment.	Method of heat treatment
3.14.1	Monantha vetch	Seeds of *Vicia monanthos* Desf.	

4. *Tubers, roots, and products derived thereof*

Number	Name	Description	Compulsory declarations
4.1.1	Sugar beet	Root of *Beta vulgaris* L. ssp. *vulgaris* var. *altissima* 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 %

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

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	Ash insoluble in HCl, if > 5 % of dry matter Moisture if < 65 % or > 82 %

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

		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.	
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, which may be pressed or dried.	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 %

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

4.1.14	Fructo-oligosaccharides	Product obtained from sugar from sugar beet through an enzymatic process.	Moisture if > 28 %
4.1.15	(Sugar) beet molasses, betaine rich, liquid/dried[a]	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 higher amount of naturally occuring betaine than standard molasses. It may be dried. 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 (*Beta vulgaris* convar. crassa var. conditiva) 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 *Daucus carota* L.	

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

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
4.4.1	Chicory roots	Roots of *Cichorium intybus* 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 %

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

4.4.3	Chicory seed	Seed of *Cichorium intybus* L.	
4.4.4	Pressed chicory pulp	Product of the manufacture of inulin from roots of *Cichorium intybus* 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 *Cichorium intybus* 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	Crude protein Crude ash Moisture if < 20 % or > 30 %

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

		contain up to 0,5 % antifoaming agents.	
4.4.8	Chicory vinasses	By-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[b]	Inulin is a fructan extracted from e.g. roots of *Cichorium intybus* L., *Inula helenium* or *Helianthus tuberosus*; 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 *Cichorium intybus* 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 *Cichorium intybus* L. and subsequent drying.	
4.5.1	Garlic, dried	White to yellow powder of pure, ground garlic, *Allium sativum* L.	
4.6.1	Manioc; [tapioca]; [cassava]	Roots of *Manihot esculenta* Crantz, regardless of their presentation.	Moisture if < 60 % or > 70 %

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

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 *Allium*) 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 *Solanum tuberosum* 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	Moisture if > 93 % Ash insoluble in HCl, if > 3,5 % of dry matter

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

		starch may be added. It may be mashed.	
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	Crude protein

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

		hydrolysis of potato proteins.	
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 *Ipomoea batatas* L. regardless of their presentation.	Moisture if < 57 % or > 78 %
4.10.1	Jerusalem artichoke; [Topinambur]	Tubers of *Helianthus tuberosus* L. regardless of their presentation.	Moisture if < 75 % or > 80 %

a Expressions differ mainly in their moisture content and are to be used as appropriate.

b The name shall be supplemented by the plant species.

5. *Other seeds and fruits, and products derived thereof*

Number	Name	Description	Compulsory declarations
5.1.1	Acorn	Whole fruits of the pendunculate oak *Quercus robur* L., the sessile oak *Quercus*	

a The name shall be supplemented by the word ‘depectinised’ where appropriate.

b The name shall be supplemented by the plant species.

		petraea (Matt.) Liebl., the cork oak of *Quercus suber* L., or other species of oak.	
5.1.2	Acorn, dehulled	Product obtained during dehulling of acorn.	Crude protein Crude fibre
5.2.1	Almond	Whole or broken fruit *Prunus dulcis*, 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 expeller	Product of oil manufacture obtained by pressing of almond kernels.	Crude protein Crude fibre
5.3.1	Anise seed	Seeds of *Pimpinella anisum*.	
5.4.1	Apple pulp, dried; [apple pomace, dried]	Product obtained from the production of juice of *Malus domestica* or cider production. It consists principally of internal pulp and outer skins that are dried. It may have been depectinised.	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. It may have been depectinised.	Crude fibre
5.4.3	Apple molasses	Product obtained after producing pectin from apple pulp.	Crude protein Crude fibre

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b The name shall be supplemented by the plant species.

		It may have been depectinised.	Crude oils and fats, if > 10 %
5.5.1	Sugar beet seed	Seeds of sugar beet.	
5.6.1	Buckwheat	Seeds of *Fagopyrum esculentum*.	
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 *Brassica oleracea* var. *capitata* f. *Rubra*.	
5.8.1	Canary grass seed	Seeds of *Phalaris canariensis*.	
5.9.1	Caraway seed	Seeds from *Carum carvi* L.	
5.12.1	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 (*Castanea* spp.).	Crude protein Crude fibre
5.13.1	Citrus pulp[a]	Product obtained by pressing citrus fruits *Citrus* (L.) spp. or during the production of citrus juice. It may have been depectinised. May	Crude fibre

a The name shall be supplemented by the word ‘depectinised’ where appropriate.

b The name shall be supplemented by the plant species.

		contain collectively up to 1 % methanol, ethanol and propan-2-ol, on an anhydrous basis.	
5.13.2	Citrus pulp, dried[a]	Product obtained by pressing citrus fruits or during the production of citrus juice, which is subsequently dried. It may have been depectinised. 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 *Trifolium pratense* L.	
5.14.2	White clover seed	Seeds of *Trifolium repens* L.	
5.15.1	Coffee skins	Product obtained from dehusked seeds of the *Coffea* plant.	Crude fibre
5.16.1	Cornflower seed	Seeds of *Centaurea cyanus* L.	
5.17.1	Cucumber seed	Seeds of *Cucumis sativus* L.	
5.18.1	Cypress seed	Seeds of *Cupressus* L.	
5.19.1	Date fruit	Fruits of *Phoenix dactylifera* L. It may be dried.	
5.19.2	Date seed	Whole seeds of *Phoenix dactylifera* L.	Crude fibre
5.20.1	Fennel seed	Seeds of *Foeniculum vulgare* Mill.	
5.21.1	Fig fruit	Fruits of *Ficus carica* L. It may be dried.	

a The name shall be supplemented by the word ‘depectinised’ where appropriate.

b The name shall be supplemented by the plant species.

5.22.1	Fruit kernels[b]	Product consisting of the inner, edible seeds of a nut or fruit stone.	
5.22.2	Fruit pulp[b]	Product obtained during the production of fruit juice and fruit puree. It may have been depectinised.	Crude fibre
5.22.3	Fruit pulp, dried[b]	Product obtained during the production of fruit juice and fruit puree which is subsequently dried. It may have been depectinised.	Crude fibre
5.23.1	Garden cress	Seeds from *Lepidium sativum* 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 *Vitis* 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. It may be concentrated.	Crude fibre

a The name shall be supplemented by the word ‘depectinised’ where appropriate.

b The name shall be supplemented by the plant species.

5.26.1	Hazelnut	Whole or broken fruit of *Corylus* (L.) spp., with or without hulls.	
5.26.2	Hazelnut expeller	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 *Perilla frutescens* L. and its milling products.	
5.29.1	Pine nut	Seeds from *Pinus* (L.) spp.	
5.30.1	Pistachio	Fruit of *Pistacia vera* L.	
5.31.1	Plantago seed	Seeds of *Plantago* (L.) spp.	
5.32.1	Radish seed	Seeds of *Raphanus sativus* L.	
5.33.1	Spinach seed	Seeds of *Spinacia oleracea* L.	
5.34.1	Thistle seed	Seeds from *Carduus marianus* L.	

a The name shall be supplemented by the word ‘depectinised’ where appropriate.

b The name shall be supplemented by the plant species.

5.35.1	Tomato pulp [tomato pomace]	Product obtained by pressing tomatoes *Solanum lycopersicum* L. during production of tomato juice. It consists principally of tomato peel and seeds.	Crude fibre
5.36.1	Yarrow seed	Seeds of *Achillea millefolium* L.	
5.37.1	Apricot kernel expeller	Product of oil manufacture obtained by pressing apricot kernels (*Prunus armeniaca* L.). It may contain hydrocyanic acid.	Crude protein Crude fibre
5.38.1	Black cumin expeller	Product of oil manufacture obtained by pressing black cumin seeds (*Bunium persicum* L.).	Crude protein Crude fibre
5.39.1	Borrage seed expeller	Product of oil manufacture obtained by pressing borrage seeds (*Borago officinalis* L.).	Crude protein Crude fibre
5.40.1	Evening primrose expeller	Product of oil manufacture obtained by pressing evening primrose seeds (*Oenothera* L.).	Crude protein Crude fibre
5.41.1	Pomegranate expeller	Product of oil manufacture obtained by pressing pomegranate seeds (*Punica granatum* L.).	Crude protein Crude fibre
5.42.1	Walnut kernel expeller	Product of oil manufacture obtained by pressing walnut kernels (*Juglans regia* L.).	Crude protein Crude fibre

a The name shall be supplemented by the word ‘depectinised’ where appropriate.

b The name shall be supplemented by the plant species.

6. *Forages and roughage, and products derived thereof*

Number	Name	Description	Compulsory declarations
6.1.1	Beet leaves	Leaves of *Beta* spp.	
6.2.1	Cereal plants[a]	Whole plants of cereal species or parts thereof. It may be dried, fresh or ensiled.	
6.3.1	Cereals straw[a]	Straw of cereals.	
6.3.2	Cereal straw, treated[ab]	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 *Trifolium* spp. It may contain up to 20 % lucerne (*Medicago sativa* L. and *Medicago* var. *Martyn*) 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[c]; [grass meal][c]; [green meal][c]	Product obtained by drying and milling and in some cases compacting forage plants.	Crude protein Crude fibre Ash insoluble, in HCl, if > 3,5 % of dry matter
6.6.1	Grass, field dried; [hay]	Species of any grass, field dried.	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.6.2	Grass, high temperature dried	Product obtained from grass (any variety) that has been artificially dehydrated (in any form).	Crude protein Fibre Ash insoluble, in HCl, if > 3,5 % of dry matter

a The name shall be supplemented by the plant species.

b The name must be supplemented by an indication of the nature of the treatment carried out.

c The species of forage crop may be added to the name.

d The term ‘meal’ may be replaced by ‘pellets’. The method of drying may be added to the name.

6.6.3	Grass; herbs; legume plants; [green forage]	Fresh, ensiled or dried arable crops consisting of grass, legumes or herbs, commonly described as silage, haylage, hay or green forage.	Ash insoluble, in HCl, if > 3,5 % of dry matter
6.7.1	Hemp flour	Flour ground from dried leaves from C*annabis sativa* L.	Crude protein
6.7.2	Hemp fibre	Product obtained during the processing of hemp, green coloured, dried, fibrous.	
6.8.1	Horse bean straw	Straw of horse bean (*Vicia faba* L. *ssp. faba* var. *equina* Pers. and var. *minuta* (Alef.) Mansf.).	
6.9.1	Linseed straw	Straw of linseed (*Linum usitatissimum* L.).	
6.10.1	Lucerne; [alfalfa]	*Medicago sativa* L. and *Medicago* 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]	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[d]; [alfalfa meal][d]	Product obtained by drying and milling Lucerne. It may contain up to 20 % clover or other forage	Crude protein Crude fibre Ash insoluble, in HCl, if > 3,5 % of dry matter

a The name shall be supplemented by the plant species.

b The name must be supplemented by an indication of the nature of the treatment carried out.

c The species of forage crop may be added to the name.

d The term ‘meal’ may be replaced by ‘pellets’. The method of drying may be added to the name.

		crop dried and milled at the same time as the lucerne.	
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, it may be dried	Crude protein
6.11.1	Maize silage	Ensiled plants or parts thereof of *Zea mays* L. *ssp. mays*.	
6.12.1	Pea straw	Straw of *Pisum* spp.	
6.13.1	Rapeseed straw	Straw of *Brassica napus* L. ssp. *oleifera* (Metzg.) Sinsk., of Indian sarson *Brassica napus* L. var. *glauca* (Roxb.) O.E. Schulz and of rape *Brassica rapa* ssp. *oleifera* (Metzg.)	

a The name shall be supplemented by the plant species.

b The name must be supplemented by an indication of the nature of the treatment carried out.

c The species of forage crop may be added to the name.

d The term ‘meal’ may be replaced by ‘pellets’. The method of drying may be added to the name.

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

Number	Name	Description	Compulsory declarations
7.1.1	Algae[a]	Algae, live or processed, including fresh, chilled or frozen algae. May	Crude protein Crude fat Crude ash

a The name shall be supplemented by the plant or algae species.

		contain up to 0,1 % antifoaming agents.	
7.1.2	Dried algae[a]	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
7.1.3	Algae meal[a]	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
7.1.4	Algal oil[a]	Oil obtained by extraction from algae. May contain up to 0,1 % antifoaming agents.	Moisture if > 1 %
7.1.5	Algae extract[a]; [algae fraction][a]	Watery or alcoholic extract of algae that principally contains carbohydrates. May contain up to 0,1 % antifoaming agents.	
7.1.6	Seaweed meal	Product obtained by drying and crushing macro-algae, in particular brown algae. This product may have been washed to reduce the iodine content. May contain up to 0,1 % antifoaming agents.	Crude ash
7.3.1	Barks[a]	Cleaned and dried bark of trees or bushes.	Crude fibre
7.4.1	Blossoms[a], dried	All parts of dried blossoms of	Crude fibre

a The name shall be supplemented by the plant or algae species.

		consumable plants and their fractions.	
7.5.1	Broccoli, dried	Product obtained by drying the plant *Brassica oleracea* 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 *Saccharum* 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	Leaves, dried[a]	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. The natural content of	Crude fibre

a The name shall be supplemented by the plant or algae species.

		trace elements shall be taken into account	
7.8.2	Powdercellulose	Product obtained by decomposition, separation of lignin and further cleaning as cellulose from vegetable fibre of untreated wood and which is modified by mechanical processing only. Neutral detergent fibre (NDF) minimum 87 %	Crude fibre
7.9.1	Liquorice root	Root of *Glycyrrhiza* L.	
7.10.1	Mint	Product obtained from drying aerial parts of the plants *Mentha apicata*, *Mentha piperita* or *Mentha viridis* (L.), regardless of their presentation.	
7.11.1	Spinach, dried	Product obtained from drying the plant *Spinacia oleracea* L., regardless of its presentation.	
7.12.1	Mojave yucca	Pulverised *Yucca schidigera* Roezl.	Crude fibre
7.12.2	Yucca Schidigera juice	A product obtained by cutting and pressing stems of *Yucca Schidigera*, composed mainly of carbohydrates	
7.13.1	Vegetal carbon; [charcoal]	Product obtained by carbonisation of organic vegetal material.	Crude fibre
7.14.1	Wood[a]	Chemically untreated wood or wood fibres.	Crude fibre
7.15.1	Waxy-leaf nightshade meal	Product obtained by drying and grinding	Crude fibre Vitamin D_3

a The name shall be supplemented by the plant or algae species.

		the leaves of *Solanum glaucophyllum*,	

a The name shall be supplemented by the plant or algae species.

8. *Milk products and products derived thereof*

Feed materials in this chapter shall fullfil the requirements of the 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	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[a]	Product obtained by churning butter out of cream or similar processes. Concentration and/or drying may be applied. 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	Crude protein Crude fat Lactose Moisture if > 6 %

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		acids: sulphuric acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % akali 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	Crude protein Moisture if > 10 %

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		use of neutralising substances and drying.	
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[a]	The fluid secreted by the mammary glands of milk-producing animals up to five days post parturition. Concentration and/or drying may be applied.	Crude protein
8.7.1	Dairy by-products	Products obtained when producing dairy products (including, but not limited to: former dairy foodstuffs, centrifuge or separator sludge, white water, milk minerals). 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	Moisture Crude protein Crude fat Total sugars, calculated as sucrose

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		— acid, hydrochloric acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % akali 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.	
8.8.1	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 powder[a]	Normal mammary secretion obtained from one or	Crude protein Crude fat Moisture if > 5 %

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		more milkings. Concentration and/ or drying may be applied.	
8.11.1	Skimmed milk/ skimmed milk powder[a]	Milk whose fat content has been reduced by separation. Concentration and/ or drying may be applied.	Crude protein Moisture if > 5 %
8.12.1	Milk fat	Product obtained by skimming milk.	Crude fat
8.13.1	Milk protein powder	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[a]	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, concentration and/ or drying may be applied.	Crude ash Crude protein Lactose Moisture if > 8 %
8.16.1	Milk retentate/milk retentate powder[a]	Product retained on the membrane from (ultra, nano or micro) filtration of milk. Concentration and/ or drying may be applied.	Crude protein Crude ash Lactose Moisture if > 8 %
8.17.1	Whey/whey powder[a]	Product of cheese, quark or casein manufacturing or similar processes.	Crude protein Lactose Moisture if > 8 % Crude ash

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		Concentration and/or drying may be applied. 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 % akali e.g. sodium, potassium, calcium, magnesium hydroxides, used for pH adjustments in many stages of	

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		production processes; — up to 2 % free-flowing agents e.g. silicium dioxide, penta-sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties.	
8.18.1	Delactosed whey/ delactosed whey powder[a]	Whey from which the lactose has been partly removed. Concentration and/ or drying may be applied. 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	Crude protein Lactose Moisture if > 8 % Crude ash

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		acid, phosphoric acid, used for pH adjustments in many stages of production processes; — up to 0,5 % akali 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.	
8.19.1	Whey protein/whey protein powder[a]	Product obtained by drying whey protein compounds extracted from whey by chemical or physical treatment. Concentration and/or drying may be applied. Where specifically prepared as feed material, may contain:	Crude protein Moisture if > 8 %

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		—	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 % akali 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-

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		sodium-triphosphate, tri-calcium-phosphate, used to improve powder flowing properties.	
8.20.1	Demineralised, delactosed whey/ demineralised, delactosed whey powder[a]	Whey from which lactose and minerals have been partly removed. Concentration and/ or drying may be applied. 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	Crude protein Lactose Crude ash Moisture if > 8 %

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		production processes; — up to 0,5 % akali 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.	
8.21.1	Whey permeate/whey permeate powder[a]	Product from the liquid phase of (ultra, nano or micro) filtration of whey and from which lactose may have been partly removed. Reverse osmosis and concentration and/or drying may be applied. Where specifically prepared as feed material, may contain: — up to 0,5 % phosphates e.g. polyphosphates (e.g. sodium	Crude ash Crude protein Lactose Moisture if > 8 %

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		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 % akali 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	

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		improve powder flowing properties.	
8.22.1	Whey retentate/whey retentate powder[a]	Product retained on the membrane from (ultra, nano or micro) filtration of whey. Concentration and/or drying may be applied. 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 % akali e.g. sodium,	Crude protein Crude ash Lactose Moisture if > 8 %

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

		— 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.	

a Expressions are not synonymous and differ mainly in their moisture content, respective expression to be used as appropriate.

9. *Land animal products and products derived thereof*

Feed materials in this chapter shall fullfil the requirements of the 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	Description	Compulsory declarations
9.1.1	Animal by-products[a]	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[b]	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	Crude fat Moisture if > 1 %

		solvents, may contain up to 0,1 % hexane.	
9.3.1	Apiculture by-products	Honey, beeswax, royal jelly, propolis, pollen, processed or unprocessed	Total sugars, calculated as sucrose
9.4.1	Processed animal protein[b]	Product obtained by heating, drying and grinding whole or parts of land animals, including invertebrates other than species pathogenic to humans and animals 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[b]	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[b]	Polypeptides, peptides and aminoacids, 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[b]	Product derived from the heat treatment of blood of slaughtered warm-blooded animals.	Crude protein Moisture if > 8 %
9.8.1	Blood products[a]	Products derived from blood or fractions of blood of slaughtered warm-blooded animals; they include dried/frozen/	Crude protein Moisture if > 8 %

		liquid plasma, dried whole blood, dried/ frozen/liquid red cells or fractions thereof and mixtures.	
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[b]	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, it may be hydrolysed.	Crude protein Moisture if > 8 %
9.12.1	Gelatine[b]	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[b]	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[a]	Former foodstuff containing animal products; with or without treatment	Crude protein Crude fat Moisture if > 8 %

		such as fresh, frozen, dried.	
9.15.1	Eggs	Whole eggs of *Gallus gallus* 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.	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, live[a]	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, dead[a]	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

a Without prejudice to mandatory requirements concerning 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 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 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.

b Without prejudice to mandatory requirements concerning 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 if the catalogue is used for labelling purposes, the name shall be supplemented as appropriate 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).

10. *Fish, other aquatic animals and products derived thereof*

Feed materials in this chapter shall fullfil the requirements of the 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	Description	Compulsory declarations
10.1.1	Aquatic invertebrates[a]	Whole or parts of marine or freshwater invertebrates, in all their life stages, other than species pathogenic to humans and animals; with or without treatment such as fresh, frozen, dried.	Crude protein Crude fat Crude ash
10.2.1	By-products from aquatic animals[a]	Originating from establishments or plants preparing or manufacturing products for human consumption; with or without treatment such as fresh, frozen, dried.	Crude protein Crude fat Crude ash
10.3.1	Crustacea meal[b]	Product obtained by heating, pressing and drying whole or parts of crustacean	Calcium Ash insoluble in HCl if > 5 %

a The name shall be supplemented by the species.

b The name shall be supplemented by the species when produced from farmed fish/crustacea as relevant.

		including wild and farmed shrimp.	
10.4.1	Fish[b]	Whole or parts of fish: fresh, frozen, cooked, acid treated or dried.	Crude protein Moisture if > 8 %
10.4.2	Fish meal[b]	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	Crude fat Moisture if > 1 %

a The name shall be supplemented by the species.

b The name shall be supplemented by the species when produced from farmed fish/crustacea as relevant.

		refining of crude fish oil to refined fish oil using the process winterization in which the saturated fats are congealed and subsequently collected.	
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 *Nereis virens* 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 %

a The name shall be supplemented by the species.

b The name shall be supplemented by the species when produced from farmed fish/crustacea as relevant.

10.10.1	Starfish meal [sea star meal]	Product obtained by heating, pressing and drying whole *Asteroidea* or parts of *Asteroidea*.	Crude protein Crude fat Crude ash, if > 20 % Moisture if > 8 %

a The name shall be supplemented by the species.

b The name shall be supplemented by the species when produced from farmed fish/crustacea as relevant.

11. *Minerals and products derived thereof*

Feed materials in this chapter containing animal products shall fullfil the requirements of the 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	Description	Compulsory declarations
11.1.1	Calcium carbonate[a]; [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	Calcium Ash insoluble in HCl if > 5 %

a The nature of the source may be indicated additionally in the name or replace it.

b The name shall be amended or supplemented to specify the organic acid.

c The manufacturing process may be included in the name.

d The name shall be supplemented by ‘from bones’ where appropriate.

		algae, ground or granulated.	
11.1.5	Lithothamn	Product of natural origin obtained from calcareous marine algae (*Phymatolithon calcareum* (Pall.)), ground or granulated.	Calcium Ash insoluble in HCl if > 5 %
11.1.6	Calcium chloride	Calcium chloride ($CaCl_2$). May contain up to 0,2 % barium sulphate.	Calcium Ash insoluble in HCl if > 5 %
11.1.7	Calcium hydroxide	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 ($CaSO_4 \times \frac{1}{2} H_2O$) obtained by partially dehydrating calcium sulphate dihydrate.	Calcium Ash insoluble in HCl if > 5 %
11.1.10	Calcium sulphate dihydrate	Calcium sulphate dihydrate ($CaSO_4 \times 2H_2O$) 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[b]	Calcium salts of edible organic acids with at least 4 carbon atoms.	Calcium Organic acid

a The nature of the source may be indicated additionally in the name or replace it.

b The name shall be amended or supplemented to specify the organic acid.

c The manufacturing process may be included in the name.

d The name shall be supplemented by ‘from bones’ where appropriate.

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 $Ca(C_6H_{11}O_7)_2$ and its hydrated forms.	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 ($C_{10}H_{12}CaN_2O_6$). 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
11.2.1	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 ($MgSO_4 \times 7\ H_2O$).	Magnesium Sulphur Ash insoluble in HCl if > 15 %
11.2.3	Magnesium sulphate monohydrate	Magnesium sulphate ($MgSO_4 \times H_2O$).	Magnesium Sulphur Ash insoluble in HCl if > 15 %

a The nature of the source may be indicated additionally in the name or replace it.

b The name shall be amended or supplemented to specify the organic acid.

c The manufacturing process may be included in the name.

d The name shall be supplemented by ‘from bones’ where appropriate.

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[b]	Magnesium salts of edible organic acids with at least 4 carbon atoms.	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 %
11.2.13	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[cd]; [calcium hydrogen orthophosphate]	Calcium monohydrogen phosphate obtained from bones or	Calcium Total phosphorus P insoluble in 2 % citric acid if > 10 %

a The nature of the source may be indicated additionally in the name or replace it.

b The name shall be amended or supplemented to specify the organic acid.

c The manufacturing process may be included in the name.

d The name shall be supplemented by ‘from bones’ where appropriate.

		inorganic sources ($CaHPO_4 \times nH_2O$, n = 0 or 2) Ca/P > 1,2 May contain up to 3 % chloride expressed as NaCl.	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[d]; [tricalcium orthophosphate]	Tricalcium phosphate from bones or inorganic sources ($Ca_3(PO_4)_2 \times H_2O$) or hydroxyl apatite ($Ca_5(PO_4)_3OH$) 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 ($Ca_3Mg_3(PO_4)_4$).	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($Ca_2P_2O_7$)	Total phosphorus Calcium P insoluble in 2 % citric acid if > 10 %

a The nature of the source may be indicated additionally in the name or replace it.

b The name shall be amended or supplemented to specify the organic acid.

c The manufacturing process may be included in the name.

d The name shall be supplemented by ‘from bones’ where appropriate.

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 ($NaH_2PO_4 \times nH_2O$; 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 ($Na_2HPO_4 \times nH_2O$; 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 ($Na_3PO_4 \times nH_2O$; 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 ($Na_4P_2O_7 \times nH_2O$; 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 ($K_2HPO_4 \times nH_2O$; 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 %

a	The nature of the source may be indicated additionally in the name or replace it.
b	The name shall be amended or supplemented to specify the organic acid.
c	The manufacturing process may be included in the name.
d	The name shall be supplemented by ‘from bones’ where appropriate.

11.3.17	Monoammonium phosphate; [Ammonium dihydrogen orthophosphate]	Monoammonium phosphate ($NH_4H_2PO_4$)	Total nitrogen Total phosphorus P insoluble in 2 % citric acid if > 10 %
11.3.18	Diammonium phosphate; [Diammonium hydrogen orthophosphate]	Diammonium phosphate ($(NH_4)_2HPO_4$)	Total nitrogen Total phosphorus P insoluble in 2 % citric acid if > 10 %
11.3.19	Sodium tripolyphosphate; [Penta sodium triphosphate]	Sodium tripolyphosphate ($Na_5P_3O_{10} \times nH_2O$; 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 ($Mg(H_2PO_2)_2 \times 6H_2O$)	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 $H_{(n+2)}PnO_{(3n+1)}$ 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	Total phosphorus Calcium

a The nature of the source may be indicated additionally in the name or replace it.

b The name shall be amended or supplemented to specify the organic acid.

c The manufacturing process may be included in the name.

d The name shall be supplemented by ‘from bones’ where appropriate.

		pyrophosphate ($CaH_2P_2O_7$)	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 Calcium 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 %

a The nature of the source may be indicated additionally in the name or replace it.

b The name shall be amended or supplemented to specify the organic acid.

c The manufacturing process may be included in the name.

d The name shall be supplemented by 'from bones' where appropriate.

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 $H_{(n+2)}PnO_{(3n+1)}$ 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[a]	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 %

a	The nature of the source may be indicated additionally in the name or replace it.
b	The name shall be amended or supplemented to specify the organic acid.
c	The manufacturing process may be included in the name.
d	The name shall be supplemented by 'from bones' where appropriate.

11.4.4	Sodium carbonate	Sodium carbonate (Na_2CO_3)	Sodium Ash insoluble in HCl if > 10 %
11.4.5	Sodium sesquicarbonate [trisodium hydrogendicarbonate]	Sodium sesquicarbonate ($Na_3H(CO_3)_2$)	Sodium Ash insoluble in HCl if > 10 %
11.4.6	Sodium sulphate	Sodium sulphate (Na_2SO_4) May contain up to 0,3 % methionine	Sodium Ash insoluble in HCl if > 10 %
11.4.7	Sodium salts of organic acids[b]	Sodium salts of edible organic acids with at least 4 carbon atoms	Sodium Organic acid
11.5.1	Potassium chloride	Potassium chloride (KCl) or product obtained by grinding natural sources of potassium chloride	Potassium Ash insoluble in HCl if > 10 %
11.5.2	Potassium sulphate	Potassium sulphate (K_2SO_4)	Potassium Ash insoluble in HCl if > 10 %
11.5.3	Potassium carbonate	Potassium carbonate (K_2CO_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[b]	Potassium salts of edible organic acids with at least 4 carbon atoms.	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	Sulphur

a The nature of the source may be indicated additionally in the name or replace it.

b The name shall be amended or supplemented to specify the organic acid.

c The manufacturing process may be included in the name.

d The name shall be supplemented by ‘from bones’ where appropriate.

		from oil refinery production as practised by sulphur manufacturers.	
11.7.1	Attapulgite	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 expressed as crude protein Sulphur
11.8.3	Ammonium salts of organic acids[b]	Ammonium salts of edible organic acids with at least 4 carbon atoms.	Nitrogen expressed as crude protein Organic acid
11.8.4	Ammonium lactate	Ammonium lactate ($CH_3CHOHCOONH_4$). Includes the Ammonium lactate produced by fermentation with *Lactobacillus delbrueckii ssp. Bulgaricus*, *Lactococcus lactis* ssp., *Leuconostoc mesenteroides*, *Streptococcus thermophilus*,	Nitrogen expressed as crude protein Crude ash Potassium if > 1,5 % Magnesium if > 1,5 %, sodium if > 1,5 %

a	The nature of the source may be indicated additionally in the name or replace it.
b	The name shall be amended or supplemented to specify the organic acid.
c	The manufacturing process may be included in the name.
d	The name shall be supplemented by ‘from bones’ where appropriate.

		Lactobacillus spp, or *Bifidobacterium* spp., containing not less than 44 % Nitrogen expressed as crude protein. 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.	
11.8.5	Ammonium acetate	Ammonium acetate (CH_3COONH_4) in aqueous solution, containing not less than 55 % Ammonium acetate.	Nitrogen expressed as crude protein
11.9.1	Flint [gizzard] grit	Product obtained by crushing naturally occurring mineral in the form of gravel	Particle size
11.9.2	[Gizzard] Redstone	Product obtained by crushing and milling of products derived from the burning of clay	Particle size Moisture if > 2 %

a	The nature of the source may be indicated additionally in the name or replace it.
b	The name shall be amended or supplemented to specify the organic acid.
c	The manufacturing process may be included in the name.
d	The name shall be supplemented by ‘from bones’ where appropriate.

12. *Products and by-products obtained by fermentation using micro-organisms, inactivated resulting in absence of live micro-organisms*

Feed materials listed in this chapter that are or are produced from genetically modified organisms, or result from a fermentation process involving genetically modified micro-organisms shall be compliant with Regulation (EC) No 1829/2003 on genetically modified feed and food.

Number	Name	Description	Compulsory Declarations
12.1.1	Product from *Methylophilus methylotrophus* rich in protein[ab]	Fermentation product obtained by culture of *Methylophilus methylotrophus* (NCIMB strain 10.515) on methanol, the crude protein is at least 68 % and the reflectance index at least 50.	Crude protein Crude ash Crude fat Propionic acid if > 0,5 %
12.1.2	Product from *Methylococcus capsulatus (Bath), Alca ligenes acidovorans, Bacillus brevis* and *Bacillus firmus* rich in protein[ab]	Fermentation product obtained by culture of *Methylococcus capsulatus* (Bath) (NCIMB strain 11132), *Alcaligenes acidovorans* (NCIMB strain 13287), *Bacillus brevis* (NCIMB strain 13288) and *Bacillus firmus* (NCIMB strain 13289) on natural gas (approx. 91 % methane, 5 % ethane, 2 % propane, 0,5 % isobutane, 0,5 % n-butane), ammonia, and mineral salts, the crude protein is at least 65 %.	Crude protein Crude ash Crude fat Propionic acid if > 0,5 %
12.1.3	Product from *Escherichia coli* rich in protein[ab]	Fermentation by-product from the production of amino acids by culture of *Escherichia coli* K12 on substrates of vegetable or chemical	Crude protein Propionic acid if > 0,5 %

a	Products obtained from the biomass of specific micro-organisms grown on certain substrates. May contain up to 0,3 % antifoaming agents, 1,5 % filtration/clarifying agents and 2,9 % propionic acid.
b	Microorganisms used in the fermentation have been inactivated with the result that no such microorganisms are viable in the feed materials.
c	Cultivation on n-alkanes is prohibited (Regulation (EU) No 568/2010).
d	The used name of the yeast strains may vary from the scientific taxonomy. Therefore, synonyms of the yeast strains listed could also be used.
e	Other fermentation by-products. May contain up to 0,6 % antifoaming agents, 0,5 % antiscaling agents and 0,2 % sulphites.
f	Parts means any soluble and insoluble fractions of the yeast including from the membrane or the inner parts of the cell.

		origin, ammonia or mineral salts; it may be hydrolysed.	
12.1.4	Product from *Corynebacterium glutamicum* rich in protein[ab]	Fermentation by-product from the production of amino acids by culture of *Corynebacterium glutamicum* on substrates of vegetable or chemical origin, ammonia or mineral salts, it may be hydrolysed.	Crude protein Propionic acid if > 0,5 %
12.1.5	Yeasts [brewers' yeast][ab]	All yeasts obtained from[d] *Saccharomyces cerevisiae, Saccharomyces carlsbergensis, Kluyveromyces lactis, Kluyveromyces fragilis, Torulaspora delbrueckii, Cyberlindnera jadinii*[c], *Saccharomyces uvarum*, *Saccharomyces ludwigii* or *Brettanomyces* ssp. 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	Moisture if < 75 % or > 97 % If moisture < 75 %: Crude protein Propionic acid if > 0,5 %

a	Products obtained from the biomass of specific micro-organisms grown on certain substrates. May contain up to 0,3 % antifoaming agents, 1,5 % filtration/clarifying agents and 2,9 % propionic acid.
b	Microorganisms used in the fermentation have been inactivated with the result that no such microorganisms are viable in the feed materials.
c	Cultivation on n-alkanes is prohibited (Regulation (EU) No 568/2010).
d	The used name of the yeast strains may vary from the scientific taxonomy. Therefore, synonyms of the yeast strains listed could also be used.
e	Other fermentation by-products. May contain up to 0,6 % antifoaming agents, 0,5 % antiscaling agents and 0,2 % sulphites.
f	Parts means any soluble and insoluble fractions of the yeast including from the membrane or the inner parts of the cell.

		and fermentation nutrients such as ammonia or mineral salts.	
12.1.6	Mycelium silage from the production of penicillin[ab]	Mycelium (nitrogenous compounds), wet by-product from the production of penicillin by *Penicillium chrysogenum* (ATCC48271) on different sources of carbohydrates and their hydrolysates, heat treated and ensiled by means of *Lactobacillus brevis*, *plantarum, sake, collinoides* and *Streptococcus lactis* to inactive the penicillin, Nitrogen expressed as crude protein is at least 7 %.	Nitrogen expressed as crude protein Crude ash Propionic acid if > 0,5 %
12.1.7	Yeasts from biodiesel process[ab]	All yeasts and parts[f] thereof obtained from[d] *Yarrowia lipolytica* grown on vegetable oils and degumming and glycerol fractions formed during biofuel production.	Moisture if < 75 % or > 97 % If moisture < 75 %: Crude protein Propionic acid if > 0,5 %
12.1.8	Product from *Lactobacillus* species rich in protein[ab]	Fermentation product obtained from culture of *Lactobacillus* on substrates mostly	Crude protein Crude ash Propionic acid if > 0,5 %

a Products obtained from the biomass of specific micro-organisms grown on certain substrates. May contain up to 0,3 % antifoaming agents, 1,5 % filtration/clarifying agents and 2,9 % propionic acid.

b Microorganisms used in the fermentation have been inactivated with the result that no such microorganisms are viable in the feed materials.

c Cultivation on n-alkanes is prohibited (Regulation (EU) No 568/2010).

d The used name of the yeast strains may vary from the scientific taxonomy. Therefore, synonyms of the yeast strains listed could also be used.

e Other fermentation by-products. May contain up to 0,6 % antifoaming agents, 0,5 % antiscaling agents and 0,2 % sulphites.

f Parts means any soluble and insoluble fractions of the yeast including from the membrane or the inner parts of the cell.

		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. The product may be dried.	
12.1.9	Product from *Trichoderma viride* rich in protein[ab]	Fermentation product obtained from culture of *Trichoderma viride* 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. The product may be dried	Crude protein Crude ash Propionic acid if > 0,5 %
12.1.10	Product from *Bacillus subtilis* rich in protein[ab]	Fermentation product obtained from culture of *Bacillus subtilis* on substrates mostly of vegetable origin such as molasses, sugar syrup,	Crude protein Crude ash Propionic acid if > 0,5 %

a	Products obtained from the biomass of specific micro-organisms grown on certain substrates. May contain up to 0,3 % antifoaming agents, 1,5 % filtration/clarifying agents and 2,9 % propionic acid.
b	Microorganisms used in the fermentation have been inactivated with the result that no such microorganisms are viable in the feed materials.
c	Cultivation on n-alkanes is prohibited (Regulation (EU) No 568/2010).
d	The used name of the yeast strains may vary from the scientific taxonomy. Therefore, synonyms of the yeast strains listed could also be used.
e	Other fermentation by-products. May contain up to 0,6 % antifoaming agents, 0,5 % antiscaling agents and 0,2 % sulphites.
f	Parts means any soluble and insoluble fractions of the yeast including from the membrane or the inner parts of the cell.

		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. The product may be dried	
12.1.11	Product from *Aspergillus oryzae* rich in protein[ab]	Fermentation product obtained from culture of *Aspergillus oryzae* 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. The product may be dried.	Crude protein Crude ash Propionic acid if > 0,5 %
12.1.12	Yeasts products[ab]	All yeasts parts[f] obtained from[d]*Saccharomyces cerevisiae, Saccharomyces carlsbergensis, Kluyveromyces lactis, Kluyveromyces fragilis, Torulaspora delbrueckii,*	Moisture if < 75 % or > 97 % If moisture < 75 %: Crude protein Propionic acid if > 0,5 %

a	Products obtained from the biomass of specific micro-organisms grown on certain substrates. May contain up to 0,3 % antifoaming agents, 1,5 % filtration/clarifying agents and 2,9 % propionic acid.
b	Microorganisms used in the fermentation have been inactivated with the result that no such microorganisms are viable in the feed materials.
c	Cultivation on n-alkanes is prohibited (Regulation (EU) No 568/2010).
d	The used name of the yeast strains may vary from the scientific taxonomy. Therefore, synonyms of the yeast strains listed could also be used.
e	Other fermentation by-products. May contain up to 0,6 % antifoaming agents, 0,5 % antiscaling agents and 0,2 % sulphites.
f	Parts means any soluble and insoluble fractions of the yeast including from the membrane or the inner parts of the cell.

		Cyberlindnera jadinii[f], *Saccharomyces uvarum*, *Saccharomyces ludwigii* or *Brettanomyces* ssp. 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.	
12.2.1	Vinasses [condensed molasses soluble][be]	By-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[f] thereof of the fermentation micro-	Crude protein Substrate and indication of production process as appropriate

a	Products obtained from the biomass of specific micro-organisms grown on certain substrates. May contain up to 0,3 % antifoaming agents, 1,5 % filtration/clarifying agents and 2,9 % propionic acid.
b	Microorganisms used in the fermentation have been inactivated with the result that no such microorganisms are viable in the feed materials.
c	Cultivation on n-alkanes is prohibited (Regulation (EU) No 568/2010).
d	The used name of the yeast strains may vary from the scientific taxonomy. Therefore, synonyms of the yeast strains listed could also be used.
e	Other fermentation by-products. May contain up to 0,6 % antifoaming agents, 0,5 % antiscaling agents and 0,2 % sulphites.
f	Parts means any soluble and insoluble fractions of the yeast including from the membrane or the inner parts of the cell.

		organisms used. The substrates are 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.	
12.2.2	By-products from the production of L-glutamic acid[be]	By-products from the production of L-glutamic acid by fermentation with *Corynebacterium melassecola* on substrate composed of sucrose, molasses, starch products and their hydrolysates, ammonium salts and other nitrogenous compounds.	Crude protein
12.2.3	By-products from the production of L-lysine-monohydrochloride with *Brevibacterium lactofermentum*[be]	By-products from the production of L-Lysine monohydrochloride by fermentation with *Brevibacterium lactofermentum* on substrate composed of sucrose, molasses, starch products and their hydrolysates, ammonium salts and	Crude protein

a	Products obtained from the biomass of specific micro-organisms grown on certain substrates. May contain up to 0,3 % antifoaming agents, 1,5 % filtration/clarifying agents and 2,9 % propionic acid.
b	Microorganisms used in the fermentation have been inactivated with the result that no such microorganisms are viable in the feed materials.
c	Cultivation on n-alkanes is prohibited (Regulation (EU) No 568/2010).
d	The used name of the yeast strains may vary from the scientific taxonomy. Therefore, synonyms of the yeast strains listed could also be used.
e	Other fermentation by-products. May contain up to 0,6 % antifoaming agents, 0,5 % antiscaling agents and 0,2 % sulphites.
f	Parts means any soluble and insoluble fractions of the yeast including from the membrane or the inner parts of the cell.

		other nitrogenous compounds.	
12.2.4	By-products from the production of amino acids with *Corynebacterium glutamicum*[be]	By-products from the production of amino acids by fermentation with *Corynebacterium glutamicum* on substrate of vegetable or chemical origin, ammonia or mineral salts.	Crude protein Crude ash
12.2.5	By-products from the production of amino acids with *Escherichia coli* K12[be]	By-products from the production of amino acids by fermentation with *Escherichia coli* K12 on substrate of vegetable or chemical origin, ammonia or mineral salts.	Crude protein Crude ash
12.2.6	By-product of enzyme production with *Aspergillus niger*[be]	By-product of fermentation of *Aspergillus niger* on wheat and malt for enzyme production.	Crude protein
12.2.7	Polyhydroxybutyrate from fermentation with *Ralstonia eutropha*[b]	Product containing 3-hydroxybutyrate and 3-hydroxyvalerate, produced via fermentation with *Ralstonia eutropha*, and non-viable bacterial protein meal remaining from the producing bacteria and fermentation broth.	

a	Products obtained from the biomass of specific micro-organisms grown on certain substrates. May contain up to 0,3 % antifoaming agents, 1,5 % filtration/clarifying agents and 2,9 % propionic acid.
b	Microorganisms used in the fermentation have been inactivated with the result that no such microorganisms are viable in the feed materials.
c	Cultivation on n-alkanes is prohibited (Regulation (EU) No 568/2010).
d	The used name of the yeast strains may vary from the scientific taxonomy. Therefore, synonyms of the yeast strains listed could also be used.
e	Other fermentation by-products. May contain up to 0,6 % antifoaming agents, 0,5 % antiscaling agents and 0,2 % sulphites.
f	Parts means any soluble and insoluble fractions of the yeast including from the membrane or the inner parts of the cell.

13. *Miscellaneous*

Feed materials in this chapter containing animal products shall fullfil the requirements of the 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	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. They may be dried.	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. They may be dried.	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. They may be dried.	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. They may be dried.	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. They may be dried.	Starch Total sugars, calculated as sucrose, Crude fat
13.1.6	Products and by-products from processing fresh fruits and vegetables[a]	Products obtained when processing fresh fruit and vegetables (including	Starch Crude fibre Crude fat, if > 5 %

a	The name shall be supplemented by the fruit, vegetable, plant, spices and herbs species, as applicable.
b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

		peel, whole pieces of fruit/vegetables, and mixtures thereof). They may have been dried, or frozen.	Ash insoluble in HCl, if > 3,5 %
13.1.7	Products from the processing of plants[a]	Products obtained from freezing or drying whole plants or their parts.	Crude Fibre
13.1.8	Products from processing of spices and seasonings[a]	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 herbs[a]	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 dried or frozen.	Starch Crude fibre Crude fat, if > 5 % Ash insoluble in HCl, if > 3,5 %
13.1.11	Products and by-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. They may be dried.	Crude fat
13.1.12	Products and by-products from the	Products and by-products of the savoury snacks	Crude fat

a	The name shall be supplemented by the fruit, vegetable, plant, spices and herbs species, as applicable.
b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

	savoury snacks industry	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.	
13.1.13	Products from the ready-to-eat food industry	Products obtained during the production of ready to eat food. They may be dried.	Crude fat, if > 5 %
13.1.14	Plants by-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 unsaleable 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	Total sugars, calculated as sucrose. Moisture if > 30 %

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c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

		sweet-flavoured soft drinks. They may be concentrated or dried.	
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. They may be concentrated or dried.	Total sugars, calculated as sucrose. Moisture if > 30 %
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	Moisture if > 30 %

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c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

		from starch. It may be dried	
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)[f]	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 β1–4 bonds with degree of polymerization ranging from 2 to 10 and produced from enzymatic hydrolysis of various feedstocks rich in hemicellulose.	Moisture if > 5 %

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c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

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 %
13.3.1	Starch[b]	Starch.	Starch
13.3.2	Starch[b], pre-gelatinised	Product consisting of starch expanded by heat treatment.	Starch
13.3.3	Starch[b] mixture	Product consisting of native and/or modified food starch obtained from different botanical sources.	Starch
13.3.4	Starch[b] 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.	

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c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

13.5.1	Polyols	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	Product obtained by hydrogenation or fermentation and consisting of reduced glucose and/ or fructose.	
13.5.4	Xylitol	Product obtained by hydrogenation and fermentation of xylose.	
13.5.5	Sorbitol	Product obtained by hydrogenation of glucose	
13.6.1	Acid oils from chemical refining[c]	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	Crude fat Moisture if > 1 %

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b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

		diglycerides, crude lecithin and fibres.	
13.6.2	Fatty acids esterified with glycerol[d]	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[d]	Product consisting of mixtures of mono-, di- and triesters of glycerol with fatty acids. They may contain small amounts of free fatty acids and glycerol. May contain up to 50 ppm Nickel from hydrogenation.	Crude fat Nickel if > 20 ppm
13.6.4	Salts of fatty acids[d]	Product obtained by reaction of fatty acids with at least four 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[c]	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	Crude fat Moisture if > 1 %

a	The name shall be supplemented by the fruit, vegetable, plant, spices and herbs species, as applicable.
b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

		diglycerides, sterols and tocopherols.	
13.6.6	Crude fatty acids from splitting[c]	Product obtained by oil/fat splitting. By definition it consists of crude fatty acids C_6-C_{24}, aliphatic, linear, monocarboxylic, saturated and unsaturated. May contain up to 50 ppm Nickel from hydrogenation.	Crude fat Moisture if > 1 % Nickel if > 20 ppm
13.6.7	Pure distilled fatty acids from splitting[c]	Product obtained by the distillation of crude fatty acids from oil/fat splitting potentially plus hydrogenation. By definition it consists of pure distilled fatty acids C_6-C_{24}, aliphatic, linear, monocarboxylic, saturated and unsaturated. May contain up to 50 ppm Nickel from hydrogenation	Crude fat Moisture if > 1 % Nickel if > 20 ppm
13.6.8	Soap stocks[c]	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,	Moisture if < 40 and > 50 % Ca or Na or K or Mg, as appropriate

a	The name shall be supplemented by the fruit, vegetable, plant, spices and herbs species, as applicable.
b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

		fruits or animal tissues such as mono- and diglycerides, crude lecithin and fibres.	
13.6.9	Mono- and diglycerides of fatty acids esterified with organic acids[de]	Mono- and diglycerides of fatty acids with at least four carbon atoms esterified with organic acids.	Crude fat
13.6.10	Sucrose esters of fatty acids[d]	Esters of saccharose and fatty acids.	Total sugars, calculated as sucrose Crude fat
13.6.11	Sucroglycerides of fatty acids[d]	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. It is produced by acylation of D-glucosamine with palmitic acid. May contain up to 0,5 % acetone.	Moisture if > 2 %, Crude fat
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
13.8.1	Glycerine, crude [Glycerol, crude]	By-product obtained from:	Glycerol Potassium if > 1,5 %

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c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

		— 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	Sodium if > 1,5 % Nickel if > 20 ppm

a	The name shall be supplemented by the fruit, vegetable, plant, spices and herbs species, as applicable.
b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

		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.	
13.8.2	Glycerine [Glycerol]	Product obtained from: — the oleochemical process of (a) oil/fat splitting followed by concentration of sweet waters and	Glycerol if < 99 % on dry matter basis Sodium if > 0,1 % Potassium if > 0,1 % Nickel if > 20 ppm

a	The name shall be supplemented by the fruit, vegetable, plant, spices and herbs species, as applicable.
b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

			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

a	The name shall be supplemented by the fruit, vegetable, plant, spices and herbs species, as applicable.
b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

		— 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.	
13.9.1	Methyl sulphonyl methane	Organo-sulfur compound ($(CH_3)_2SO_2$) obtained by chemical synthetis 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

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b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

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 $C_3H_8O_2$. 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 acids[d]	Mono-esters of propylene glycol and fatty acids, alone or in mixtures with diesters.	Propylene glycol Crude fat
13.12.1	Hyaluronic acid	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

a	The name shall be supplemented by the fruit, vegetable, plant, spices and herbs species, as applicable.
b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

13.12.2	Chondroitin sulphate	Product obtained by extraction from tendons, bones and other animal tissues containing cartilage and soft connective tissues.	Sodium
13.12.3	Gluconic acid	Gluconic acid ($C_6H_{12}O_7$), a water soluable organic acid with a pKa of 3,7, has a clear to brown color. The liquid form has a minimum content of Gluconic acid of 50 %. It is produced through the microbial fermentation of glucose syrup or as the co-product from the manufacturing of food grade glucono-delta-lactone.	Gluconic acid

a	The name shall be supplemented by the fruit, vegetable, plant, spices and herbs species, as applicable.
b	The name shall be supplemented by the indication of the botanical origin.
c	The name shall be supplemented by the indication of the botanical or animal origin.
d	The name shall be amended or supplemented to specify the fatty acids used.
e	The name shall be amended or supplemented to specify the organic acid.
f	The name shall be supplemented by the words ‘from animal tissues’ or ‘from fermentation’, as appropriate**]**

(1) OJ L 229, 1.9.2009, p. 1.

(2) OJ L 159, 17.6.2011, p. 25.

(3) OJ L 77, 24.3.2010, p. 17.

(4) **[**[F1]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).**]**

(5) **[**[F1]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).**]**

(6) **[**[F1]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).**]**

(7) **[**[F1]OJ L 147, 31.5.2001, p. 1.**]**

(8) **[**[F1]OJ L 35, 8.2.2005, p. 1.**]**

(9) **[**[F1]As Low As Reasonably Achievable.**]**

(10) **[**[F1]OJ L 140, 30.5.2002, p. 10.**]**

(11) **[**[F1]OJ L 70, 16.3.2005, p. 1.**]**

(12) **[**[F1]OJ L 268, 18.10.2003, p. 29.**]**

(13) **[**[F1]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.**]**

(14) **[**[F1]By derogation from this obligation, for the process ‘drying’ the common name/qualifier may be added.**]**

Textual Amendments

F1 Substituted by Commission Regulation (EU) 2017/1017 of 15 June 2017 amending Regulation (EU) No 68/2013 on the Catalogue of feed materials (Text with EEA relevance).

Changes to legislation:
There are outstanding changes not yet made to Commission Regulation (EU) No 68/2013. Any changes that have already been made to the legislation appear in the content and are referenced with annotations.
View outstanding changes

Changes and effects yet to be applied to :

- Annex Pt. A point 2 words substituted by S.I. 2019/654 reg. 135(a)
- Annex Pt. A point 3 words substituted by S.I. 2019/654 reg. 135(b)

Changes and effects yet to be applied to the whole legislation item and associated provisions

- Signature words omitted by S.I. 2019/654 reg. 134