



Standards Commission for Straight  
Feeding Stuffs  
at the Central Committee of the  
German Agriculture

# Positive List for Straight Feeding Stuffs

## 13th Edition

Berlin, February 2019

Issued by:

Central Committee of the German Agriculture,  
Standards Commission for Straight Feeding Stuffs  
*Zentralausschuss der Deutschen Landwirtschaft,  
Normenkommission für Einzelfuttermittel*

Funded by Landwirtschaftliche Rentenbank



# Table of Contents

	<b>Page</b>
<b>Preliminary remarks</b>	<b>II</b>
<b>Preface</b>	<b>II</b>
<b>Editors and authors</b>	<b>V</b>
<b>Explanations</b>	<b>VII</b>
<b>Glossary</b>	<b>XII</b>
<b>Data sheet for straight feeding stuffs of the Positive List</b>	<b>XV</b>
<b>Instruction on compiling the data sheet</b>	<b>XVI</b>
<b>Annex</b>	<b>XVIII</b>

## **Straight Feeding Stuffs**

<b>Number</b>	<b>Group</b>	<b>Page</b>
01	Cereal grains, their products and by-products	1
02	Oil seeds and oil fruits and other oil-supplying plants, their products and by-products	11
03	Grain legumes, their products and by-products	23
04	Tubers and roots, their products and by-products	25
05	By-products of fermentation and distillation, including fermentative alcohol production for bioenergy purposes	29
06	Other seeds and fruits, their products and by-products	31
07	Roughages and forages	33
08	Other plants, their products and by-products	35
09	Milk products (except where cow's milk is used, the species must be specified)	37
10	Fish and other marine animals, their products and by-products	40
11	Minerals	42
12	Miscellaneous straight feeding stuffs	46
13	Former foodstuffs, products and by-products of food production	49
14	Proteins obtained from microorganisms	52
17	Ammonium salts	55
18	Other NPN compounds (except ammonium salts)	55
19	Products and by-products from terrestrial animals	55
20	Egg products	56
<b>Alphabetical list of the straight feeding stuffs</b>		<b>57</b>

# Preliminary remarks

In the current 13<sup>th</sup> edition, 18 straight feeding stuffs were admitted and 38 amendments for straight feeding stuffs already listed and some other remarks and 5 deletions have been made.

The amendments which have been made since the 12<sup>th</sup> edition are summarized in table 1 in the Annex (see page XVIII).

## Preface

In the agricultural and food sector as well as between politicians and consumers, there is a consensus on the need to list all feed used in the Federal Republic of Germany as well as in the EU for the feeding of farm animals. Over recent years feeding stuff legislation has been drawn up to ensure comprehensive safety when producing foodstuffs of animal origin, however various recent scandals (dioxin contamination, use of contaminated fats etc.) have shown that the necessary care is not always taken during production and distribution of raw materials. Therefore it appears sensible and commensurate to draw up a list of straight feeding stuffs that can be used for feeding livestock. In livestock feeding also compound feeding stuffs, which may also contain additives, processing aids or carrier substances, are used; these products are regulated by specific legislation and are therefore not subject of this list. A current list of approved additives on the basis of Regulation (EC) No 1831/2003 can be found on the homepage of the Bundesanstalt für Lebensmittelsicherheit ([www.bvl.bund.de](http://www.bvl.bund.de) → Futtermittel → Zusatzstoffe in Futtermitteln).

The Positive List for Straight Feeding Stuffs is based on a voluntary agreement of the concerned economic sectors and organizations. While in the lists established on the basis of the European feed legislation (see EU catalog of straight feeding stuffs in Regulation (EU) No. 68/2013 and European Feed Materials Register , [www.feedmaterialsregister.eu](http://www.feedmaterialsregister.eu)) almost all feed ingredients intended or may be intended for animal consumption are collected, the Positive List of Straight Feeding stuffs contains only feed materials, which have undergone a safety audit with regard to the raw materials, processing aids and manufacturing processes used and taking also in account their nutritional value and their suitability for livestock feeding.

The Standards Commission of Straight Feeding Stuffs works on the following principles:

The list should not just be restricted to enumerate the straight feeding stuffs. In fact the basis must be a clear definition (designation and description) of the origin and characteristics of the straight feeding stuffs. For this purpose it is necessary to have a comprehensive description of the manufacturing process inclusive the processing aids used and indication of possible risks.

**Field crops**, which are only reduced technically to different degrees of size (e.g. crushing or grinding whole grains), from which nothing else is removed or added except water, are not listed individually. If feeding stuffs of the same or similar origin with different designations are circulated, (e.g. wheat bran, wheat feed, wheat hulls and bran), they must be clearly differentiated from each other. It is the task of the specific industrial sector to define **differentiation criteria** and to quantify them. The defined **requirements** are criteria that are binding for the inclusion of the respective straight feeding stuffs in the list. It is important here to define a compact number of criteria in order to ensure the highest possible level of risk minimisation and consumer protection and also proved feed value.

**Primary criteria for the inclusion of a straight feeding stuff in the positive list comprise:**

- a) the legal admissible use as a straight feeding stuff
  - b) a substantiated feed value, i.e. the product must
    - be consumed orally in an effective quantity and
    - make a relevant contribution to the supply of energy and/or nutrition or
    - contribute to appetite stimulation, salivary flow, satiety or to maintain or support the function of the digestive tract and / or its eubiosis,
  - c) harmlessness for animals and humans,
  - d) not negatively affect the quality of animal products,
  - e) not present a hazard to the ecological balance due to undesirable substances it contains,
- Specific nutritional effects may be included as additional benefits, while taking into account the primacy of the drug legislation and the feeding stuffs legislation on feed additives and dietary feed.

A differentiation should be made here between straight feeding stuffs primarily produced on the farm (e.g. grass and the products conserved from grass such as hay or silage) and commercial feeding stuffs. In the case of **roughage produced on the farm**, it is not necessary and not commensurate to define all quality differences. In this case, a summarised list of all relevant products must be drawn up. In contrast to **commercial feeding stuffs**, a clear designation for each product with a clear description must be available.

One important question is the intended use of **former foodstuffs and products and by-products from the food production** as feeding stuff. The overriding principle here is, that products, that have been clearly indicated as food for human consumption can be used to feed livestock unless there are contrary statutory regulations (e.g. restrictions or prohibitions to feed products of animal origin to animals intended for food production). As food and by-products of food change in relatively short periods with regard to their processing and also production procedures, and to ensure that this list is transparent and manageable, steps have been taken to summarise products into defined groups based on certain characteristics.

One large sector comprises by-products obtained during the production and processing of foodstuffs. In principle, it is reasonable to use these products, of which most of them have high quality nutrients and are of food quality, as animal feed. However measures must be taken to ensure that these by-products really originate from foodstuffs and are not predominately processing additives, added externally during the production processes and then removed from the process.

Distinguishing between the sectors of food, parts of foodstuffs and by-products obtained during the production of food is a complex task. This is why data sheets need to be presented for certain products especially in the case of complex production processes. This is an aid that needs to be applied in particular on an everyday basis of feeding stuff circulation. The **data sheet** must contain all relevant data about the production process, the use of processing aids, the analyses and so-called "critical control points".

In particular, a data sheet should also be submitted for foodstuffs of which the shelf life has expired (taking into consideration the hygiene status) or for pre-packed foodstuffs as, in the case of the latter, the legal feed requirements can often only be satisfied by specialized companies with specific technical tools (e.g. removal of the packaging).

The objective of this Positive List cannot be to list and assess data sheets for all products and from all manufacturers. This would go beyond the scope of the Positive List and require frequent adjustments due to the continuously changing of market conditions. The intention is rather to give an impulse to create and maintain data sheets as an aid to ensure feed safety. For this purpose, the Standards Commission has requested a data sheet for most of the straight feeding stuffs in order to be able to assess whether or not the requirements are satisfied to the Standards

Commission's expectations. It is up to the users of straight feeding stuffs (compound feed manufacturers as well as farmers) to ask for the data sheet when purchasing the respective straight feeding stuffs. The manufacturers and distributors of these feeding stuffs are obliged to keep a data sheet, make it available to the customers and to update it in case of changes of the production process and to inform the users about changes of the product.

The professional evaluation of the straight feeding stuffs is based on nutritional and safety criteria. Regarding genetically modified organisms and feeding stuffs produced thereof it is referred to the appropriate legislation.

Products that are not allowed for livestock feeding under current law (such as e.g. certain products from warm-blooded livestock) except those with special legal approval (see hydrolysed proteins, certain blood products, etc.) have been looked at during the evaluation and assessment but are not included in the Positive List. However it is possible at any time to include those products, subject to a risk assessment, if legislation changes. Straight feeding stuffs that are approved in accordance with current law, but which has a minor contribution to energy and nutrient supply, are not excluded from the Positive List, but are indicated with special comments in the column "remarks".

The Positive List should be regarded as a so-called closed list. This does not mean that new or previously not listed products are excluded from use as feed for all time. There is a possibility of including them in the Positive List during the continuously updating process after they have been examined according to the principles of the Standards Commission. On the other side, there is a possibility to remove straight feeding stuffs from the list on the basis of new information. In cases right connected with a direct hazard, an amendment of this kind affiliated to an appropriate transition period is indicated in the list in order to inform the interested circles and to give them an opportunity to adapt to the new situation.

In the light of the frequent changes in the market, it is not feasible to reprint the updated list continuously. Instead, all amendments are updated in the Internet, marked accordingly and made accessible.

Due to the size of the feeding stuff market the scope of the Positive List is extensive. Primarily this is due to the division of labour in our society. On the one hand, to ensure sustainability many by-products need to be considered, e.g. food production and processing, within the meaning of recycling and production of meat, milk and eggs, and on the other hand, the number of products is high due to the differentiated preparation of individual products as is clearly seen by the example of wheat and the products obtained thereof.

The wide range of feed resources is advantageous for our livestock production. Similar to humans, the indigestion system and the metabolism is able to make use of a wide feed base without impairing the health or well-being of the animals.

In all cases, the above-mentioned principles, which constitute the basis for the establishment of the Positive List, need to be observed.

**Dr. Franz-Peter Engling**

Chairman of the Standards Commission for Straight Feeding Stuffs at the Central Committee of the German Agriculture

# Editors and authors

Editor of the positive list is the Central Committee of the German Agriculture, (*Zentralausschuss der Deutschen Landwirtschaft*).

## Central Committee of the German Agriculture:

Deutscher Bauernverband e.V. (DBV) / *German Farmers Association*  
 Deutsche Landwirtschaftsgesellschaft DLG e.V. / *German Agriculture Society*  
 Deutscher Raiffeisen-Verband e.V. (DRV) / *German Raiffeisen Federation*  
 Verband der Landwirtschaftskammern e.V. (VLK) / *Chamber of Agriculture*

The Positive List is drawn up by the Standards Commission. This is a working group within the Central Committee of the German Agriculture. The Standards Commission is independent and focuses primarily on evaluating, assessing, classifying and differentiating feed materials with regard to their use and safety.

The Standards Commission comprises of 8-12 members whose work is in addition supported by representatives from other organisations (permanent guests). Representatives from science, consulting, feeding industry and feeding experts are brought in if necessary.

The evaluation process is based on scientific criteria. These are documented as a guide and comprise part of the rules of procedure of the Standards Commission.

## Appointed members of the Standards Commission for Straight Feeding Stuffs:

Dr. Franz-Peter Engling	Landwirtschaftliche Untersuchungs- und Forschungsanstalt (LUFA) Nord-West	Oldenburg	Chairman
Insea Staschinski	Deutscher Bauernverband e.V. (DBV)	Berlin	Managing Director
Dr. Michael Baum	Agravis Raiffeisen AG	Münster	
Dr. Ingrid Halle	Bundesforschungsanstalt für Tiergesundheit	Braunschweig	
Dr. Martin Pries	Landwirtschaftskammer Nordrhein-Westfalen	Bad Sassendorf	
Andrea Meyer	Landwirtschaftskammer Niedersachsen	Hannover	
Peter Radewahn	Deutscher Verband Tiernahrung e.V. (DVT)	Bonn	
Prof. Dr. Hans Schenkel	Institut für Nutztierwissenschaften der Universität Hohenheim	Stuttgart	
Dr. Detlef Kampf	DLG e.V.	Frankfurt	Competence office

Silke Ausmeier

DLG e.V

Frankfurt

Competence  
officePermanent guests of the Standards Commission:

Franz Doppelreiter	Österreichische Agentur für Gesundheit und Ernährungs- sicherheit GmbH (AGES)	Wien	
Dr. Gerd Finkler	Bundesamt für Verbraucher- schutz und Lebensmittel- sicherheit (BVL)	Berlin	
Dr. Sabine Kruse	Bundesministerium für Ernährung und Landwirtschaft (BMEL)	Bonn	
Simone Mönning	QS Qualität und Sicherheit GmbH	Bonn	
Dr. Uwe Petersen		Meckenheim	Petition office
Jürgen Plange	PMG Premium Mühlen Gruppe GmbH & Co.KG	Neuss	
Dr. Jürgen Trede	Ministerium für Energiewende, Landwirtschaft, Umwelt und ländliche Räume	Kiel	

Responsible for the content: Zentralkommission der Deutschen Landwirtschaft (ZDK)  
Claire-Waldoff-Straße 7, 10117 Berlin

# Explanations

The Positive List in its current valid version provides an overview of the straight feeding stuffs for livestock. It needs to be constantly updated. It is always possible to add new products or cross off products or make amendments based on latest findings.

The positive list is updated at regular intervals. Any amendments/new additions agreed upon by the Commission in the meantime are published via the amendments/new additions list at [www.dlg.org/de/landwirtschaft/themen/tierhaltung/positivliste-fuer-einzelfuttermittel](http://www.dlg.org/de/landwirtschaft/themen/tierhaltung/positivliste-fuer-einzelfuttermittel).

Products crossed off by the Commission are marked with an appropriate interim period. These changes are communicated at an early date via the "**Grey list**" in the Internet in order to give producers, distributors or users the opportunity to adapt accordingly within an adequate period.

The level of transparency when circulating the respective feeding stuffs is significantly increased thanks to the "**data sheet**". The information contained in the data sheet is much more detailed than the general description given in the Positive List. It also contains details about special operation, specific features during production or the composition of the straight feeding stuffs that are not usually available in practice. The information about the production process can help to identify so called critical control points for the risk assessment of feeding stuffs. In addition, the data sheet also contains information about any necessary examinations relating to undesirable substances with regard to the specific properties of the raw product, the production processes or processing aids that are used. The data sheet should be available to the buyer of the straight feeding stuff, e.g. the farmer or compound feed producer. In the case of deliveries from one supplier, the data sheet only needs to be presented once as long as the product itself or the production process has not changed. In the case of changes, the data sheet needs to be updated and made available to the buyer in the current version. In the case of the products of Group 13 (Former foods, products and by-products of food production), the appropriate data sheet for each delivery in the current version need to be enclosed.

During the revision and update of the Positive List, the latest findings relating to the production, composition or use of the straight feeding stuffs are taken into consideration. A risk assessment takes place for both new and products already on the list.

## The straight feeding stuffs are classified into the following groups:

01. Cereal grains, their products and by-products
02. Oil seeds, oil fruits and other oil-supplying plants, their products and by-products
03. Legume grains, their products and by-products
04. Tubers and roots, their products and by-products
05. By-products of fermentation and distillation, including fermentative alcohol production for bioenergy purposes
06. Other seeds and fruits, their products and by-products
07. Roughages and forages
08. Other plants, their products and by-products
09. Milk products
10. Fish and other marine animals, their products and by-products
11. Minerals
12. Miscellaneous straight feeding stuffs
13. Former foodstuffs, products and by-products of food production
14. Protein obtained from microorganisms
17. Ammonium salts (except ammonium salts)
18. Other NPN compounds
19. Products and by-products from terrestrial animals
20. Egg products

## For the presentation of the **straight feeding stuffs**

### “Head notes”

The listed products are preceded by five so-called "headnotes":

- 1) Feeding stuff may be formaldehyde-treated, xylose-treated, thermally, hydrothermally or pressure hydrothermally treated in order to reduce ruminal protein or starch digestion. In this case the feeding stuff has to be designated as “protected”. The kind of treatment has to be stated in the data sheet.
- 2) The word ‘low in glucosinolate’ may be added to the designation if the straight feeding stuff complies with the maximum glucosinolate content determined in Article 4 (2) of Commission Regulation (EC) No 658/96 of 9 April 1996 on certain conditions for granting compensatory payments under the support system for producers of certain arable crops (OJ L 91 p. 46), as amended
- 3) Product obtained by anaerobic lactic acid-fermentation with or without use of ensiling additives. Only ensiling additives listed in the register of the European Commission ([http://ec.europa.eu/food/food/animalnutrition/feedadditives/registeradditives\\_en.htm](http://ec.europa.eu/food/food/animalnutrition/feedadditives/registeradditives_en.htm)) may be used in accordance with Directive (EU) No. 1831/2003 of the European Parliament and the Council dated 22nd September 2003 on additives for use in animal nutrition.
- 4) The provisions of Regulation (EC) No 1069/2009 as amended and the implementing provisions of Regulation (EC) No 142/2011 need to be observed.
- 5) For explanations of the columns see pages IX-X of the foreword.

The head notes 1-4 are added as footnotes to the designation, description and labelling provisions of the listed feeding stuffs, if relevant.

### Column heading and column contents

#### Number (column 1):

Column 1 contains the code number of the feeding stuff in alphabetical order (German Alphabet) according to the respective raw products. In some cases, exceptions to the alphabetical order may be made.

Within the raw products the corresponding processing products are classified in the order of their occurrence in the processing procedure. The straight feeding stuffs are numerically coded; the first number indicates the Group, the following number the type of feeding stuff and the last number the specific product or by-product.

#### Designation (column 2)

Column 2 contains the designation of the straight feeding stuff. This designation must be used on the label. Parts of words in brackets may be omitted, e.g. (-beans) in soya(-bean), extracted.

#### Description (column 3)

Column 3 contains the description of the products; the used part of the product or by-product, e.g. grains, seeds, tubers, meal, cake etc., and the procedure that the product or by-product was subjected to, such as e.g. drying, extracting, heating etc., are clearly characterised. If necessary the level of distinguishing features, ripeness or the quality of the product or by-product are also indicated, e.g. “low in glucosinolate“, “low in sugar”.

**Distinguishing features (column 4)**

The differentiation criteria in column 4 serve to distinguish similar products within a stepwise or continuous processing procedure. The differentiation figures for characteristic constituents are based on dry matter.

**Requirements (column 5)**

Column 5 contains the characteristic requirements for the products based on dry matter unless stated otherwise. Special units / details are declared as a footnote.

**Instructions for labelling (column 6)**

Here the ingredients are listed, which shall be given on the label under the heading "Ingredients" or "analytical components". In addition, the provisions of the feed legislation for the labeling of feed ingredients according to Regulation (EC) No. 767/2009 have to be observed. The mandatory listing of ingredients of a feed material depends on the respective category, in which the feed material in accordance with Annex V to Regulation (EC) No. 767/2009 is to be classified. In Annex V, 18 categories of feed ingredients are listed and for each category the analytical components which shall be labelled are indicated. The labeling of the analytical components may be done also in accordance with the requirements of Regulation (EU) No. 68/2013 regarding the catalog of feed material, when the feed material corresponds to the description and designation in the catalog. In individual cases different analytical components from those prescribed pursuant to Annex V for the listed feed materials may be given for labelling. Unless otherwise specified, the contents of the analytical components, in accordance with Article 11 para. 4 in conjunction with Annex II Nr. 1 of Regulation (EC) No. 767/2009, must be indicated on the basis of original substance. The content of ash insoluble in hydrochloric acid shall be declared on the basis of dry matter; the declaration has to be done due to the provisions of Annex I no. 5 of Regulation (EC) No. 767/2009, unless other requirements are specified in the Catalogue of feed materials. Furthermore, this column can contain additional requirements for the designation. Special units / details are declared as a footnote.

**Additional information about the production process (column 7)**

Column 7 contains the following information

- a) "Data sheet required", i.e. a data sheet (see Annex) is required for these products, because e.g. for an HACCP assessment indications of chemical, physical or biological risks are required or the raw material is subject to significant variation in the composition of constituents or also undesirable substances. This data sheet must be made available to the user by the manufacturer/distributor on request. In the case of changes of the product or the production process, this data sheet must to be updated and the purchaser must be informed about the modification.
- b) Other information that characterises the product or production process in more detail (e.g. information about ensiling additives or the drying process).

**Remarks (column 8)**

Column 8 contains additional comments to certain products or any other comments, e.g. about feed value or critical constituents in a straight feeding stuff.

### **Explanation of further terms**

For clearer understanding, a few terms are explained below, that are not part of the glossary; the glossary contains technical terms of the most important production procedures. Foodstuff identical stuff, their products and by-products of the food industry are listed in Group 13. This means the individual products do not have to be listed unless they are already listed within other groups due to their importance for animal feeding (e.g. bran, starch, milk etc.). For the listed products, the designations, descriptions, requirements etc. given in the list apply. The general designation "Food" or "products and by-products of the food production" is not allowed to be used.

### **Former foodstuffs, products and by-products of food production**

Food within the meaning of article 2 of Regulation (EC) No. 178/2002/EG are any substance or product, whether intended to be or reasonably expected to be ingested by humans, whether processed, partially processed or unprocessed. Substances and products can be both foodstuffs or straight feeding stuffs depending on their type and properties. The distinction should be made objectively based on the abstract or specific intended use. They can only be fed to livestock if they are labelled according to the nature of the substance and their use in animal nutrition is not restricted or forbidden by specific feed legislation. If food contain food additives or processing aids, steps need to be taken to ensure that they are safe if fed properly. Some of these products are already included in the positive list in the individual groups (e.g. individual cereal species and bran). Unnamed products, in particular processed products or by-products, can be included in the positive list under the position "Former foodstuffs, products and by-products of food production" but they must have a feed value that is verified by means of suitable parameters in accordance with the criteria for the inclusion of a straight feeding stuff in the list.

The category "Former foodstuffs, products and by-products of food production" also includes "former foodstuffs".

### **Former foodstuffs**

are foodstuffs, except recyclable residues from the preparation of food (food and kitchen waste and catering reflux), which were prepared in full compliance with EU food law for human consumption, but for practical or logistical reasons or due to problems in the production or due to defective packing or otherwise are no longer intended for that purpose, and when used as feed pose no health risk (part A of Annex no. 3 of Regulation (EU) No. 68/2013). Former foodstuffs also include food of which the shelf life data has expired taking into account the hygiene status of the product. Likewise, it may be foodstuffs that e.g. for reasons of presentation (size difference, colour, non conforming batches etc.) are not forwarded for human consumption. Substances for which a health-related effect is claimed (e.g. functional foodstuff) cannot be included in the positive list.

### **Products and by-products from the production of food**

are obtained during the production of foodstuffs and are not all recorded separately as straight feeding stuffs in the positive list. The products from process steps and basic substances from the food production (e.g. baking mixtures, yoghurt powder) that are usually further processed before they are consumed by humans should be named. They may be fed to livestock if the products are labelled to the nature of the substance and their use is not restricted or forbidden by other legal acts.

No part of the positive list are processing aids and carriers, insofar as the latter are not straight feeding stuffs.

### **Processing aids**

Within the meaning of the Article 2 Par. 2 Letter h) of Regulation (EC) No. 1831/2003 of the European Parliament and the Council of 22nd September 2003 about additives for use in animal nutrition (ABI EU No. L 268 S.29), processing aids are substances, which are added during the treatment or processing feeding stuffs in order to satisfy certain technological requirements. Their

use, based on the state-of-the-art, can lead to unavoidable residues including decomposition and reaction products in feeding stuffs. These residues may neither be hazardous to the health of animals or humans or the environment nor have a technological effect on the feeding stuff. In accordance with Article 4, paragraph 3 in conjunction with Annex I no. 1 of Regulation (EC) No. 767/2009 on the marketing and use of feed (OJ. European Union L 229, p 1) feed materials must be in accordance with good professional practice free from chemical impurities of the production process, and must be free of processing aids, unless there is a maximum level in the European Catalogue of feed materials established. With Regulation (EU) No. 68/2013 on the Catalogue of straight feeding stuffs (OJ. European Union L 29, p 1) for some feed ingredients maximum levels for residues of processing aids for some feed ingredients were set. According to Annex Part A no. 5 of Regulation (EU) No. 68/2013 maximum levels for residues of processing aids are in principle only established if the use of a processing aid results in residues of more than 0.1% (based on original substance). The established levels of maximum residues and the 0.1% rule apply only to feed materials that are listed in the Catalogue of straight feeding stuffs. For feed ingredients which have been registered in accordance with Article 24, paragraph 6 of the feed business under their own responsibility in the Register of feed materials, neither the maximum levels fixed nor the 0.1% rule apply; those feed materials must be free of chemical impurities in accordance with good professional practice.

For the positive list, the 0.1% rule applies, as long as the legal regulations do not specify otherwise.

### **Carrier substances**

are substances added to a premixture for technological purposes (e.g. support of the homogenous dilution of an additive or the flowability). Feed material, feed additives or other substances can be used as carriers provided they are safe (in the meaning of article 15 of Regulation (EC) No 178/2002 in conjunction with § 17 of the Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch (LFGB) 2006). Straight feeding stuffs listed in the Positive List, which may be used as carrier, are not specifically indicated.

# Glossary

Term	Description	Common designation
Coating	Coating of feed particles, e.g. with fat, to prevent decomposition	coated
Cleaning	e.g. of grain; mechanical removal of impurities such as spoiled grains or fungi-infested grains incl. ergot, dust or any other solid components	cleaned
Concentrating <sup>1)</sup>	Enriching certain ingredients by removing water or other components	Concentrate
Conservation	Procedure used to conserve products using physical processes or by adding organic or inorganic substances	conserved
Delinting	Removal of the furry exterior (lint and fuzz) from <i>Gossypium spp.</i> Seeds	Delinted
Desugaring	Complete or partial removal of mono- or disaccharides from molasses or other sugar containing materials by means of chemical or physical processes	desugared, partially desugared
Drying	Artificial or natural removal of water	dried
Ensiling	Production of storable feeding stuffs (silages) by means of anaerobic fermentation	ensiled (fermented)
Expansion	Release of starch kernels localised in the endosperm by means of chemical or physical processes or degradation of the lignocellulose compounds by use of alkali (e.g. straw)	expanded / starch expansion / straw expansion
Extraction	Obtaining fat or oil from certain materials by means of extraction using organic solvents or obtaining sugar or other water-soluble components by means of watery extraction. If an organic solvent is used, the extracted material needs to be technically free of solvent residues.	Extraction meal (for oily materials), molasses, pulp (for sugar or other materials containing water-soluble components)
Extraction of pectin	Extraction of pectin	Pectin extracted
Extruding	Pressing or squeezing material through an opening under pressure (see also pre-agglutination)	extruded
Fat hydrogenation	Converting unsaturated glycerides into saturated glycerides (hardening of oils and fats)	hydrogenated, partially hydrogenated
Fermenting	Biochemical break down of carbohydrates (starch, sugar), e.g. for producing alcohol	fermented
Flaking	Rolling of damp, heat-treated material	Flakes
Flour milling	Mechanical processing of grains to reduce the grain size and gentle separation into its several parts like flour, bran, middlings, feed	Flour, bran, middlings, feed
Fractioning	Physical process to separate vegetable fats into fatty acid fractions	fractionate, fractionation
Grinding coarsely	Mechanical processing of grains or other straight feeding stuffs to reduce their size	coarse meal, ground

Term	Description	Common designation
Heating	General designation for different heat treatments performed under certain conditions to modify the nutritional value or structure of the material or to reduce the content of native anti-nutritive substances	steam-heated/toasted, boiled, heat-treated, roasted
Hydrolysis	Break down into simpler chemical components by means of suitable treatment with water and if necessary enzymes, acids or alkalis	hydrolysed, partially hydrolysed
Hydrothermal treatment	Heating of products using saturated steam, e.g. treatment to expand starch	Expanded, expansion
Modifying	Modifying of starch in order to improve the characteristic and mode action by physical and chemical treatment	modified
Molass	Addition of molasses before or after drying wet pulp of beets, the addition before drying is considered as premolasses, the addition after drying is considered as postmolasses	Molasses, premolasses, postmolasses
Parboiling	Water, heat and pressure treatment to protect the B-vitamins and improve the cooking properties (rice)	parboiled
Peeling <sup>2)</sup>	Complete or partial removal of the outer shell or of shells of grains, seeds, fruits, nuts or others	peeled, partially peeled
Pelleting	Special shaping process using dies	Pellet, pelleted
Pre-agglutination	Hydrothermal processing of starch to significantly increase its swelling capacity in cold water	pre-agglutinated <sup>3)</sup> , soaked
Pressing	Obtaining oil or fat from oil-rich products or juice from fruits or other plant products or dewatering by mechanical means of pressing, may be also with additional gentle heat treatment	Cake (for products containing oil), pulp, marc (e.g. in the case of fruits), pressed pieces (for sugar beets). In the case of products containing oil, only the term cake is used, the former term "expeller" is out of use
Refining	Complete or partial removal of impurities from sugar, oils, fats and other natural materials by means of chemical or physical processes	refined, partially refined
Sifting	Mechanical separation of ground products of varying size by means of sieving	sifted
(Soap)stock	Product, which is obtained during the deacidification of vegetable oils and fats with the help of aqueous solutions of calcium, magnesium, potassium or Natrium or Potassium oxide; it contains salts of free fatty acids, oils or fats and natural components of seeds, fruits or animal tissue such as mono- and diglycerides, lecithin and fibers	
Steaming	Heating process using damp heat	steamed
Syrup	Thick-liquid, concentrated, sugar containing liquid	
Torrefying	Drying of germinated cereals during the malting process with hot air	torrefied

Wet milling	Mechanical separation of individual components of grains and kernels also after soaking in water with or without adding sulphur dioxide to obtain starch	Germs, gluten, starch
-------------	--	-----------------------

Term	Description	Common designation
<b>More terms</b>		
significantly exceeding	More than two thirds	
practically free of/as free as possible of.	In compliance with the current state-of-the-art free of non-desirable components	
technically pure	In compliance with the technical possibilities (state-of-the-art) free or freed of any other type of component	

# See Annex

## Data sheet for straight feeding stuffs of the Positive List

<b>Manufacturer/distributor</b>	
<b>Feeding stuff/designation of the product</b> (Name according to positive list / trade name / brand name, supplemented with no according to the positive list)	
<b>Product description</b> (Description of the product and description of the manufacturing process)	
<b>Information about the production process</b> Information on constituents of the starting product / possible further components → (Flow diagram to show the processing steps / material flows)	
<b>Information on the use of processing aids</b> → (Including all other added substances)	
<b>Information about the composition</b> Averages analysis of the most important valuable constituents	
<b>Information about relevant undesirable substances during the risk-oriented self control</b> (e.g. HACCP)	
<b>Details about shelf life, storage and transport</b>	
<b>Safety information</b> (flammable, explosive, caustic etc.)	
Information about specific analytical problems	

Details in **bold print** are stringently required

# Instruction on compiling the data sheet

## Manufacturer/distributor

- Specify the correct full address

## Feeding stuff/Product *designation*

- Stated according to the designation in the Positive List (with number)  
In the case of new additions after confirming the designation with the Standards Commission

Additional designations (trade or brand name) are possible  
compatibility with the Positive List has priority (see also requirements of QS)

## Product description

- Product description according to the Positive List  
Special features/deviations must be clearly indicated here!

Company-specific characteristics have to be marked in the data sheets.

## Information about the production process

- The information should contain all important sub-steps ranging from the raw material to the product or by-product (to be supplemented with a flow chart)

The chart should allow clear allocation of the following information about the use of processing aids in the process and/or allocation of CCPs in the HACCP-system.

It should be clear whether or not e.g. several raw products are used or whether or not the final product also contains different partial fractions that are developed during the whole process.

Information about technical innovations that could result in a new group (designation) or possibly modification of differentiation features also need to be sent to the Standards Commission of straight feeding stuffs.

## Information about the use of processing aids

- **Complete list of all used processing aids**

Within the meaning of the Article 2 Par. 2 letter h) of Regulation (EC) No. 1831/2003 of the European Parliament and the Council dated 22nd September 2003 about additives for use in animal nutrition (ABI EU No. L 268 S.29), processing aids are substances that have been added when finishing or processing feeding stuffs in order to satisfy certain technological requirements. Their use, based on the state-of-the-art, can result in unavoidable residues including decomposition and reaction products in feeding stuffs. These residues may neither be hazardous to the health of animals or humans or the environment nor have a technological effect on the feeding stuff. Details about quality requirements of **processing aids** would be preferred. According to Article 4, paragraph 3 in connection with Annex I, No. 1 of Regulation (EC) No. 767/2009 on the marketing and use of feed (OJ. European Union L 229, p.1) feed materials must be free of chemical impurities resulting from the manufacturing process taking in account good manufactory practice, and must be free of processing aids, unless a maximum residue level has been established for a specific constituent in the European Catalogue of feed materials. For some feed ingredients maximum residue levels for processing aids were established in Commission Regulation (EU) No. 68/2013 on the Catalogue of feed (OJ. European Union L 29 p.1). According to Part A of Annex no. 5 of Regulation (EU) No. 68/2013 maximum levels for residues of processing aids in principle may only be established if the use of a processing aid results in

residues of more than 0.1% (based on original substance). The maximum level for residues of processing aids and the 0.1% rule apply only to feed materials that are listed in the Catalogue of feed. For feed ingredients which have been registered in accordance with Article 24, paragraph 6 in the Register of Feed materials by action of the feed business operators under their own responsibility, neither the established maximum residue levels nor the 0.1% rule apply; those feed materials in principle must be free of chemical impurities in accordance with the good practice.

## Information about composition

### → Details about the contents of the most important valuable constituents (average analysis)

At least details of the parameters regarding the labeling are necessary.

At least one timely analyses certificate or a compilation of values from the self-control or assurance of minimum or maximum values of the parameters to be labelled is required

Feed analysis methods shall be used.

If a declaration of energy is made, these calculations are to be made for the specific feedstuffs (e.g. ME for poultry, pigs, calves, fattening cows, NEL for dairy cows)

## Details about relevant undesirable substances on the basis of the risk-oriented self control

### → It must be clearly stated, which tests were performed for which substances with regard to the specific properties of the raw product, the production process or the processing aids used.

Also a timely examination test or a compilation of values from the self-control or maximum values of the parameters

Details of the essential CCPs when HACCP concepts are available. Otherwise HACCP-compliant notes

Where applicable, reference to "industry guidelines on quality assurance".

## Details about shelf life, storage and transport<sup>1)</sup>

e.g. storage conditions (moisture), control of rodents and birds etc.

<sup>1)</sup> if there are specific requirements

## Safety information

In accordance with the requirements of the Hazardous Substances Regulation for the handling of hazardous substances

## Notes about special analytical problems, if relevant or known

# Annex

Table 1 contains the relevant amendments / new additions for the straight feeding stuffs of the Positive List for the period 01.04.2017 to 11.02.2019.

The table contains the amendment date, the number or classification in the Positive List, the designation and the respective amendments / new additions.

**Table 1:**

Date of amendment or new addition	Number or classification in the Positive List	Designation	Kind of amendments / new additions
27.11.2017	02.25.02	Amaranth expeller	New admission
27.11.2017	02.26.02	Camelina expeller	New admission
27.11.2017	08.12.01	Tetraselmis algae	New admission
27.11.2017	08.13.01	Leaves of the wax-leaved leaf cherry	New admission
27.11.2017	09.09.04	Colostrum, defatted, decaseinated, partly demineralized, rich in immunoglobulins	New admission
27.11.2017	11.01.61	Calcium carbonate, Decarbonisation	New admission
27.11.2017	12.16.01	Cellobiose	New admission
27.11.2017	14.03.01	Yeast	New admission
11.02.2019	if applicable	if applicable	In columns 4, 5 and 6 water changed to moisture
11.02.2019	01.06.02	Rice, broken	Description changed
11.02.2019	01.10.02	Cereal grains/mixed cereals	Description of requirements revised
11.02.2019	02.14.06	Soya (bean)extraction meal from, dehulled seeds, toasted	Requirements changed
11.02.2019	02.15.02	Sunflower cake	Deleted
11.02.2019	02.15.04	Sunflower cake from peeled or partially peeled seed	Description changed
11.02.2019	02.15.09	Sunflower husk	Description changed
11.02.2019	02.22.01	Lecithin, raw (crude lecithin)	Deleted
11.02.2019	02.22.02	Lecithin, de-oiled	Deleted
11.02.2019	04.01.01	Fodder beat	Description changed
11.02.2019	04.02.01	Carrot	Description and information on the manufacturing process revised
11.02.2019	04.03.01	Potatoes	Description changed
11.02.2019	04.04.01	Manioc / tapioca	Description changed
11.02.2019	04.06.01	Turnip	Description changed
11.02.2019	04.07.01	Sweet potato / batata	Description changed

Date of amendment or new addition	Number or classification in the Positive List	Designation	Kind of amendments / new additions
11.02.2019	04.08.01	Jerusalem artichoke	Description changed
11.02.2019	04.09.01	Chicory	Description changed
11.02.2019	04.10.01	Sugar beet	Description changed
11.02.2019	04.10.08	Dried (sugar) beet pulp	Description changed
11.02.2019	04.10.09	(Sugar) beet pulp, molassed	Description changed
11.02.2019	08.01.01	Hop cones pellets, debittered	Name, description, requirements and information on labeling revised
11.02.2019	08.11.01	Fragrant agrimony	Requirements changed
11.02.2019	09.01.01	Milk	Description changed
11.02.2019	09.01.03	Skimmed milk	Description changed
11.02.2019	09.03.01	Buttermilk	Description changed
11.02.2019	09.09.02	Colostrum powder, defatted, rich in immunoglobulins	Comments changed
11.02.2019	09.09.03	Colostrum feed, standardised	Comments changed
11.02.2019	10.01.01	Fish liver oil	Requirements changed
11.02.2019	11.01.05	Calcium citrate	Deleted
11.02.2019	11.01.06	Calcium formiate	Deleted
11.02.2019	12.07.02	Plant glycerine	Comments changed
11.02.2019	12.07.03	Raw plant glycerine	Comments changed
11.02.2019	12.09.01	Malt coffee spent wash	Comments changed
11.02.2019	14.01.01	Bacteria cultivated on methanol for calves, pigs, poultry and fish	Comments changed
11.02.2019	14.02.01	Protein product of fermentation from natural gas obtained by culture of <i>Methylococcus capsulatus</i> (Bath) strain NCIMB 11132, <i>Alcaligenes acidovorans</i> strain NCIMB 12387, <i>Bacillus brevis</i> strain NCIMB 13288 and <i>Bacillus firmus</i> strain NCIMB 13280 for pigs for fattening from 25 to 60kg and for salmon	Comments changed
11.02.2019	14.06.01	By-product of fermentation of solid material with fungi, rich in crude protein	Description changed
11.02.2019	14.10.01	By-product of the production of citric acid with <i>Pichia guilliermondii</i>	Description of the manufacturing process revised
Date of amendment or new addition	Number or classification in the Positive List	Designation	Kind of amendments / new additions
11.02.2019	17.01.01	Ammonium acetate for bovines, sheep and goats with functioning rumen	Deleted

11.02.2019	18.01.01	By-product from the production of L-glutamic acid, for bovines, sheep and goats with functioning rumen	Comments changed
11.02.2019	18.01.02	By-product from the production of L-lysine, for bovines, sheep and goats with functioning rumen	Comments changed
11.02.2019	19.01.04	Protein hydrolyzate from porcine blood plasma	New admission
11.02.2019	20.	Egg products	Comments changed
11.02.2019	20.01.01	Egg powder	Comments changed
11.02.2019	20.01.02	Egg powder, sugared	Comments changed
11.02.2019	20.02.01	Hen's egg albumen, pasteurised	Comments changed
11.02.2019	20.03.01	Egg shells, dried	Comments changed

<sup>1)</sup> Feeding stuff may be formaldehyde-treated, xylose-treated, thermally, hydrothermally or pressure hydrothermally treated in order to reduce ruminal protein or starch digestion. In this case the feeding stuff has to be designated as “protected”. The kind of treatment has to be stated in the data sheet.

<sup>2)</sup> The word 'low in glucosinolate' may be added to the designation if the straight feeding stuff complies with the maximum glucosinolate content determined in Article 4 (2) of Commission Regulation (EC) No. 658/96 of 9 April 1996 on certain conditions for granting compensatory payments under the support system for producers of certain arable crops (OJ L 91 p. 46), as amended.

<sup>3)</sup> Product obtained by anaerobic lactic acid fermentation with or without use of ensiling additives. Only ensiling additives listed in the register of the European Commission ([http://ec.europa.eu/food/food/animalnutrition/feedadditives/registeradditives\\_en.htm](http://ec.europa.eu/food/food/animalnutrition/feedadditives/registeradditives_en.htm)) may be used in accordance with the Regulation (EC) No. 1831/2003 of the European Parliament and the Council dated 22nd September 2003 on additives for use in animal nutrition.

<sup>4)</sup> The provisions of Regulation (EC) No. 1069/2009 as amended and the implementing provisions of Regulation (EC) No 142/2011 need to be observed.

<sup>5)</sup> Explanation for the columns see page IX - X of the foreword.

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
00.01.01	(Drinking) Water	Water obtained from the public water supply, watercourses, wells or rainfall					Observe water quality
<b>01. Cereal grains, their products and by-products</b>							
01.01.01	Spelt	Grains of spelt, <i>Triticum spelta</i> L., <i>Triticum diococcum</i> Schrank, <i>Triticum monococcum</i>					
01.01.02	Dehusked Spelt	Product obtained by dehusking cleaned spelt	Crude fibre max. 5		Starch Crude fibre		
01.01.03	Spelt flakes	Product obtained by steaming and rolling cleaned and dehusked spelt	Crude fibre max. 5		Starch Crude fibre		
01.01.04	Spelt husks	By-product of the dehusking of cleaned spelt	Ash insoluble in HCl max. 6		Crude fibre Ash insoluble in HCl		Low energy- and nutrient supply, dietary fibre character
01.02.01	Barley <sup>1)</sup>	Grains of <i>Hordeum vulgare</i> L.				If <sup>1)</sup> , then data sheet required	
01.02.02	Dehusked barley	Product obtained by dehusking cleaned barley	Crude fibre max. 2.3		Starch		
01.02.03	Barley flakes	Product obtained by steaming and rolling screened and dehusked barley and which can be expended	Crude fibre max. 2.3 Ash insoluble in HCl max. 0.5	If expanded: starch expansion min. 50	Starch Crude fibre In case of expansion, the designation may be completed accordingly		

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.02.04	Barley middlings	By-product obtained during the processing of screened, dehusked barley into pearl barley, groats or flour	Crude fibre max. 12		Crude fibre Starch		
01.02.05	Barley bran	By-product obtained during the processing of cleaned barley into flour. It consists predominately of barley hulls and particles of grain and may contain a small proportion of husks	Crude fibre max. 17		Crude protein Crude fibre		
01.02.06	Barley hulls and bran	By-product obtained during the processing of cleaned barley into pearl barley and barley groat. It consists almost entirely of hulls	Crude fibre max. 23		Crude fibre		
01.02.08	Small barley flakes, expanded	By-product obtained by wetting and heating cleaned barley after rolling and screening	Crude fibre max. 15	Starch expansion min. 50	Starch Crude fibre		
01.03.01	Oat	Grains of <i>Avena sativa</i> L. and other cultivars of oat					
01.03.02	Dehusked oat	Product obtained by dehusking cleaned oat	Crude fibre max. 4		Starch		
01.03.03	Oat groat	Product obtained by steaming and steel-cutting cleaned, dehusked oat. It may contain a small proportion of oat husks			Starch Crude fibre		
01.03.04	Oat flakes	Product obtained by steaming and rolling cleaned, dehusked oat. It may contain a small proportion of oat husks	Crude fibre max. 4		Starch		
01.03.05	Oat middlings	By-product obtained during the processing of cleaned, dehusked barley into oat groat or flour. It consists predominately of oat flour and small proportions oat husks	Crude fibre max. 9.5		Crude fibre		

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.03.06	Pre-gelatinised oat flour	Product obtained from ground oat groat and in which the starch has been largely expanded by heat or heat-moisture treatment	Crude fibre max. 4	Moisture max. 12 Starch expansion min. 50	Starch	Data sheet required	
01.03.07	Oat hulls and bran	By-product of flour manufacture, obtained from cleaned oat kernels. It consists predominately of fragments of hulls, husks and parts of the endosperm	Crude fibre max. 30 Ash insoluble in HCl max. 5		Crude fibre		
01.03.08	Oat husks	By-product of the dehusking of oat	Ash insoluble in HCl max. 6		Crude fibre Ash insoluble in HCl		Low energy- and nutrient supply, ballast character
01.03.09	Oat-Spelt-husks	By-product of peeling of oat and spelt consisting predominately of husks	Ash insoluble in HCl max. 6		Crude fibre Ash insoluble in HCl		Low energy- and nutrient supply, ballast character
01.04.01	Millet	Grains of <i>Panicum miliaceum</i> L.					
01.04.02	Sorghum	Sorghum grains of <i>Sorghum bicolor</i> (L.) Moench s.l.			Additional designation "Milocorn" is possible.		
01.05.01	Maize <sup>1)</sup>	Grains of <i>Zea mays</i> L.				If <sup>1)</sup> , then data sheet required	
01.05.02	Maize flakes	Product obtained by steaming and rolling cleaned maize and which can be expanded or wetting and heating	Crude fibre max. 4.7 Ash insoluble in HCl max. 0.5	If expanded: Starch expansion min. 50	Starch Crude fibre In case of expansion, the designation can be supplemented accordingly		
01.05.03	Maize screenings	By-product of the manufacture of flour or semolina or flour from maize	Starch min. 40		Starch Crude fibre		
01.05.04	Maize middlings	By-product of the manufacture of flour or semolina from maize. It consists predominately of fragments of the outer skins and of particles of the grain	Starch min. 34		Starch Crude fibre		
01.05.05	Maize bran	By-product of the manufacture of flour or semolina from maize. It consists predominately of outer skins and some maize germ fragments, parts of the endosperm			Crude protein Crude fibre		

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.05.06	Maize germ	By-product of the manufacture of semolina, flour or starch from maize. It consists predominately of maize germ, outer skins and parts of the endosperm, and may be dried		Crude fat min. 18	Crude protein Crude fat Crude fibre Moisture, if > 10%	Data sheet required	
01.05.07	Maize germ and bran	By-product of the manufacture of semolina, flour or starch from maize. It consists of non-extracted germ, outer skins and parts of the endosperm	Crude fibre max. 10		Starch Crude protein Crude fat Crude fibre	Data sheet required	
01.05.08	Maize starch	Technically pure starch obtained from maize		Ash insoluble in HCl max. 0.5	Starch	Data sheet required	
01.05.09	Pre-gelatinised maize starch	Product obtained from maize starch largely expanded by heat or heat-moisture treatment		Ash insoluble in HCl max. 0.5 Moisture max. 12 starch expansion min. 50	Starch	Data sheet required	
01.05.11	Maize gluten	Dried by-product of starch production from maize. It consists predominately of maize-protein obtained during the separation of the starch	Crude protein min. 62 Ash insoluble in HCl max. 0.5		Crude protein	Data sheet required	
01.05.12	Maize germ expeller	By-product of oil manufacture, obtained by pressing of dry or wet processed germ of maize and to which parts of the endosperm and testa may still adhere			Starch Crude protein Crude fat Crude fibre	Data sheet required	
01.05.13	Maize germ, extracted	By-product of oil extraction, obtained by and extraction of dry or wet processed maize germ to which parts of the endosperm and testa may still adhere	Crude fat max. 4		Starch Crude protein Crude fibre	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.05.14	Maize gluten feed	By-product of the manufacture of maize starch. It consists of bran and gluten, to which the broken maize obtained from screening at an amount no greater than 15% of the product or the residues of the steeping liquor used for the production of alcohol or other starch-derived products, may be added. The product may also include residues from the oil extraction of maize germs			Crude protein Starch Crude fat, if > 4.5% Moisture, if > 14%	Data sheet required	"Description due to customs law!"
01.05.15	Pre-gelatinised maize flour	Product obtained from maize flour, in which the starch has largely been expanded by heat or heat-moisture treatment		Moisture max. 12 Crude fibre max. 2 starch expansion min. 50	Starch	Data sheet required	
01.05.16	Small maize flakes, expanded	By-product obtained by wetting and heating cleaned maize after rolling and screening	Crude fibre max. 12	Starch expansion min. 50	Starch Crude protein Crude fat Crude fibre		
01.05.17	Maize hulls	By-product obtained during starch production from cleaned maize that may contain parts of the endosperm and maize germs			Crude fibre Starch, if > 20% Crude protein, if > 10% Crude fat, if > 5% Moisture, if > 14%	Data sheet required	
01.06.01	Rice	Grains of <i>Oryza sativa</i> L. (including parboiled rice)					
01.06.02	Rice, broken	By-product of preparation of cleaned, polished or glazed rice (including parboiled rice). It consists predominately of undersized and/or broken grains	Ash insoluble in HCl max. 1	Botanical purity min. 99	Starch		
01.06.03	Fodder rice	Product obtained from cleaned, chalky or unripe grains (including parboiled rice grains) sifted out during the milling of rice, or from normal dehusked grains which are yellow or spotted	Crude fibre max. 3	Botanical purity min. 99	Starch		

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.06.04	Rice flakes	Product obtained by grinding, steaming and rolling broken rice (including parboiled rice)	Crude fibre max. 3	Botanical purity min. 99	Starch		
01.06.05	Rice semolina/rice flour	Product obtained during the grinding of cleaned rice (including parboiled rice)			Starch		
01.06.06	Pre-gelatinised rice flour	Product obtained from rice flour or broken rice, in which the starch has largely been expanded by heat or heat-moisture treatment and which is practically free of husks	Crude fibre max. 2	Starch expansion min. 50	Starch	Data sheet required	
01.06.07	Rice middlings <sup>1)</sup>	By-product of the polishing of cleaned dehusked rice (including parboiled rice). It consists principally of silvery skins, particles of the aleurone layer, endosperm and germ	Crude fibre max. 12.5 Ash insoluble in HCl max. 1.7	Rice hulls max. 3	Starch Crude fat Crude fibre The designation may be completed with "yellow" or "white", in these case the maximum ash insoluble in HCl must be stated	Data sheet required	
01.06.09	Rice bran with calcium carbonate	By-product of the polishing of cleaned dehusked rice (including parboiled rice). It consists predominately of silvery skins, parts of the aleurone layer, endosperm and germ and may contain varying amounts of calcium carbonate resulting from the polishing process		Calcium carbonate max. 23 Ash insoluble in HCl max. 1.2 Rice hulls max. 2	Starch Crude fat Crude fibre Calcium carbonate	Data sheet required	
01.06.10	Rice bran <sup>1)</sup>	By-product of the polishing of cleaned rice (including parboiled rice). It consists predominately of parts of rice hulls and bran and may contain varying amounts of calcium carbonate			Crude protein Starch Crude fibre Calcium carbonate	Data sheet required	
01.06.15	Rice gluten/ Rice protein	By-product of the starch production from cleaned rice, primarily comprising of rice protein or rice gluten, dried		Crude protein min. 50 Crude ash max 3	Crude protein Crude fibre Crude ash	Data sheet required	
01.07.01	Rye	Grain of <i>Secale cereale L.</i>					

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.07.02	Rye flakes	Product obtained by rolling and in some cases steaming cleaned rye			Starch Crude fibre		
01.07.03	Rye middlings	By-product of the manufacture of flour from cleaned rye. It consists predominately of particles of endosperm, with fine fragments of the outer skins and some other parts of the grain	Starch min. 32		Starch Crude fibre		
01.07.04	Rye screenings	By-product of the manufacture of flour from cleaned rye in which the proportion of endosperm significantly exceeds the proportion of fragments of outer skins	Starch min. 44		Starch Crude fibre		
01.07.05	Rye feed	By-product of flour manufacture, obtained from cleaned rye. It consists predominately 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 min. 17 Crude fibre max. 7		Crude protein Crude fibre		
01.07.06	Rye bran	By-product of flour manufacture, obtained from cleaned rye. It consists predominately of fragments of the outer skins, and of particles of grain from which most of the endosperm has been removed			Crude protein Crude fibre		
01.07.07	Pre-gelatinised rye flour	Product obtained from rye flour and in which the starch has been largely expanded by heat or heat-moisture treatment		Moisture max. 12 Crude fibre max. 4 Starch expansion min. 50	Starch	Data sheet required	
01.08.01	Triticale	Grain of <i>Triticum x Secale</i> hybrid					
01.08.02	Triticale flakes	Product obtained by rolling and in some cases steaming cleaned triticale	Crude fibre max. 3		Starch Crude fibre		
01.09.01	Wheat <sup>1)</sup>	Grain of <i>Triticum aestivum</i> L., <i>Triticum durum</i> Desf. and other cultivars of naked wheat species				If <sup>1)</sup> , then data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.09.02	Wheat flakes	Product obtained by rolling and in some cases steaming cleaned wheat which may be expanded	Crude fibre max. 3	If expanded, starch expansion min. 50	Starch Crude fibre In case of expansion, the designation may be completed accordingly		
01.09.03	Wheat screenings	By-product of the manufacture of flour from cleaned wheat. It consists predominately of particles of endosperm, fine fragments of outer skins and few other parts of the grain	Starch min. 44		Starch Crude fibre		
01.09.04	Wheat middlings	By-product of flour manufacture, obtained from cleaned grains. It consists primarily of particles of endosperm, fine fragments of the outer skins and few particles of the grain	Starch min. 34		Starch Crude fibre		
01.09.05	Wheat feed	By-product of flour or flake manufacture, obtained from cleaned grains. It consists predominately of fragments of the outer skins and of particles of grain from which to a lower extent the endosperm has been removed than in wheat bran	Starch min. 17		Crude protein Crude fibre		
01.09.06	Wheat bran	By-product of flour manufacture, obtained from cleaned grains of wheat. It consists predominately of fragments of the outer skins and of particles of grain from which the greater part of the endosperm has been removed			Crude protein Crude fibre		
01.09.07	Wheat protein, hydrolysed	Product obtained from wheat gluten by enzymatic hydrolysis		Crude protein min. 65 Ash insoluble in HCl max.1.5	Crude protein	Data sheet required	
01.09.08	Pre-gelatinised wheat flour	Product obtained from wheat flour and in which the starch has been largely expanded by heat or heat-moisture treatment		Moisture max. 12 Crude fibre max. 3 Starch expansion 50	Starch	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.09.09	Wheat germ	By-product of flour milling, the manufacture of starch or grits from cleaned wheat, consisting predominately of wheat germ to which fragments of endosperm and outer skin may still adhere, it may be dried or treated by heat or heat-moisture		Moisture max. 10, if dried	Crude protein Crude fat Moisture, if > 12%	Data sheet required	
01.09.11	Wheat starch	Technically pure starch obtained from cleaned wheat or from wheat flour		Ash insoluble in HCl max. 0.5	Starch	Data sheet required	
01.09.13	Pre-gelatinised wheat starch	Product consisting of wheat starch largely expanded by heat and hydrothermal treatment		Moisture max. 12 Ash insoluble in HCl max. 0.5 Starch expansion 50	Starch	Data sheet required	
01.09.14	Wheat starch containing protein, partially desugared	By-product obtained during the production of wheat starch mainly comprising of desugared starch, the soluble proteins and other soluble parts of the endosperm		Crude protein min. 15	Total sugar as sucrose Crude protein Moisture, if >14%	Data sheet required	
01.09.15	Wheat gluten	Dried by-product of the manufacture of wheat starch. It consists predominately of wheat protein obtained during the separation of starch	Crude protein min. 70 Moisture max. 13	Ash insoluble in HCl max. 0.5	Crude protein	Data sheet required	
01.09.16	Wheat gluten feed	By-product of the manufacture of wheat starch and gluten. It consists of bran, from which the germ may have been partially removed, gluten and pulp			Starch Crude protein Crude fat	Data sheet required	
01.09.17	Wheat germ expeller	By-product of oil manufacture obtained during the pressing of wheat germs obtained from cleaned wheat to which parts of the endosperm and hulls still adhere	Crude protein min. 25		Crude protein Crude fat Crude fibre Starch	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.10.01	Preserved wet grain	Grain preserved by adding approved preservation additives			Moisture The type of treatment must be stated. Grain species used (descending order of content)	Details about the conservation additives used are required	
01.10.02	Cereal grains / mixed cereals	Product obtained from the grading of cleaned cereal grains using trieur cylinders or revolving screens		Grain species max. 5 Grain min. 96	Grain species used (descending order of content)		
01.10.03	Cereal pulp	By-product of starch manufacture from cereal grains or cereal flour, it may contain starch, gluten and hulls		Moisture max. 95	Moisture Crude protein Grain species used (descending order of content)	Data sheet required	
01.10.04	Dried cereal pulp	By-product obtained by extracting most of the water from cereal pulp		Moisture max. 13	Starch Crude protein Crude fibre Grain species used (descending order of content)	Data sheet required	
01.10.05	Condensed/grain steep water	By-product obtained by concentrating or drying steeping liquor from starch manufacture			Crude protein Crude ash Moisture, if > 13% Grain species used (descending order of content)	Data sheet required	
01.10.06	Grain expanded with caustic soda	Grain that has been expanded by means of adding caustic soda		Sodium 1.5 to 2.5	Moisture Sodium Starch, if > 20% Crude protein, if > 10% Crude fibre Grain species used (descending order of content)		
01.10.07	Grain feed flour	By-product obtained during the production of flour from cleaned grain kernels. It consists predominately of parts of the endosperm and hulls and small amounts of other parts of the kernel	Starch min. 44		Starch Crude fibre Grain species used (descending order of content)		

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
01.10.08	Grain middlings	By-product obtained during the production of flour from cleaned grain kernels. It consists predominately of parts of the endosperm and for the rest hulls and small amounts of other parts of the kernels	Starch min. 34		Starch Crude fibre Grain species used (descending order of content)		
01.10.09	Grain semolina bran	By-product obtained during the production of flour or flakes from cleaned grain kernels. It consists predominately of parts of the hulls and for the rest of parts of the kernels, from which the endosperm is not so extensively removed as compared with grain bran	Starch min. 17		Crude protein Crude fibre Grain species used (descending order of content)		
01.10.10	Grain bran	By-product obtained during the production of flour from cleaned grain kernels. It consists predominately of parts of the hulls and for the rest of other parts of the kernel, from which the endosperm is extensively removed			Crude protein Crude fibre Grain species used (descending order of content)		
<b>02. Oil seeds, oil fruits and other oil-supplying plants, their products and by-products</b>							
02.01.01	Cotton seed	Seeds of cotton, <i>Gossypium ssp.</i> , from which the fibres have been removed			Crude protein Crude fat Crude fibre		The content of Gossypol considered
02.02.01	Groundnuts	Groundnut seeds, <i>Arachis hypogea</i> L. and other species of <i>Arachis</i> , decorticated, the hulls may be removed					Observe aflatoxin content
02.02.02	Groundnut expeller	By-product of oil manufacture, obtained by pressing of wholly or partially decorticated groundnuts		Crude fibre max. 16	Crude protein Crude fat Crude fibre	Data sheet required	Observe aflatoxin content
02.02.03	Groundnut extracted	By-product of oil manufacture, obtained by extraction of wholly or partially decorticated groundnuts	Crude fat max. 4	Crude fibre max. 16	Crude protein Crude fibre	Data sheet required	Observe aflatoxin content

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
02.03.01	Cocoa husks	Product obtained by dehusking roasted cocoa beans, <i>Theobroma cacao</i> L.			Crude fibre	Data sheet required	Observe theobromine content
02.05.01	Dried copra	Dried endosperm and outer husk (tegument) of the seed of the coconut palm, <i>Cocos nucifera</i> L.		Crude fat min. 60 Moisture max. 6	Crude fat	Data sheet required	
02.05.02	Copra expeller	By-product of oil manufacture, obtained by pressing the dried endosperm and outer husk (tegument) of the seed of the coconut palm			Crude protein Crude fat Crude fibre	Data sheet required	
02.05.03	Copra, extracted	By-product of oil manufacture, obtained by extraction of the dried endosperm and outer husk (tegument) of the seed of the coconut palm	Crude fat max. 4		Crude protein Crude fibre	Data sheet required	
02.06.01	Pumpkin seed expeller	By-product of oil manufacture, obtained by pressing of pumpkin seeds, <i>Cucurbita maxima</i> Duch., <i>moschata</i> (Duch) Poir., <i>Cucurbita pepo</i> L. and other species of <i>Cucurbita</i>		Moisture max. 13	Crude protein Crude fat Crude fibre	Data sheet required	
02.07.01	Linseed	Seeds of flax, <i>Linum usitatissimum</i> L.		Botanical purity min. 93			Observe hydrogen cyanide content
02.07.02	Linseed cake	By-product of oil manufacture, obtained by pressing of linseed		Botanical purity min. 93	Crude protein Crude fat Crude fibre	Data sheet required	Observe hydrogen cyanide content
02.07.03	Linseed, extraction meal <sup>1)</sup>	By-product of oil manufacture, obtained by extraction of linseed cake	Crude fat max. 4	Botanical purity min. 93	Crude protein Crude fibre In the case "linseed extraction meal" contains bleaching earth and filter materials up to 1% and crude lecithins it must be designated as " <b>linseed extraction meal feed</b> " <u>In the case the product</u> contains furthermore soapstock occurring in the	Data sheet required	Observe hydrogen cyanide content

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
					production process, it must be designated as “ <b>linseed extraction meal feed, with (soap)stock</b> ”		
02.07.04	Linseed extraction meal, partially extracted <sup>1)</sup>	By-product of oil manufacture, obtained by partial extraction of linseed cake	Crude fat max. 8	Botanical purity min. 93	Crude protein Crude fat Crude fibre In the case “linseed extraction meal, partially extracted” contains bleaching earth and filter materials up to 1% and crude lecithins it must be designated as “ <b>linseed extraction meal feed, partially extracted</b> ” . <u>In the case the product</u> contains furthermore soapstock occurring in the production process, it must be designated as “ <b>linseed extraction meal feed, partially extracted, with (soap)stock</b> ”	Data sheet required	Observe hydrogen cyanide content
02.08.01	Olives	Olives of the variety <i>Olea europaea</i> L.					
02.09.01	Palm kernels	Product obtained by crushing kernels, from which as much as possible of the hard shell has been removed, of the oil palms <i>Elaeis guineensis</i> Jacq. and <i>Corozo oleifera</i> (H.B.K.) L. H. Bailey ( <i>Elaeis melanococca</i> auct.), the Ecuadorian palm <i>Ynesa colenda</i> O.F. Cook, the Macoya palms <i>Acrocomia sclerocarpa</i> Mart. and <i>Acrocomia totai</i> Mart., the murumuru palm <i>Astrocaryum murumuru</i> Mart., the tucum palm <i>Astrocaryum tucuma</i>		Moisture max. 10	Crude fat Crude fibre		

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
		Mart. and the uricuri palm <i>Syagrus coronata</i> (Mart.) Becc.					
02.09.02	Palm kernel expeller	By-product of oil manufacture, obtained by pressing of palm kernels from which as much as possible of the hard shell has been removed			Crude protein Crude fat Crude fibre	Data sheet required	
02.09.03	Palm kernel, extracted	By-product of oil manufacture, obtained by extraction of palm kernels from which as much as possible of the hard shell has been removed	Crude fat max. 4		Crude protein Crude fibre	Data sheet required	
02.10.01	Vegetable oil / vegetable fat	Crude, unprocessed oil or fat obtained from plants (excluding the castor-oil plant), it may be degummed		Impurities insoluble in petrol-ether max. 1.5 Maximum acid index in the product as such 50	Moisture, if > 1% The word "vegetable" may be replaced in the designation of the plant. The designation must be completed by the plant species. If the oil or fat is obtained from more than one plant species, these must be stated in descending order of their content	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
02.10.02	Vegetable fat, refined / vegetable oil, refined	Refined product obtained from vegetable fats or vegetable oils and used edible fats (excluding castor oil)		Impurities insoluble in petrol-ether max. 0.5 Maximum unsaponifiable matter in the product as such 3 Moisture max. 0.2	Moisture, if > 1% The word "vegetable" may be replaced in the designation of the plant. The designation must be completed by the plant species. If the oil or fat is obtained from more than one plant species, these must be stated in descending order of their content	Data sheet required	
02.10.03	Vegetable fat , protected / vegetable oil, protected	Vegetable oil or vegetable fat (excluding castor oil) and used edible fats or isolated fractions thereof suitably processed (by hydration, coating or physical treatment) to decrease ruminal digestion		Impurities insoluble in petrol-ether max. 1.5 Maximum acid index in the product as such 50	The word "vegetable" may be replaced in the designation of the plant. The designation must be supplemented by the plant species. If the oil or fat is obtained from more than one plant species, these must be stated in descending order of their content The process (hydration, coating or physical procedure) and eventually developed fat fractions must be stated	Data sheet required	
02.10.04	Fatty acids from chemical refining	By-product obtained during the deacidification of oils and fats of vegetable (except castor oil) or animal origin (except used cooking fats) with alkalis and then acidified and separated from the aqueous phase, it contains free fatty acids, oils or fats and natural components of seed, fruit or animal tissue such as mono and diglycerides, lecithin, and fibres. The residues of deodorisation must not be added		Residues insoluble in petrol-ether max. 1.3	Crude fat Moisture, if > 1% The plant species or the animal species must also be specified in the designation. If the oil or fat is obtained from more than one plant or animal species, this must be specified in descending order of content	Data sheet required	The addition of deo-distillates must be marked

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
02.10.05	Fatty acid distillates from physical refining	By-product obtained during the deacidification of oils and fats of vegetable (except castor oil) or animal origin (except used cooking fats) by distillation, it contains free fatty acids, oils or fats and natural components of seeds, fruits or animal tissue such as mono and diglycerides, sterols and tocopherols		Residues insoluble in petrol-ether max. 1.3	Crude fat Moisture, if > 1% The plant species or the species must also be specified in the designation If the oil or fat is obtained from more than one plant or animal species, this must be specified in descending order of content	Data sheet required	
02.11.01	Rape seed <sup>2)</sup>	Seeds of rape, <i>Brassica napus</i> L. ssp. <i>oleifera</i> (Metzg.) Sinsk, of Indian sarson <i>Brassica napus</i> L. Var. <i>Glauca</i> (Roxb.) O.E. Schulz and of rape <i>Brassica napa</i> ssp. <i>oleifera</i> (Metzg.) Sinsk		Botanical purity min. 94			Observe glucosinolate content
02.11.02	Rape seed hulls	By-product obtained by dehulling of rape seeds			Crude fibre		
02.11.03	Rape seed cake <sup>1) 2)</sup>	By-product of oil manufacture, obtained by extraction of seeds rape		Botanical purity min. 94	Crude protein Crude fat Crude fibre	Data sheet required	Observe glucosinolate content
02.11.04	Rape seed, extraction meal <sup>1) 2)</sup>	By-product of oil manufacture, obtained by extraction of rape seed cake	Crude fat max. 4	Botanical purity min. 94 Ash insoluble in HCl max. 0.9	Crude protein Crude fibre In the case "Rape seed, extraction meal" contains bleaching earth and filter materials up to 1% and crude lecithins it must be designated as " <b>Rape seed extraction meal feed</b> " <u>In the case the product contains furthermore soapstock</u> occurring in the production process, it must be designated as " <b>Rape seed extraction meal feed, with (soap)stock</b> "	Data sheet required	Observe glucosinolate content

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
02.11.05	Rape seed extraction meal, partially extracted <sup>1)</sup> <sup>2)</sup>	By-product of oil manufacture, obtained by extraction of rape seed cake	Crude fat max.6	Botanical purity min. 94 Ash insoluble in HCl max. 0.9	Crude protein Crude fat Crude fibre In the case "Rape seed extraction meal, partially extracted" contains bleaching earth and filter materials up to 1% and crude lecithins it must be designated as " <b>Rape seed extraction meal feed, partially extracted</b> <u>In the case the product contains furthermore soapstock occurring in the production process, it must be designated as "<b>Rape seed extraction meal feed, partially extracted, with (soap)stock</b>"</u>	Data sheet required	Observe glucosinolate content
02.12.01	Safflower seed	Seeds of safflower, <i>Catharmus tinctorius</i> L.					
02.12.02	Safflower seed expeller	By-product of oil manufacture, obtained by pressing of decorticated or partially decorticated seeds of safflower		Crude fibre max. 33	Crude protein Crude fat Crude fibre	Data sheet required	
02.12.03	Safflower seed, extracted	By-product of oil manufacture, obtained by extraction of decorticated or partially decorticated seeds of safflower	Crude fat max. 4	Crude fibre max. 35	Crude protein Crude fibre	Data sheet required	
02.13.01	Sesame seed	Seeds of sesame, <i>Sesamum indicum</i> L.					
02.13.02	Sesame seed expeller	By-product of oil manufacture, obtained by pressing of seeds of the sesame plant		Ash insoluble in HCl max. 5	Crude protein Crude fat Crude fibre Ash insoluble in HCl, if > 2.2%	Data sheet required	
02.13.03	Sesame seed, extracted	By-product of oil manufacture, obtained by extraction of seeds of the sesame plant	Crude fat max. 4	Ash insoluble in HCl max. 5	Crude protein Crude fibre	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
					Ash insoluble in HCl, if > 2,2%		
02.14.01	Soya beans	Soya beans, <i>Glycine max.</i> L. Merr					
02.14.02	Soya beans, toasted <sup>1)</sup>	Soya beans subjected to an appropriate heat treatment		Urease activity: max. 0.4 mg N/g * minute		If <sup>1)</sup> , then data sheet required	
02.14.03	Soya (bean) hulls	By-product obtained during dehulling of soya beans			Crude fibre		
02.14.04	Soya (bean) extraction cake	By-product of oil manufacture, obtained by pressing of soya beans			Crude protein Crude fat Crude fibre, if > 8%	Data sheet required	
02.14.05	Soya (bean) extraction meal, toasted <sup>1)</sup>	By-product of oil manufacture, obtained from soya beans by extraction and subjected to an appropriate heat treatment	Crude fat max. 4	Urease activity: max. 0.4 mg N/g * minute, Ash insoluble in HCl max. 0.9	Crude protein Crude fibre, if > 8% In the case "Soya(bean), extraction meal, toasted" contains bleaching earth and filter materials up to 1% and crude lecithins it must be designated as " <b>Soya(bean) extraction meal feed, ,toasted</b> " <u>In the case the product</u> contains furthermore soapstock occurring in the production process, it must be designated as " <b>Soya(bean) extraction meal feed, toasted, with (soap)stock</b> "	Data sheet required	
02.14.06	Soya (bean)extraction meal from, dehulled seeds, toasted <sup>1)</sup>	By-product of oil manufacture, obtained from dehulled soya beans by extraction and subjected to an appropriate heat treatment	Crude fat max. 4	Crude fibre max. 5 Urease activity: max. 0.45 mg N/g * minute Ash insoluble in HCl max. 0.9	Crude protein In the case "Soya(bean) extraction meal from dehulled seeds, toasted" contains bleaching earth and filter materials up to 1% and crude lecithins it must be designated as " <b>Soya(bean) extraction meal feed from dehulled seeds, toasted</b> " <u>In the case the product</u> contains furthermore	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
					soapstock occurring in the production process, it must be designated as <b>“Soya(bean) extraction meal feed from dehulled seeds with (soap)stock”</b>		
02.14.07	Soya (bean) protein concentrate	By-product obtained from dehulled, fat-extracted soya beans, subjected to a further extraction with water or alcohol or treated with enzymes to reduce the level of soluble non-protein components.	Crude protein min. 55	Moisture max. 10	Crude protein	Data sheet required	
02.14.08	Soya (bean) protein isolate	Product obtained from coagulation, separation and drying of soya beans (dehulled and defatted).	Crude protein min. 85	Lysine min. 5 Moisture max. 10	Crude protein Lysine	Data sheet required	
02.15.01	Sunflower seed	Seeds of the sunflower, <i>Helianthus annuus</i> L.					
02.15.03	Sunflower cake poor in husks	By-product of oil manufacture, obtained by pressing of unpeeled seeds of the sunflower from which the husks have were then largely removed		Crude fibre max. 15	Crude protein Crude fat Crude fibre	Data sheet required	
02.15.04	Sunflower cake	By-product of oil manufacture obtained by pressing of peeled or partly peeled sunflower seed		From peeled seed Crude fibre max. 15 From partially peeled seed crude fibre max. 25	Crude protein Crude fat Crude fibre	Data sheet required	
02.15.05	Sunflower extraction meal <sup>1)</sup>	By-product of oil manufacture obtained by extracting sunflower cake from unpeeled sunflower seed under heat treatment	Crude fat max. 4	Ash insoluble in HCl max. 0.9	Crude protein Crude fibre In the case “sunflower extraction meal” contains” bleaching earth and filter materials up to 1% and crude lecithins it must be designated as <b>“sunflower extraction meal feed”</b> . <u>In the case the product contains furthermore soapstock occurring in the</u>	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
					production process, it must be designated as “ <b>sunflower extraction meal feed with (soap)stock</b> ”		
02.15.06	Sunflower extraction meal from peeled or partially peeled seed	By-product of oil manufacture obtained by extracting sunflower cake from partially peeled or peeled sunflower seed under heat treatment. It can be set differently in the crude fibre and crude protein fraction by further mechanical processing (e.g. air sifting)	Crude fat max. 4	Ash insoluble in HCl max. 0.9	Crude protein Crude fibre May be designated as "protein-rich" when produced from partially-peeled seed if the crude protein content is min 45%. May be designated as "rich in crude fibre" when made from partially-peeled seed if the crude fibre content is at least 35%. In the case “sunflower extraction meal from peeled or partially-seed” contains bleaching earths and filter aids up to 1% and crude lecithins, it must be designated as “ <b>sunflower extraction meal feed</b> from peeled or partly peeled seed”. <u>In the case the product</u> contains furthermore soapstock occurring in the production process, it must be designated as “ <b>sunflower extraction meal feed from peeled or partly peeled seed with (soap)stock</b> ”	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
02.15.07	Sunflower protein concentrate <sup>1)</sup>	By-product obtained from defatted and peeled sunflower seed by various chemical and physical separation methods (e.g., extraction, centrifugation, ultrafiltration, reverse osmosis) consisting essentially of the proteins of the sunflower endosperm	Crude fat max. 5	Ash insoluble in HCl max. 0.9 Crude protein min. 70	Crude protein	Data sheet required	
02.15.08	Sunflower syrup	By-product obtained from defatted, peeled sunflower seed by various chemical and physical separation methods (e.g. extraction, centrifugation, ultrafiltration, reverse osmosis) consisting essentially of the readily soluble carbohydrates of the sunflower endosperm		Ash insoluble in HCl max. 0.9 Total sugar min. 40	Moisture Crude ash Total sugar Crude protein	Data sheet required	Crude protein consists approximately half of NPN
02.15.09	Sunflower husk	By-product obtained by peeling sunflower seeds and may be palletised			Crude fibre		Low energy- and nutrient supply, ballast character
02.16.01	Walnut expeller	By-product of oil manufacture obtained by pressing of walnuts, <i>Juglans regia. L.</i> , from which practically all of the hull has been removed			Crude protein Crude fat Crude fibre	Data sheet required.	
02.17.02	Borage expeller	By-product of oil manufacture obtained by pressing the seeds of the borage, <i>Borago officinalis L.</i>		Ash insoluble in HCL max. 8	Crude protein Crude fat Crude fibre Crude ash	Data sheet required.	
02.18.02	Evening primrose expeller	By-product of oil manufacture obtained by pressing the seeds of the evening primrose, <i>Oenothera biennis L.</i>		Crude fibre max. 25	Crude protein Crude fat Crude fibre Crude ash	Data sheet required.	
02.19.02	Black cumin expeller	By-product of oil manufacture obtained by pressing the seeds of the black cumin, <i>Nigella sativa L.</i>			Crude protein Crude fat Crude fibre Crude ash	Data sheet required.	Observe shelf life.

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
02.20.02	Hemp expeller	By-product of oil manufacture obtained by pressing hemp seeds, <i>Cannabis sativa L.</i>		Tetrahydrocannabinol max. 0.2	Crude protein Crude fat Crude fibre	Data sheet required.	Only seeds that meet EU requirements
02.21.01	Chia seed	Seeds of the chia plant <i>Salvia hispanica L.</i>			Crude fat Crude protein Crude fibre		As far as possible free from Senecio seeds
02.21.02	Chia press cake	By-product obtained during oil manufacture by pressing chia seed ( <i>Salvia hispanica</i> )			Crude fat Crude protein Crude fibre	Data sheet required	As far as possible free from Senecio seeds
02.23.01	Milk thistle expeller	By-product of oil manufacture, obtained by pressing the seeds of the Milk Thistle ( <i>Silybum marianum</i> ) is obtained			Crude protein Crude fat Crude fibre	Data sheet required	
02.24.01	Mono and diglycerides of fatty acids	Product, which is obtained from vegetable fats / oils and consists of mixtures of mono and diglycerol esters of glycerol with fatty acids having at least 4 carbon atoms. It may contain small amounts of free fatty acids and glycerol, and up to 50 ppm of nickel from the hydrogenation			Crude fat Nickel, if > 20 ppm	Data sheet required	
02.25.02	Amaranth expeller	By-product of oil manufacture, obtained by pressing the seeds of Amaranth ( <i>Amaranthus L.</i> ) is obtained			Crude protein Crude fat Crude fibre	Data sheet required	
02.26.02	Camelina expeller	By-product of oil manufacture, obtained by pressing the seeds of Camelina ( <i>Camelins sativa</i> ) is obtained			Crude protein Crude fat Crude fibre	Data sheet required	Observe glucosinolate content
<b>03. Grain legume, their products and by-products</b>							
03.01.01	Horse bean <sup>1)</sup>	Seeds of <i>Vicia faba L. ssp. faba var. equina Pers.</i> and <i>var. minuta (Alef.) Mansf.</i>				If <sup>1)</sup> , data sheet required	
03.01.02	Horse bean flakes	Product obtained by steaming and rolling cleaned horse beans			Crude protein Crude fibre Starch		

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
03.01.03	Horse bean protein	By-product obtained during starch manufacturing from the separated horse bean fruit water		Crude protein min. 70	Moisture, if > 14% Crude protein	Data sheet required	
03.01.04	Horse bean pulp	By-product obtained by starch manufacturing from cleaned horse beans which consists of parts of the hulls and the endosperm			Moisture, if > 14% Crude fibre Starch	Data sheet required	
03.01.05	Horse bean fruit water	By-product obtained by starch manufacturing from the cleaned horse beans and from which crude protein and water are partly removed			Moisture Crude protein Crude ash Potassium	Data sheet required	
03.02.01	Beans, toasted	Seeds of <i>Phaseolus</i> or <i>Vigna</i> ssp. submitted to an appropriate heat treatment to destroy toxic lectines				The heat treatment must be stated	
03.02.02	Bean flakes	Product obtained by steaming and rolling cleaned beans submitted to an appropriate heat treatment to destroy toxic lectines			Crude protein Crude fibre Starch	The heat treatment must be stated	
03.02.03	Bean middlings	By-product of flour manufacture, obtained from cleaned beans. It consists primarily of particles of cotyledons and, to a lesser extent, of hulls. The beans must be submitted to an appropriate heat treatment to destroy toxic lectines	Crude fibre max. 11		Crude protein Crude fibre	The heat treatment must be stated	
03.02.04	Bean bran	By-product obtained during the manufacture of bean meal. It consists primarily of hulls. The beans must be submitted to an appropriate heat treatment to destroy toxic lectines		Crude fibre max. 45	Crude fibre The designation may be replaced by 'bean husks'	The heat treatment must be stated	
03.03.01	Peas <sup>1)</sup>	Seeds of <i>Pisum</i> spp.				If <sup>1)</sup> , data sheet required	
03.03.02	Pea flakes	Product obtained by steaming and rolling cleaned peas			Crude protein Crude fibre Starch		

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
03.03.03	Pea middlings	By-product obtained during the manufacture of pea-flour from cleaned peas. It consists primarily of particles of cotyledons and, to a lesser extent, of hulls	Crude fibre max. 10		Crude protein Crude fibre		
03.03.04	Pea bran	By-product obtained during the manufacture of pea meal from cleaned peas. It consists predominately of hulls		Crude fibre max. 28	Crude fibre		
03.03.05	Pea protein	By-product obtained from the separated pea fruit water when producing starch		Crude protein min. 65	Moisture, if > 14% Crude protein	Data sheet required	
03.03.06	Pea pulp	By-product obtained when producing starch from cleaned peas; it consists of parts of the hulls and the endosperm			Moisture, if > 14% Crude fibre Starch	Data sheet required	
03.03.07	Pea fruit water	By-product obtained when producing starch from the cleaned peas and from which crude protein and water are partly removed			Moisture Crude protein Crude ash Potassium	Data sheet required	
03.03.08	Pea hulls	By-product obtained during dehulling of cleaned peas			Crude fibre		
03.04.01	Guar germs, extracted	By-product of mucilage extraction from germinated seeds of <i>Cyamopsis tetragonoloba</i> (L.) Taub			Crude protein	Data sheet required	
03.05.01	Chick peas	Seeds of <i>Cicer arietinum</i> L.					
03.06.01	Lentils	Seeds of <i>Lens culinaris</i> a.o. Medik					
03.06.02	Lentil hulls	By-product obtained during dehulling of cleaned lentils. It consists predominately of hulls			Crude fibre		
03.07.01	Chickling vetch	Seeds of <i>Lathyrus sativus</i> L. submitted to an appropriate heat treatment to destroy toxic lectines					
03.08.01	Sweet lupins <sup>1)</sup>	Seeds of <i>Lupinus</i> ssp. low in bitter constituents				If <sup>1)</sup> , then data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
03.09.01	Vetches	Seeds of <i>Vicia sativa</i> L. var. sativa and other varieties					
03.10.01	Monantha vetch	Seeds of <i>Vicia monanthos</i> Desf.					
03.11.01	Legumes bran	By-product obtained when producing flour from cleaned legume grains which consist predominantly of husks, fragments and components of flour. Products containing by-products of beans must be heat treated in order to destroy toxic lectins			Crude protein Crude fibre	Data sheet and, in case of a product containing beans, information about heat treatment are required	
<b>04. Tubers, roots, their products and by-products</b>							
04.01.01	Fodder beat	Root tuber of <i>Beta vulgaris</i> var. <i>Crassa</i> (Content and mass beat)					
04.02.01	Carrot	Root tubers of <i>Daucus carota</i> L. ssp <i>sativus</i> .				Additional information on the drying process and the fuel if dried	
04.02.02	Carrot pulp	By-product of juice extraction from cleaned carrots; it may be dried			Crude fibre Moisture, if > 14%	Additional information on the drying process and the fuel if dried	
04.03.01	Potatoes	Tubers of <i>Solanum tuberosum</i> L.					
04.03.02	Potato flakes	Product obtained by drying of washed, peeled or unpeeled steamed or cooked potatoes		Ash insoluble in HCl max. 1.7	Starch Crude fibre	Drying process and fuel used must be indicated	
04.03.03	Potato starch	Technically pure starch from washed potatoes		Ash insoluble in HCl max. 0.5	Starch Moisture, if > 14%	Data sheet required	
04.03.04	Pre-gelatinised potato starch	Product consisting of potato starch largely expanded by heat treatment		Moisture max. 12 Ash insoluble in HCl max. 0.5 Starch expansion max. 50	Starch	Data sheet required	
04.03.06	Potato fibre / starch mixture	By-product of starch production from washed potatoes. It consists of cell wall material and starch		Starch min. 70	Starch Moisture, if > 14%	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
04.03.07	Potato protein	Dried by-product of starch manufacture, which consists predominately protein obtained after the separation of starch		Crude protein min. 75 Ash insoluble in HCl max. 0.5	Crude protein Moisture, if > 14%	Data sheet required	
04.03.08	Potato fruit water, condensed	By-product of the manufacture of potato starch from which proteins and water have been partly withdrawn			Crude protein Crude ash Moisture	Data sheet required	
04.03.09	Potato pulp	By-product (may be dried) of the manufacture of potato starch from washed potatoes			Starch Crude fibre Moisture, if > 14%	Data sheet required	
04.03.10	Potato peels	By-product of the peeling of washed potatoes, it may be steamed or dried			Ash insoluble in HCl, if > 5% Crude fibre	Data sheet required	Additional information on the drying process and the fuel if dried
04.03.11	Potatoe bits and pieces	By-product obtained when processing cleaned potatoes to produce starch, flakes or granules it comprises predominately of pieces of potatoes and of potato peels			Starch Crude fibre Ash insoluble in HCL, if > 3.5%		
04.03.12	Potato steaming water	By-product obtained when producing potato flakes by steaming washed potatoes			Moisture	Data sheet required	Not storable
04.03.13	Potatoe granules	Granulated product obtained by steaming or cooking and after that drying of cleaned and possibly washed potatoes		Ash insoluble in HCl max. 1.7	Starch Crude fibre	The drying process has to be indicated	
04.04.01	Manioc / tapioca	Product obtained by crushing, grinding or pelleting dried, and if necessary washed, peeled root tubers of manioc roots ( <i>Manihot esculenta</i> Crantz)		Ash insoluble in HCl max. 4.5	Starch Crude fibre Ash insoluble in HCl, if > 3.5% The designation may be supplemented with 'meal', 'pulp' (=crisps) or 'pellets'	Data sheet required.	
04.05.01	Horseradish pulp	By-product of juice extraction from cleaned horseradish ( <i>Armoracia</i> P. Gaertn.)			Crude fibre Moisture		
04.06.01	Turnip	Root tubers of <i>Brassica rapa</i> var. Rapa					

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
04.07.01	Sweet potato / batata	Root tubers of <i>Ipomoea batatas</i> (L.) Poir			Starch		
04.07.02	Sweet potato chips or sweet potato meal	Product obtained by crushing or grinding cleaned, dried sweet potato / batata tubers			Starch		
04.08.01	Jerusalem artichoke	Root tubers of <i>Helianthus tuberosus</i> L.					
04.08.02	Jerusalem artichoke chips / Jerusalem artichoke meal	Product obtained by chopping or grinding cleaned, dried tubers of Jerusalem			Inulin Crude fibre		
04.09.01	Chicory	Root tubers of <i>Cichorium intybus</i> L.					
04.09.02	Chicory roots	Product obtained by chopping or grinding cleaned, dried roots of chicory which may be dried			Inulin Crude fibre		
04.09.03	Chicory pulp, dried	By-product obtained when extracting inulin after chopping / or grinding cleaned and dried chicory roots			Crude fibre Crude ash Ash insoluble in HCl, if > 3.5%	Data sheet required.	
04.10.01	Sugar beet	Root tubers of <i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>altissima</i> Doell				If dried, drying process and fuel used must be indicated	
04.10.02	(Sugar) beet tops and tails	By-product of sugar beet processing. It consists predominately of cleaned pieces of sugar beet, and parts of leaves, and is as free as possible of weeds and other foreign constituents; it may be ensiled <sup>3)</sup>			Ash insoluble in HCl, if > 5%	Additional information on the ensiling additive if <sup>3)</sup>	Observe soil content
04.10.03	(Beet) sugar / sucrose	Product extracted from sugar beets			Sucrose	Data sheet required	
04.10.04	(Sugar) beet molasses	By-product obtained during the manufacture or refining of sugar from sugar beets	Total sugar calculated as sucrose: minimum 40% of the product as such		Total sugar, calculated as sucrose Moisture, if > 28%	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
04.10.05	(Sugar) beet molasses, partially desugared	By-product obtained during recovery of the remaining sucrose from sugar beet molasses by saccharate precipitate, ion exchange or ion exclusion			Total sugar, expressed as sucrose Moisture, if > 14%	Data sheet required	
04.10.06	Wet (sugar) beet pulp	By-product obtained after the extraction of the raw juice from sugar beets, which is practically desugared and may be ensiled <sup>3)</sup>		Moisture max. 92	Ash insoluble in HCl, if > 5%	Additional information on the ensiling additive if <sup>3)</sup>	
04.10.07	Pressed (sugar) beet pulp	By-product obtained after the extraction of the raw juice from sugar beets, which is practically desugared and pressed, and may be molassed and ensiled			Ash insoluble in HCl, if > 5% Total sucrose content, when > 10.5% If molassed, the product must be designated as "(Sugar) beet pulp, molassed"	Additional information on the ensiling additive if <sup>3)</sup>	
04.10.08	Dried (sugar) beet pulp	By-product obtained after the extraction of the raw juice from sugar beets which is practically desugared pressed and dried		Ash insoluble in HCl max. 4.5	Ash insoluble in HCl, if > 3.5% Total sugar expressed as sucrose, if > 10.5%	Data sheet required Information on the drying process and fuel used	
04.10.09	(Sugar) beet pulp, molassed	By-product obtained after the extraction of the raw juice from sugar beets which is practically desugared, pressed and dried, and molasses has been added before or after drying		Ash insoluble in HCl max. 4.5	Ash insoluble in HCl, if > 3.5% Total sugar expressed as sucrose, if > 10.5%	Data sheet required Information on the drying process and fuel used	
04.10.10	(Sugar) beet cooking chips	By-product obtained when producing syrup from sugar beet; and which may be pressed or dried			If dried, ash insoluble in HCl, if > 3.5% If pressed, ash insoluble in HCl, if > 5%	Data sheet required Information on the drying process and fuel used	
04.10.11	Pressed (Sugar) beet pulp, (partially) depectinised	By-product obtained during the pectin manufacture from pressed (sugar) beet chips, and - due to the manufacturing process - may contain salts of acids and alkalis, crude cellulose, fatty acid esters and residual pectin			Ash insoluble in HCl, if > 5% Crude fibre moisture, if > 14%	Data sheet required	Note of rapid spoilage required

**05. By-products of fermentation- and distillation industry inclusive enzymatic production of alcohol for bioenergetic purposes**

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
05.01.01	Brewers' grains	By-product of brewing obtained from malted and unmalted cereals and other starchy products; it may be ensiled <sup>3)</sup> or dried		Moisture max. 81	Crude protein Crude ash Moisture, if > 14% used raw materials (starch origin) if not grain	Data sheet required. Information on the ensiling agent if <sup>3)</sup>	
05.03.01	Malt germs (Malt sprouts)	By-product of malting of cereals, consisting of dried germs		Crude fibre max. 19	Crude protein	Data sheet required	
05.03.02	Malt bran	By-product obtained during the production of malt flour of grain malt after extraction of the malt germs and malt flour. It consists predominately of skin particles and other parts of the kernel and may contain traces of husks			Crude protein Crude fibre Starch, if < 20%	Data sheet required	
05.04.01	Vinasse	By-product obtained after the fermentation with added microorganisms of sugar cane molasses, sugar beet molasses or thickened juice in the production of alcohol, yeast, citric acid or other organic substances and from which potassium may be removed. It may contain inactive microorganisms used during the process.			The raw materials used must be stated in the designation  crude protein crude ash potassium moisture, if > 35%	Data sheet required	Crude protein consists predominately of NPN, may have higher sulphate content
05.04.02	Apple vinasse	By-product obtained after the fermentation with added microorganisms of depectinised apple pulp in the production of alcohol, yeast, citric acid or other organic substances			Crude protein Crude fibre Moisture, if > 35% Crude ash Sugar	Data sheet required	Crude protein consists predominately of NPN, may have higher sulphate content
05.04.03	Vinasse from ketogulonic acid production	By-product obtained during the fermentative production of ketogulonic acid based on corn steep liquor and sorbitol. The ketogulonic acid is used as a starting product for the production of vitamin C			Moisture, if > 14% crude protein pH value	Data sheet required	Observe the pH value

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
05.05.01	Distillery spent wash	By-product obtained when extracting alcohol by distilling mash of cereals, potatoes and / or other starch or sugar containing substances of vegetable origin with addition of yeast and from which only water may be removed			Moisture, if >14%, Crude protein Raw material used must be stated in descending order	Data sheet required	
05.06.01	Distillers dried grains feed	By-product obtained when producing alcohol by distilling mash of cereals, parts of cereals and/or other starch or sugar containing substances of vegetable origin with addition of yeast. Water and other substances may be removed and/or during the manufacturing process occurring substances may be added			Moisture, if >14% Crude protein Crude fat, if > 5% Crude fibre, if > 5% Crude ash Chloride, calculated as NaCl, if > 1% Potassium, if > 1% Raw materials used must be stated in descending order	Data sheet required	Feed value varies depending on raw material and manufacturing process. Sufficient water supply should be attended
05.07.01	Grape pulp from wine production	By-product obtained after extraction of juice from grapes by pressing out and from which kernels and particles are largely removed			Crude fibre Moisture		Low content of usable energy and nutrient content; dietary fibre character.
05.08.01	First wort	Liquid by-product of breweries obtained by lantering of the mash. It contains substantially the solvent substances of the malt after conversion into sugar and may be fermented			Crude protein Crude fibre Sugar as saccharose Moisture	Data sheet required	In case of non fermented products, notice to rapid spoilage is necessary
<b>06. Other seeds and fruits, their products and by-products</b>							
06.01.01	Buckwheat	Grains of buckwheat <i>Fagopyrum sagittatum Gilib.</i> ( <i>Fagopyrum esculentum Moench</i> )					Can trigger skin disorders on unpigmented parts if fed as a high proportion of the daily ration to animals exposed to direct sunlight

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
06.01.02	Buckwheat, dehulled	Product obtained by dehulling cleaned buckwheat grains	Crude fibre max. 3	Starch min. 57	Starch		Can trigger skin disorders on unpigmented parts if fed as a high proportion of the daily ration to animals exposed to direct sunlight
06.01.03	Buckwheat hulls and bran	By-product obtained during the processing of cleaned buckwheat. It consists predominately of particles of buckwheat hulls	Crude fibre max. 29		Crude fibre		Can trigger skin disorders on unpigmented parts if fed as a high proportion of the daily ration to animals exposed to direct sunlight
06.02.01	Acorns, dehusked	Dried and dehusked fruit of the pendunculate oak <i>Quercus robur</i> L., the sessile oak <i>Quercus petraea</i> (Matt.) Liebl, the cork oak of <i>Quercus suber</i> L., or other species of oak		Moisture max. 13			
06.03.01	Carob meal	Product obtained by grinding the dried fruits (pods) of the carob tree <i>Ceratonia siliqua</i> L., from which the kernels have been removed		Moisture max. 14	Crude fibre		
06.04.01	Coffee skin pellets	By-product of processing the seeds of the coffee tree <i>Coffea</i> L. ssp. It consists of coffee bean skins		Crude fibre max. 30	Crude protein Crude fibre	Data sheet required	
06.04.02	Coffee waste pellets	By-product obtained when processing shelled seeds of the coffee tree <i>Coffea</i> L. ssp. It consists of coffee skins and residues of dried and treated coffee beans as well as of coffee wax, obtained during the decaffeination and which may be added in varying portions			Crude fat Crude fibre	Data sheet required	The contents of theobromine and caffeine should be observed.

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
06.05.01	Fruit pulp	By-product obtained during the production of fruit juice. It may be dried			Crude fibre Moisture The description must be completed by the type of fruit		
06.05.02	Fruit pulp, depectinised	Depectinised by-product obtained during the production of fruit juice			Crude fibre Moisture The description must be completed by the type of fruit	Data sheet required	
06.05.03	Apple molasses	By-product obtained after producing pectine from apple pulp			Total sugar calculated as sucrose		
06.06.02	Grape kernels, de-oiled	By-product obtained during the production of grape kernel oil by pressing or extraction which consists nearly exclusively of deoiled grape kernels				Data sheet required	Low energy and nutrient supply, dietary fibre character
06.07.01	Citrus pulp, dried	Dried by-product obtained by pressing citrus fruits, <i>Citrus</i> ssp., during the production of citrus juice		Moisture max. 13	Crude fibre	Data sheet required Information on the drying process and the fuel used	
06.07.02	Citrus pulp, (Partially) depectinised	By-product obtained during pectin production from citrus pulp, which may contain, by virtue of the process, salts of acids and alkalis, crude cellulose and residual pectin			Crude fibre Moisture, if > 14%	Data sheet required In the case of using dried citrus ester information on the drying process and fuel used	Note regarding rapid spoilage required
06.08.01	(Sugar) beet seeds	Seeds of sugar beet, <i>Beta vulgaris</i> L. ssp. <i>vulgaris</i> var. <i>altissima</i> Doell					
06.09.01	Roselip oilcake	By-product obtained after extraction of the oil from roselips by pressing. It may be dried			Crude fibre Crude protein	Data sheet required	Low energy and nutrient supply, dietary fibre character

**07. Roughages and forages produced on farm**

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
07.01.01	Permanent pasture products	Fresh, ensiled <sup>3)</sup> or dried products from permanent pasture consisting of grasses, legumes or herbs			Crude fibre	Additional information on the ensiling additive if <sup>3)</sup>	As far as possible free of toxic plants (e.g. autumn crocus, senecio herbs, , marsh horsetail or eagle fern) and in the case of hay or silage free of visible mould
07.01.02	Grass / legume plant	Fresh, ensiled <sup>3)</sup> or dried arable crops consisting of grass, legumes or herbs			Crude fibre	Additional information on the ensiling additive if <sup>3)</sup> .	As far as possible free of toxic plants (e.g. autumn crocus, senecio herbs, marsh horsetail or eagle fern) and in the case of hay or silage free of visible mould
07.01.03	Green meal	Product obtained by drying, milling and in some cases compacting young forage plants		Crude protein min. 15.5 Ash insoluble in HCl max. 5 Moisture max. 12	Crude protein Crude fibre Ash insoluble in HCl, if > 3,5% The word 'meal' may be replaced by 'pellets', The species of fodder plant must be stated in the designation	Information on the drying process and the fuel.	
07.02.01	Brassica plants	Fresh, ensiled <sup>3)</sup> or dried plants of species of brassica			Crude fibre	Additional information on the ensiling additive, if <sup>3)</sup>	
07.03.01	Cereal plants	Fresh, ensiled <sup>3)</sup> or dried whole plants of cereal species or parts thereof, except grains (see Group 1: Cereal grains, their products and by-products)			Crude fibre	Additional information on the ensiling additive if <sup>3)</sup>	
07.03.02	Straw	Product obtained after the removal of seeds from plants			Crude fibre The species of plant must be stated in the designation.		Alternative EU designation: cereal straw.

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
07.03.03	Straw, expanded	Product obtained after the removal of seeds from plants and subjected to alkali treatment with sodium hydroxide or ammonia to improve its digestibility		a) Nitrogen min. 1.1 in case of treatment with NH <sub>3</sub> b) Sodium 1.5 to 3.1 Moisture max. 16	Crude fibre Sodium, if treated with NaOH The designation must be completed with the type of chemical treatment		Alternative EU designation: cereal straw, treated
07.04.01	Clover meal	Product obtained by drying and milling and in some cases compacting young clover plants, <i>Trifolium</i> spp. It may contain up to 20% other forage crops dried and milled at the same time as the clover		Crude protein min. 17 Moisture max. 12 Botanical purity min. 80	Crude protein Crude fibre Ash insoluble in HCl, if > 3.5% The word "meal" may be replaced by "pellets"	Information on the drying process and the fuel	
07.05.01	Lucerne meal	Product obtained by drying and milling young lucerne, <i>Medicago sativa</i> L. and <i>Medicago var. Martyn.</i> It may contain up to 20% other forage crops dried and milled at the same time as the lucerne		Crude protein min. 17 Moisture max. 12	Crude protein Crude fibre Ash insoluble in HCl, if > 3,5% The word "meal" may be replaced by "pellets"	Information on the drying process and the fuel	
07.06.01	Maize plants	Fresh, ensiled <sup>3)</sup> or dried plants of <i>Zea mays</i> or parts thereof, except grains (see Group 1)			Crude fibre In the case the product consist of parts of the maize plant, the name of the respective part of the plant (for example maize stalks) instead of the designation "maize plant" must be used	Additional information on the ensiling additive if <sup>3)</sup>	
07.07.01	Beet leaves	Fresh, ensiled <sup>3)</sup> or dried leaves of Beta species			Crude ash	Additional information on the ensiling additive if <sup>3)</sup>	Observe soil content
<b>08. Other plants, their products and by-products</b>							
08.01.01	Hop cones pellets, debittered	By-product obtained after extraction of brewing-technology relevant ingredients by milling, separating or extracting of hop cones		Bitter constituents max. 1.0 conductometer value Moisture max. 13	Crude fibre Bitter constituents, if > 0,2 Conductometer value The designation "hop cones pellets" may be replaced by "spent hops"	Data sheet required	Observe bitter constituents

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
08.03.01	Marigold meal	Product obtained by grinding dried petals of Mexican marigold, <i>Tagetes erecta</i>			Crude protein		
08.04.01	(Cane) sugar/sucrose	Sugar extracted from sugar cane, <i>Saccharum officinarum</i> L.			Sucrose	Data sheet required	
08.04.02	(Cane) sugar molasses	By-product obtained during the manufacture or refining of sugar from (cane) sugar			Total sugar calculated as sucrose Moisture, if > 28%	Data sheet required	
08.05.01	Sea weed meal	Product obtained by drying and chopping sea weed, in particular brown algae, the product may be washed to reduce the iodine content			Crude ash Crude fibre		Observe arsenic and iodine content
08.06.01	Spirulina algae	Blue / green algae (cyanobacteriae) of the species sperulina, produced under controlled conditions in natural alkaline unfertilized lakes or in open cultivation facilities (raceway ponds) using defined nutrient solutions and which may be washed. No substances except water may be extracted. The algae are deactivated by drying and toxinogenic algae and their toxins may not be measurable		Crude ash max. 9 Crude protein min. 50 Crude fat min. 4 Cyanobacterial toxins not measurable (microcystine < 0.4 µg/g)	Crude protein Crude fat Crude fibre Crude ash Moisture, if > 8%	Data sheet required. Details about drying procedure and fuels used	Observe content of lead, cadmium mercury and microcystine
08.07.01	Chlorella algae	Green algae (Chlorophytae) of species Chlorella, produced under controlled conditions in open or closed cultivation facilities using defined nutrient solutions and which may be washed. No substances except water may be extracted. The algae are deactivated by drying		Crude ash max. 9 Crude protein min. 35 Crude fat min. 6.5	Crude protein Crude fat Crude fibre Crude ash Moisture, if > 8%	Data sheet required. Details about drying procedure and fuels used	Observe content of lead, cadmium and mercury
08.08.01	Oregano leaves	Product obtained from the preparation of purified oregano leaves for food purposes, may contain small amounts of stems and stalks, can be shredded and dried		Ash insoluble in HCl max. 5	Crude fibre Crude ash Ash insoluble in HCl, if > 3, 5%	Data sheet required Details about drying procedure and fuels used	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
08.09.01	Schizochytrium limacinum algae	Algae of the species <i>Schizochytrium limacinum</i> , produced under controlled conditions in cultivation plants with defined nutrient solutions, which may be washed, of which no substances other than water are extracted, which are deactivated by drying and in which toxin-forming algae and their toxins are not detectable		Crude fat min. 60 Docosahexaenoic acid min. 15	Crude protein Crude Fat Crude fibre Crude ash moisture, if > 8%	Data sheet required Details about drying procedure and fuels used	Note the lead, cadmium and mercury content
08.10.01	Small water lens	Small water lens ( <i>Lemna Minor L.</i> ) which is produced in closed photobioreactors under controlled conditions and using suitable water. It may be dried.		Crude ash max. 15 crude protein min. 25	Crude protein Crude Fat Crude fibre Crude ash moisture, if >8%	Data sheet required. If dried: information on the drying process and fuel used	
08.11.01	Fragrant agrimony	Whole plants of fragrant agrimony ( <i>Agrimonia procera</i> ), dried and crushed		Tannins min. 2 (*footnote for method)	Crude protein Crude fibre Crude ash ash insoluble in HCl, if > 3.5%	Data sheet required. If dried: information on the drying process and fuel used	Note content of tannins. Low nutrient and energy supply capacity. Dietary fibre character
08.12.01	Tetraselmis algae	Saltwater green algae (Chlorophyta) of the genus Tetraselmis, produced under controlled conditions in closed culture systems with defined nutrient solutions, which may have been washed, from which no substances other than water have been removed and which are inactivated by drying.		Crude ash max. 20% Crude protein min 30% Crude fat min. 5%	Crude protein Crude fat Crude fibre Crude ash Moisture, if > 8%	Data sheet required. Details about drying procedure and fuels used	Observe content of sodium, iodine, lead, cadmium and mercury
08.13.01	Leaves of the wax-leaved leaf cherry	Leaves of the wax-leaved leaf cherry ( <i>Solanum glaucophyllum</i> ), dried and milled, with a high content of vitamin D3 active substances		Ash insoluble in HCl max. 5	Crude ash Crude fibre Vitamin D3 Moisture, if > 12%	Data sheet required. Details about drying procedure and if necessary fuels used	Observe vitamin D3 supply, avoid oversupply
<b>09. Milk products (the species must be stated if other than cow's milk) <sup>4)</sup></b>							
09.01.01	Milk	Product obtained from raw milk (Unprocessed secretion of the mammary gland obtained by milking farmed animals) excluding colostrum					

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
09.01.02	Milk powder	Dried product from milk or semi-skimmed milk.	Crude fat min. 10		Crude protein Crude fat Moisture, if > 5%		
09.01.03	Skimmed milk	By-product obtained by separating milk in skimmed milk and cream, whose protein content may be standardized by addition or withdrawal of milk constituents. The relationship between whey protein to casein must not be modified		Moisture max. 92 Crude protein min. 34 based on fat free dry matter	The designation 'skimmed milk concentrate' may be used if water has been removed to concentrate the product. In this case the moisture content must be stated		
09.01.04	Skimmed milk powder	Product obtained by drying of skimmed milk			Crude protein Moisture, if > 5%		
09.02.01	Milk fat	Product obtained by skimming milk and from which the water may be extracted		Moisture max. 1 Crude fat min. 96	Crude fat		
09.03.01	Buttermilk	By-product obtained after the separation of butter by churning whole milk and cream, also acidified and which may be concentrated		Moisture max. 92	The designation 'butter milk concentrate' may be used if water has been removed to concentrate the product. The moisture content must then be stated	Data sheet required	
09.03.02	Buttermilk powder	Product obtained by drying buttermilk			Crude fat Crude protein Lactose Moisture, if > 6%	Data sheet required	
09.04.01	Lactose powder	Product obtained by purifying and drying the sugar separated from milk or whey			Lactose Moisture, if > 5%	Data sheet required	
09.05.01	Whey	By-product obtained by the manufacture of cheese, yoghurt or casein from milk and which may be thickened		Moisture max. 95	The designation 'whey concentrate' may be used, if water has been removed to concentrate the product. The moisture content must then be stated.'	Data sheet required	
09.05.02	Whey, partly desugared	Product obtained by partly removing lactose and from whey and which may be thickened		Moisture max. 97	Moisture	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
09.05.03	Whey powder	Product obtained by drying whey			Crude protein Lactose Crude ash Moisture, if > 8%	Data sheet required	
09.05.04	Whey powder, partly desugared	Product obtained by drying whey from which the lactose has been partly removed	Lactose max. 70		Crude protein Lactose Crude ash Moisture, if > 8%	Data sheet required	
09.05.05	Whey powder, partly desugared and partly demineralised	Product obtained by drying whey from which the lactose and minerals have been partly removed	Lactose max. 70		Crude protein Lactose Crude ash Moisture, if > 8%	Data sheet required	
09.05.06	Whey permeate	Product obtained by ultra filtration of whey through a membrane filter which may be partly desugared and thickened or dried			Crude ash Crude protein Lactose Moisture, if > 8%	Data sheet required	
09.05.07	Whey retentate	Product obtained during ultra filtration of whey retained by the membrane and which may be partially desugared, thickened or dried			Crude protein Crude ash Lactose Moisture, if > 8%	Data sheet required	
09.06.01	Casein powder	Product obtained by drying casein precipitated from skimmed milk or buttermilk by means of acids or rennet			Crude protein Moisture, if > 10%	Data sheet required	
09.06.02	Caseinate, dried	Dried product obtained from broken cheese or casein by treatment with neutralising agents			Crude protein Moisture, if > 10%	Data sheet required	
09.07.02	Whey protein powder	By-product consisting of dried protein compounds obtained from whey or milk by chemical or physical processing	Crude protein min. 70		Crude protein Moisture, if > 8% The designation may be replaced with "milk-protein concentrate"	Data sheet required	
09.08.01	Acid whey powder, neutralised	Dried by-product obtained by the manufacture of fresh cheese, casein or sour milk cheese		Ash insoluble in HCl max. 0,5	Crude protein Lactose Calcium Sodium Moisture, if > 5%	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
09.09.01	Colostrum	Untreated secretion of the udder obtained by milking of farmed lactating animals up to the third or fifth day of lactation.					Fresh colostrum may only be fed in the own establishment
09.09.02	Colostrum powder, defatted, rich in immunoglobulins	Dried product obtained from colostrum after separation of the fat and pasteurizing		Immunoglobulins (IgG) min. 15 Crude protein min. 50	Crude protein Lactose, if > 10% Moisture, if > 5%	Data sheet required (including kind of drying procedure)	References of health status of the animals or the livestock, from which the colostrum has been obtained, should be given in the data sheet
09.09.03	Colostrum feed, standardised	Product obtained drying of colostrum, defatted or partly defatted colostrum and whose content of immunoglobulins and protein is adjusted by addition or extraction of colostrum components		Immunoglobulins (IgG) min. 8 Crude protein min. 35	Crude protein Crude fat Lactose, if > 10% Moisture, if > 5%	Data sheet required	References of health status of the animals or animal stocks, from which the colostrum has been obtained, should be given in the data sheet. The drying procedure needs to include pasteurization or a homologous procedure
09.09.04	Colostrum, defatted, decaseinated, partly demineralized, rich in immunoglobulins	Product obtained of defatted, decaseinated and partly demineralized colostrum and whose immunoglobulin content is thereby enriched		Immunoglobulins (IgG) min. 60 Crude protein min. 80	Crude protein Lactose, if 10% Moisture	Data sheet required. If the heating method used deviates from the requirements of Regulation (EC) 142 / 2011, specify the treatment method as part of the overall hygiene concept.	References of health status of the animals or the livestock, from which the colostrum has been obtained, should be given in the data sheet

**10. Fish and other marine animals, their products and by-products <sup>4)</sup>**

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
10.01.01	Fish liver oil	Oil obtained from fresh livers of fish		Residues insoluble in petroleumether in the product as such max. 0.1 acid index in the product as such max. 6 Moisture max. 0.2, predominately from the cod family subordination from the cod family ( <i>Gadidae</i> )		Data sheet required	Be aware of high vitamin A contents
10.02.01	Fish meal	Product obtained by processing whole fish or parts of fish from which part of the oil may have been removed and to which fish solubles may have been re-added		Crude protein min. 60 ash insoluble in HCl max. 2.2 Moisture max. 12	Crude protein Crude fat Crude ash, if > 20% Moisture, if > 8% Products containing more than 75% crude protein in the dry matter may be qualified as 'rich in protein'	Data sheet required	
10.02.02	Fish solubles, condensed	Product obtained during manufacture of fish meal which is stabilised by acidification or drying			Crude protein Crude fat Moisture, if > 5%	Data sheet required	
10.02.03	Fish oil	Oil obtained from fish or parts of fish			Water, if > 1%	Data sheet required	
10.02.04	Fish oil, refined, hydrogenized	Oil obtained from fish or parts of fish which has been refined and hydrogenized			Iodine number Moisture, if > 1%	Data sheet required.	
10.03.01	Shrimps	Product obtained by steaming and drying shrimps; it may be ground		Ash insoluble in HCl max. 5 Moisture max. 12	Moisture, if > 8% Crude protein, if > 10% Crude fat, if > 5%	Data sheet required	
10.04.01	Mussel meatmeal, dried	Dried and ground meat of mussels			Crude protein Crude fat, if > 5% Moisture, if > 8%	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
10.05.01	Fish protein hydrolysate	Product obtained from fish or of fish parts by means of acid hydrolysis			Moisture Crude protein The predominately fish species may be highlighted	Data sheet required	
<b>11. Minerals</b>							
11.01.03	Calcium carbonate	Product obtained by grinding sources of calcium carbonate, such as limestone, oyster or mussel shells, or by precipitation from acid solution		Calcium min. 36	Calcium Ash insoluble in HCl, if > 5% The origin type may substitute the designation or be added to the designation	Data sheet required	
11.01.04	Calcium chloride	Product consisting of technically pure calcium chloride, including crystal water			Calcium	Data sheet required	
11.01.07	Calcium fumarate	Product consisting of technically pure calcium fumarate			Calcium	Data sheet required	
11.01.08	Calcium gluconate	Product consisting of technically pure calcium gluconate			Calcium	Data sheet required	
11.01.11	Calcium magnesium carbonate	Natural mixture of calcium carbonate and magnesium carbonate			Calcium Magnesium Ash insoluble in HCl, if > 5%	Data sheet required	
11.01.12	Calcium magnesium phosphate	Technically pure calcium magnesium phosphate			Calcium Magnesium Phosphor	Data sheet required	
11.01.13	Calcium sodium phosphate	Product obtained by a hydrothermal process from apatite phosphate, phosphoric acid and soda			Calcium Sodium Phosphor	Data sheet required	
11.01.14	Calcium sulphate	Product that occurs naturally as gypsum ( $\text{CaSO}_4 \cdot x\text{H}_2\text{O}$ )		Calcium min. 23	Calcium	Data sheet required	
11.01.15	Dicalcium phosphate	Precipitated calcium monohydrogen phosphate from inorganic sources ( $\text{CaHPO}_4 \cdot x\text{H}_2\text{O}$ )		Chloride, calculated as NaCl max. 1 Moisture max. 5	Calcium Phosphor	Data sheet required	
11.01.16	Dimagnesium phosphate	Product consisting of technically pure dimagnesium phosphate			Magnesium Phosphor	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
11.01.18	Disodium phosphate	Product consisting of technically pure disodium phosphate, including crystal water		Purity min. 95	Sodium Phosphor	Data sheet required	
11.01.19	Potassium chloride	Product consisting of technically pure potassium chloride			Potassium	Data sheet required	
11.01.20	Calcareous marine algae	Product of natural origin obtained from calcareous algae, ground or granulated		Ash insoluble in HCl max. 5	Calcium	Data sheet required	
11.01.21	Magnesium carbonate, basic	Industrially obtained product consisting in varying proportions of magnesium carbonate, magnesium hydroxide and crystal water		Purity min. 95	Magnesium	Data sheet required	
11.01.22	Magnesium acetate	Product consisting of technically pure magnesium acetate			Magnesium	Data sheet required	
11.01.23	Magnesium chloride	Product consisting of technically pure magnesium chloride (MgCl <sub>2</sub> * 6H <sub>2</sub> O)		Purity min. 95	Magnesium	Data sheet required	
11.01.24	Magnesium citrate	Product consisting of technically pure magnesium citrate			Magnesium	Data sheet required	
11.01.25	Magnesium fumarate	Product consisting of technically pure magnesium fumarate			Magnesium	Data sheet required	
11.01.26	Magnesium gluconate	Product consisting of technically pure magnesium gluconate			Magnesium	Data sheet required	
11.01.27	Magnesium lactate	Product consisting of technically pure magnesium lactate			Magnesium	Data sheet required	
11.01.28	Magnesium oxide	Technically pure magnesium oxide			Magnesium	Data sheet required	
11.01.29	Magnesium propionate	Technically pure magnesium propionate			Magnesium	Data sheet required	
11.01.30	Magnesium phosphate	Product consisting of technically pure mono- or dimagnesium phosphate (MgHPO <sub>4</sub> * xH <sub>2</sub> O)			Magnesium Phosphor	Data sheet required	
11.01.31	Magnesium sulphate	Technically pure magnesium sulphate (MgSO <sub>4</sub> * xH <sub>2</sub> O)			Magnesium Sulphur	Data sheet required	
11.01.32	Monocalcium phosphate	Technically pure calcium-bis-dihydrogen phosphate (Ca(H <sub>2</sub> PO <sub>4</sub> ) <sub>2</sub> * xH <sub>2</sub> O) of mineral origin			Calcium Phosphor	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
11.01.33	Monoammonium phosphate	Technically pure monoammonium phosphate (NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> )			Total nitrogen Phosphor	Data sheet required	
11.01.34	Mono-dicalcium phosphate	Product obtained chemically consisting of equal parts of dicalcium phosphate and mono-calcium phosphate (CaHPO <sub>4</sub> -Ca(H <sub>2</sub> PO <sub>4</sub> ) <sub>2</sub> * H <sub>2</sub> O)		Chloride, expressed as NaCl max. 1	Calcium Phosphor	Data sheet required	
11.01.35	Mono-dicalcium sodium phosphate	Product obtained from calcium sodium phosphate and defluorinated phosphoric acid, or from defluorinated phosphoric acid, calcium oxide and sodium carbonate			Calcium Sodium Phosphor	Data sheet required	
11.01.36	Monosodium phosphate	Technically pure monosodium phosphate (NaH <sub>2</sub> PO * H <sub>2</sub> O).		Purity min. 95	Sodium Phosphor	Data sheet required	
11.01.38	Sodium calcium magnesium phosphate	Product consisting of sodium-calcium-magnesium-phosphate			Calcium Magnesium Sodium Phosphor	Data sheet required	
11.01.39	Sodium acetate	Product consisting of technically pure sodium acetate			Sodium	Data sheet required	
11.01.40	Sodium bicarbonate	Technically pure sodium bicarbonate			Sodium	Data sheet required	
11.01.41	Sodium carbonate	Product consisting of technically pure sodium carbonate			Sodium	Data sheet required	
11.01.42	Sodium chloride	Technically pure sodium chloride or product obtained by grinding natural sources of sodium chloride, such as rock salt, boiled salt or sea salt			Sodium The origin type may substitute the designation or be added to the designation	Data sheet required	
11.01.47	Sodium sulphate, anhydrous	Product consisting of technically pure anhydrous sodium sulphate			Sodium Sulphur	Data sheet required	
11.01.48	Raw phosphate, defluorinated	Product obtained by grinding purified and appropriately defluorinated natural phosphates		Fluor max. 0.2	Calcium Phosphor	Data sheet required	
11.01.49	Tricalcium phosphate	Product consisting of technically pure tricalcium phosphate		Chloride, calculated as NaCl max. 1	Calcium Phosphor	Data sheet required	
11.01.50	Trisodium phosphate	Product consisting of technically pure trisodium phosphate			Sodium Phosphor	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
11.01.51	Trimagnesium phosphate <sup>4)</sup>	Product consisting of technically pure trimagnesium phosphate			Magnesium Phosphor	Data sheet required	
11.01.52	Monopotassium phosphate	Product consisting of technically pure potassium dihydrogen orthophosphate (KH <sub>2</sub> PO <sub>4</sub> )			Potassium Phosphor	Data sheet required	
11.01.53	Magnesium aspartate (-hydrochloride)	Product consisting of technically pure magnesium aspartate in the chemical form as dihydrate, tetrahydrate or hydrochloride		Magnesium min. 6	Magnesium	Data sheet required	
11.01.54	Dicalcium phosphate, dihydrat <sup>4)</sup>	Product obtained from edible bones after the extraction of gelatine		Chloride, calculated as NaCl max. 1 Moisture max. 5	Calcium Phosphor "contains di-calcium phosphate of animal origin, may not be fed to ruminants"	Data sheet required	Regulation (EU) No. 999/2001, as amended, need to be observed
11.01.55	Calcium carbonate from crustacean shells	Product obtained by drying and grinding hydrolysed crab and shrimp shells		Calcium min. 20	Calcium Crude fibre	Data sheet required	
11.01.56	Calcium pidolate	Product obtained from L-glutamic acid and calcium carbonate		Calcium min. 13	Calcium	Data sheet required	
11.01.57	Calcium carbonate-magnesium oxide	Product obtained by heating of natural calcium and magnesium containing substances like dolomite		Calcium oxide max. 1 Magnesium oxide min. 22	Calcium Magnesium	Data sheet required	
11.01.58	Tripotassium citrate	Product consisting of technically pure tripotassium citrate			Potassium	Data sheet required	
11.01.59	Magnesium glycinate	Product consisting of technically pure magnesium glycinate		Magnesium min. 10	Magnesium	Data sheet required	
11.01.60	Salt from the processing of plant crude glycerol, rich in sodium	By-product obtained during the distillation of vegetable crude glycerol which consists essentially of sodium chloride and residues of glycerol			Sodium Glycerol	Data sheet required. The method used to determine the glycerol content should be indicated	Ensure adequate water supply for the animal
11.01.61	Calcium carbonate, Decarbonisation	Product obtained by decarbonisation as part of drinking water treatment by the addition of calcium hydroxide.		Calcium min. 39	Calcium	Data sheet required	

## 12. Miscellaneous straight feeding stuffs

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
12.01.01	Dextrose molasses	By-product obtained during the production of dextrose by enzymatic digestion of grain starch after the crystallisation.		Total sugar min. 50 Moisture max. 50	Total sugar, calculated as sucrose Moisture	Data sheet required	
12.02.01	Glucose molasses	By-product obtained during the production of glucose by enzymatic digestion of grain starch after the crystallisation		Total sugar min. 50 Moisture max. 50	Total sugar, calculated as sucrose Moisture	Data sheet required	
12.03.01	Isomaltulose (palatinose-) molasses	By-product obtained during the production of isomaltulose (palatinose) by enzymatic digestion of saccharose after the crystallization		Total sugar min. 50 Moisture max. 50	Total sugar, calculated as sucrose Moisture The word "molasses" in the description may be replaced by the word "syrup"	Data sheet required.	
12.06.01	Starch sugar	Product obtained by hydrolysis of starch		Reduced sugar min. 70 Moisture max. 22	Reduced sugar Moisture	Data sheet required	
12.06.02	Dextrose (glucose)	Product of the saccharification of starch, consisting of purified, crystallised glucose, with or without crystal water		Glucose min. 99 Moisture max. 10	Glucose	Data sheet required	
12.07.01	1,2 Propanediol (Propylenglycol)	Product obtained from Propylene oxide by hydrogenation		Monopropylenglycol min. 99.5 Moisture max. 0.2	Propan-1,2-diol can also be called Propylenglycol	Data sheet required	
12.07.02	Plant glycerine	Product obtained by distilling "raw plant glycerine" (see 12.07.03), it may be bleached		Glycerine min. 99	Glycerine	Data sheet required	Ensure adequate water supply for the animals; The determination of the glycerol content must be carried out according to the analytical method of the VDLUFA, Methodenbuch Vol. III, No. 14.25.1

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
12.07.03	Raw plant glycerine	By-product obtained during the production of fatty acid methyl esters (biodiesel) from vegetable oils or fats		Glycerine min. 80 Methanol max. 0,2	Glycerine Moisture Crude ash Chloride, calculated as NaCl, if > 1% potassium, if > 1%	Data sheet required	Ensure adequate water supply for the animals; The determination of the glycerol content must be carried out according to the analytical method of the VDLUFA, Methodenbuch Vol. III, No. 14.25.1
12.08.01	Lignocellulose	Product obtained by means of mechanical processing (fibrillation) of fresh natural dried wood and which predominantly consists of lignocellulose	Acidic Detergent Lignin (ADL) min. 20	Size of particles < 500µm air jet sieving	May be designated as woodfibre. Plant species must be specified	Data sheet required	Low energy- and nutrient supply, dietary fibre-character. Water binding capacity may be indicated
12.08.02	Powdercellulose	Product obtained by decomposition, separation of the lignin and further cleaning as cellulose from vegetable fibre substances of untreated wood, and which is exclusively modified by mechanical processing		Neutral detergent fibre (NDF) min. 87		Data sheet required	Low energy- and nutrient supply, bulk material character
12.08.03	Psyllium husks	Product obtained by dehusking of cleaned psyllium seeds ( <i>Plantago ovata</i> )		Swelling number min. 40	The word "psyllium husks" in the description may be replaced by the word "psyllium"	Data sheet required	Low content of available energy and nutrients, dietary fibre character; water binding capacity may be stated
12.08.04	Spruce branch powder	Branch of common spruce ( <i>Picea abies</i> ), harvested freshly in its natural state, mechanical processed and dried		Size of particles < 400µm Ash insoluble in HCl < 3		Data sheet required	Low content of nutrient supply
12.08.05	Lignocellulose from bark	Product which is manufactured from fresh, purified bark and small amounts of wood after drying by mechanical treatment and primarily consists of lignocellulose	Acid detergent lignin (ADL) min. 15	Particle size < 300 µm (air flow sieving)	Crude fibre Crude ash Plant species must be specified	Data sheet required	Low energy and nutrient supply capacity, fibre character

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
12.08.06	Peat, dried	Product originated by the natural decomposition of plants (especially peat moss) in anaerobic and oligotrophic atmosphere and which shall be dried		Humic acids min. 10 Ash insoluble in HCl max. 7	Crude fibre	Data sheet required	Low energy and nutrient supply capacity, fibre character Note arsenic and dioxin contents
12.08.07	Product obtained from brown coal, rich in humic acid	Product obtained by crushing, drying and hydrolytic conversion from brown coal or soft brown coal (Leonardite) which consists mainly of humic acids and their salts		Humic acids min. 50 crude ash max. 30	Crude fibre Ash insoluble in HCl, if > 5%	Data sheet required. Information on the drying process and fuel used	Note low energy and nutrient supply capacity, fibre character, arsenic and dioxin levels
12.09.01	Malt coffee spent wash	By-product obtained when producing coffee extract from barley, rye and chicory			Crude fibre Crude protein Crude fat	Data sheet required	
12.10.01	Salts from fatty acids	Product obtained by saponification of fatty acids with calcium-, sodium- or potassium hydroxide			Crude fat Crude ash Moisture, if > 1% Calcium, potassium or sodium depending on treatment	Data sheet required	
12.11.01	Starch mixture	Product consisting of native and / or modified edible starch obtained from maize, rice, potatoes or manioc in different proportions			Starch Kind of Starch in descending order	Data sheet required	
12.12.01	Lactulose	Semi-synthetic disaccharides obtained by the isomerization of glucose to fructose of lactose and may be present as a powder or syrup		Lactulose min. 60	Lactulose	Data sheet required	Provisions of Regulation (EU) No. 142/2011 in the currently valid version are to be noted

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
12.13.01	Pectin	Product, which is obtained by aqueous extraction of suitable plant material, in particular citrus fruits or apples, and which consists essentially of the partial methyl esters of polygalacturonic acid, and their sodium, potassium, calcium or ammonium salts		Max.1% free methanol, ethanol or propan-2-ol individually or in sum	Pectin	Data sheet required. As precipitant only methanol, ethanol or propane-2-ol may be used	The pectin content can be determined by determining the polygalacturonic acid
12.14.01	Fructo-Oligosaccharides	Product obtained by enzymatic degradation of polymeric carbohydrates (e.g. inulin) or produced from sucrose			Content of fructo-oligosaccharides (method of analysis must be specified), animal species or category and recommended dosage (minimum, maximum level) and raw material used shall be indicated	Data sheet required	Prebiotic effect
12.15.01	Poultry grit from quartz	Product which is obtained by means of crushing or without crushing of purified quartz gravel or quartz sand			Raw material, granulation (average and / or range) as well as target species and application must be indicated. May also be referred to stomach pebbles or stomach gravel of quartz	Data sheet required	In support of the mechanical comminution of feed in the digestive tract of poultry
12.16.01	Cellobiose	Product obtained enzymatically from sucrose (e.g. sugar beet), consisting of two $\beta$ -1,4-glycosidically bound glucose molecules (disaccharide) in crystalline form		Cellobiose min. 95	Cellobiose	Data sheet required	analytical method shall be specified Prebiotic effect

**13. Former foods, products and by-products of food production**

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
13.01.01	Former foodstuff <sup>4)</sup>	Foodstuffs other than recyclable residues from the preparation of food (catering reflux), which were prepared in full compliance with EU food legislation for human consumption, but for practical or logistical reasons or due to problems in the production or due to defective packing or otherwise are no longer intended for that purpose, and which do not pose a health risk when used as animal feed. They can be dried and must be free of packaging and packaging components			The designation must be made specifically by the nature of the product. The designation may be supplemented by an indication of the way in which the feed material was recovered. Moisture, if > 14%	Data sheet required. Feeding is permitted, if not restricted by other legal regulations. Additional information on the drying process and the fuel if dried	Data sheet to be provided, see explanatory notes, observe spoilage of the product
13.02.01	Products and by-products of the convenience food industry <sup>4)</sup>	Products and by-products obtained during the production of convenience food. They may be dried and must be free of packaging and packaging parts			The designation must be made specifically by the nature of the product The designation may be supplemented by an indication of the way in which the feed material was recovered. Moisture, if >14%	Data sheet required. Feeding is permitted, if not restricted by other legal regulations. Additional information on the drying process and the fuel if dried	Data sheet to be provided, see explanatory notes
13.02.02	Products and by-products from the baking and pastry industry <sup>4)</sup>	Products and by-products obtained when producing bread, inclusive biscuits, wafers or pastry goods. They may be dried and must be free of packaging and packaging parts			The designation must be made specifically by the nature of the product. The designation may be supplemented by an indication of the way in which the feed material was recovered. Starch Total sugar, calculated as sucrose, Moisture, if >14% Crude fat, if > 5%	Data sheet required. Feeding is permitted, if not restricted by other legal regulations. Additional information on the drying process and the fuel if dried	Data sheet to be provided, see explanatory notes
13.02.03	Products and by-products from the sweets industry <sup>4)</sup>	Products and by-products obtained during the production of sweets, inclusive chocolate. They may be			The designation must be made specifically by the nature of the product The designation may be	Data sheet required. Feeding is permitted, if not restricted by other legal	Data sheet to be provided, see explanatory notes

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
		dried and must be free of packaging and packaging parts			supplemented by an indication of the way in which the feed material was recovered. Starch Crude fat, if > 5% Total sugar, calculated as sucrose, Moisture, if > 14%	regulations. Additional information on the drying process and the fuel if dried	
13.02.04	Products and by-products of the confectionary and ice-cream industry <sup>4)</sup>	Products and by-products obtained when producing confectionary, cakes or ice-cream. They may be dried and must be free of packaging and packaging parts			The designation must be made specifically by the nature of the product The designation may be supplemented by an indication of the way in which the feed material was recovered. Starch Total sugar, calculated as sucrose, Crude fat Moisture, if >14%	Data sheet required. Feeding is permitted, if not restricted by other legal regulations. Additional information on the drying process and the fuel if dried	Data sheet to be provided, see explanatory notes
13.02.05	Products and by-product from processing fresh fruit and vegetables	Products and by-products obtained when processing fresh fruit and vegetables. They may be dried and must be free of packaging and packaging parts			The designation must be made specifically by the nature of the product The designation may be supplemented by an indication of the way in which the feed material was recovered. Starch Crude fibre Crude fat, if > 5% Ash insoluble in HCl, if > 5% Moisture, if > 14%	Data sheet required. Feeding is permitted, if not restricted by other legal regulations. Additional information on the drying process and the fuel if dried	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
13.02.06	Products and by-products from the dairy industry <sup>4)</sup>	Products and by-products obtained at the end of the production process by rinsing the residues with potable water when producing dairy products (e.g. buttermilk, quark, ice-cream) from heated milk, also by adding other foodstuffs (e.g. rice, fruit juices) in the dairy, unless listed separately in the positive list, and to which heated centrifuge sludge (centrifuges repelling) can be added			The designation must be made specifically by the nature of the product The designation may be supplemented by an indication of the way in which the feed material was recovered. Moisture Crude protein Crude fat Lactose, if > 10% Total sugar, calculated as sucrose	Data sheet required. Feeding is permitted, if not restricted by other legal regulations	Data sheet to be provided, see explanatory notes. The product must not contain any inhibitors, detergent or disinfectant residues. The requirements of Regulation (EU) No. 142/2011 shall be observed
<b>14. Proteins obtained from microorganisms</b>							
14.01.01	Bacteria cultivated on methanol for calves, pigs, poultry and fish	Product obtained by drying <i>Methylophilus methylotrophus</i> bacteria, strain NCIB strain 10.515, cultivated on methanol		Crude protein in the product as such min. 68 Reflectance index > 50	Crude protein Crude fat Crude ash Moisture	Data sheet required	a) "Avoid inhalation of gas / smoke / steam / aerosol"
14.02.01	Protein product of fermentation from natural gas obtained by culture of <i>Methylococcus capsulatus</i> (Bath) strain NCIMB 11132, <i>Alcaligenes acidovorans</i> strain NCIMB 12387, <i>Bacillus brevis</i> strain NCIMB 13288 and <i>Bacillus firmus</i> strain NCIMB 13280 for pigs for fattening from 25 to 60kg and for salmon	Protein product obtained of fermentation from natural gas (approx. 91% methane, 5% ethane, 2% propane, 0.5% isobutane, 0.5% n-butane and 1% other constituents), ammonium and mineral salts by culture of <i>Methylococcus capsulatus</i> (Bath), <i>Alcaligenes acidovorans</i> , <i>Bacillus brevis</i> and <i>Bacillus firmus</i> and the cells of which have been killed		Crude protein in the product as such min. 65	Crude protein Crude fat Crude ash Moisture	Data sheet required	a) 'The product named in Column 1 must not exceed 8% of the daily ration in the case of pigs for fattening and calves, 19% in the case of salmon (fresh water) and 33% in the case of salmon (seawater)' b) 'Avoid inhalation'

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
14.02.02	Bacterial protein of <i>Escherichia coli</i> K12	By-product from the production of amino acids by multiplying <i>Escherichia coli</i> K12 in nutrient solutions of plant or chemical origin with addition of ammonia or minerals salts, possibly hydrolyzed or dried			Crude protein	Data sheet required	
14.03.01	Yeast	All yeasts obtained from the fermentation of animal or vegetable nutrient substrates such as molasses, distillery residues, cereals and products containing starch, fruit juice, whey, lactic acid or hydrolysed vegetable fibres, using <i>Saccharomyces cerevisiae</i> , <i>Saccharomyces carlsbergiensis</i> , <i>Kluveromyces lactis</i> or <i>Kluveromyces fragilis</i> , or <i>Candida utilis</i> ( <i>Cyberlindnera jadinii</i> / <i>Pichia jadinii</i> ) and the cells of which have been killed or inactivated and may be dried			Crude protein Moisture, if > 8% Yeast Yeasts which are dried and originate from the production of beer can be described as 'brewer's yeast, dried'	Data sheet required If dried, details of the drying process and fuel used	
14.04.01	Brewer's yeast, fresh	By-product obtained during the production of beer which consists essentially of the cells of yeast strains of the genus <i>Saccharomyces cerevisiae</i> and / or <i>Saccharomyces pastorianus</i> and whose cells are not killed			Crude protein Moisture	Data sheet required	The yeast cells must be inactivated before feeding
14.06.01	By-product of fermentation of solid material with fungi, rich in crude protein	By-product, rich in crude protein, obtained by fermentation of defined substrates (rape seed extracted, beet pulp, molassed, maize gluten feed, maize semolina) with fungi ( <i>Aspergillus niger</i> , <i>Aspergillus</i>		Crude protein min. 20 in original material	Crude protein Crude fat Crude fibre	Data sheet required	Included fungi must be killed

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
		<i>tubingensis</i> , <i>Aspergillus oryzae</i> , <i>Aspergillus sojae</i> and <i>Neurospora intermedia</i> ). Organic acids are added in order to inactivate the residues of the biomass and preserve the product					
14.07.01	Crude protein rich by-product of the production of amino acids by <i>Corynebacterium glutamicum</i>	Crude protein rich by-product from the production of amino acids by fermentation of a nutrient solution of vegetable or chemical origin (e.g. ammonia and mineral salts) with <i>Corynebacterium glutamicum</i> . The microbes must be inactivated or killed		Crude protein min 65	Crude protein Lysine Crude ash	Data sheet required	Included fungi must be killed
14.08.01	By-product of the production of enzymes with <i>Aspergillus niger</i>	By-product which is obtained during the fermentative production of enzymes by means of <i>Aspergillus niger</i> using defined substrates (for example malt germs, wheat bran) and is dried			Crude protein Crude fat Crude ash	Data sheet required Details of the drying process and fuel used	Included fungi must be killed
14.09.01	By-product of the production of citric acid with <i>Aspergillus niger</i>	By-product obtained in the production of citric acid by fermentation of high-sugar substrates with the aid of <i>Aspergillus niger</i> . It consists essentially of the mycelium of the fungus and is dried		Crude fibre min. 30	Crude protein Crude fat Crude ash	Data sheet required Details of the drying process and fuel used	Included fungi must be killed. Low nutrient and energy supply, fibre character
14.10.01	By-product of the production of citric acid with <i>Pichia guilliermondii</i>	By-product obtained from the fermentative production of citric acid by means of <i>Pichia guilliermondii</i> using suitable substrates (for example, molasses, sugar syrup or starch-containing products). It consists essentially of inactivated cells of this yeast strain and their constituents, may contain residues of the substrates and is dried			Crude protein Moisture	Data sheet required Details of the drying process and fuel used	Contained yeast cells must be inactivated
<b>Non-protein nitrogenous compounds (NPN compounds)</b>							
<b>17. Ammonium salts</b>							

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
17.01.02	Ammonium lactate from fermentation for bovines, sheep and goats with functioning rumen	Ammonium lactate produced by fermentation of whey with <i>Lactobacillus bulgaricus</i> CH <sub>3</sub> CHOHCOONH <sub>4</sub>		Crude protein in the product as such min. 44	Crude protein Crude ash Moisture	Data sheet required	
17.01.03	Ammonium sulphate for bovines, sheep and goats with functioning rumen	Product consisting of ammonium sulphate in aqueous solution (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>		Ammonium sulphate in the product as such min. 35	Nitrogen Moisture	Data sheet required	"Ammonium sulphate must not exceed 0.5% of the daily ration in the case of calves, lambs and goat kids"
<b>18. Other NPN compounds (except ammonium salts)</b>							
18.01.01	By-product from the production of L-glutamic acid, for bovines, sheep and goats with functioning rumen	Concentrated liquid by-product from the production of L-glutamic acid by fermentation of sucrose, molasses, starch products and their hydrolysates with <i>Corynebacterium melassecola</i>		Crude protein in the product as such min. 48	Crude protein Crude ash Moisture	Data sheet required	
18.01.02	By-product from the production of L-lysine, for bovines, sheep and goats with functioning rumen	Concentrated liquid by-product from the production of L-lysine monohydrochloride by fermentation of sucrose, molasses, starch products and their hydrolysates with <i>Brevibacterium lactofermentum</i>		Crude protein in the product as such min. 45	Crude protein Crude ash Moisture	Data sheet required	
<b>19. Products and by-products from terrestrial animals <sup>4)</sup></b>							
19.01.01	Blood plasma powder, from pigs	Product obtained by means of centrifugal force and partial filtering of pig blood, spray-dried		Crude protein min. 70	Crude protein Crude ash Sodium	Data sheet required	Provisions of Regulation (EU) No. 999/2001, as amended, must be observed
19.01.02	Haemoglobin powder, from pigs	By-product obtained when producing plasma from pig blood, consisting predominately of spray-dried haemoglobin		Crude protein min. 90	Crude protein Iron	Data sheet required	Provisions of Regulation (EU) No. 999/2001, as amended, must be observed

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
19.01.03	Protein hydrolyzate from porcine hemoglobin	Product obtained by enzymatic hydrolysis from the red blood cells (hemoglobin) of pig blood and is spray-dried		Crude protein min. 85	Crude protein Crude ash Iron Moisture	Data sheet required	Provisions of Regulation (EC) no. 999/2001, as amended, must be observed, note potassium
19.01.04	Protein hydrolyzate from porcine blood plasma	Product obtained by centrifuging and filtering pig blood, enzymatically hydrolysed and spray-dried		Crude protein min. 73	Crude protein Crude ash Sodium	Data sheet required	Provisions of Regulation (EU) No. 999/2001, as amended, must be observed
19.02.01	Protein hydrolysate, from pigs	By-product obtained during the production of heparin by enzymatic digestion from pig intestine mucosa		Crude protein min. 50	Crude protein Crude ash Sodium	Data sheet required	Regulation (EU) No. 999/2001, as amended, needs to be observed
19.03.01	Gelatine, from pigs	Product obtained by means of hydrolysis of the collagen of defatted pig bones, dried		Crude protein min. 90	Crude protein Crude ash	Data sheet required	Regulation (EU) No. 999/2001, as amended, needs to be observed
19.03.02	Protein hydrolyzate of gelatine extraction of pigs	By-product of the production of gelatine of hydrolyzed pig bones, which may be dried		Crude protein min. 60	Crude protein Crude fat Crude ash Moisture	Data sheet required	Regulation (EU) No. 999/2001, as amended, needs to be observed
19.04.01	Animal fat	Product consisting of fat from warm-blooded land animals		Impurities insoluble in petrolether for rendered fat of ruminants max. 0.15	Moisture, if >1% The designation may be completed by the indication of the animal species and of kind of fat, from which it has been derived (tallow, lard, bone fat etc.)	Data sheet required	
<b>20. Egg products (If cracked eggs are used, the top note<sup>4)</sup> must be considered)</b>							
20.01.01	Egg powder	Product consisting of dried and pasteurised hen eggs without shells or of a mixture of different proportions of dried albumen and dried egg yolk		Moisture max. 5	Crude protein Crude fat	Data sheet required	

Number	Designation	Description	<sup>5)</sup> Distinguishing features (%)	<sup>5)</sup> Requirements (%)	<sup>5)</sup> Instruction for labelling (constituents to be declared)	Additional information on the production process	Remarks
20.01.02	Egg powder, sugared	Egg powder to which one or several types of sugar has been added	Total sugar mind. 3	Moisture max. 5	Crude protein Crude fat Total sugar	Data sheet required	
20.02.01	Hen's egg albumen, pasteurised	Product obtained after the separation of shells and yolk from cracked hen eggs, pasteurised and denatured with fishmeal_and / or may be dried			Crude protein Moisture	Data sheet required. When dried, details of the drying process and fuel used	
20.03.01	Egg shells, dried	By-product obtained during the production of egg powder. It consists mainly of egg shells and is dried			Crude ash Calcium	Data sheet required Details of the drying process and fuel used	

### Alphabetical list of the straight feeding stuffs

Designation	Number
Acid whey powder, neutralised	09.08.01
Acorns, dehusked	06.02.01
Amaranth expeller	02.25.02
Ammonium lactate from fermentation for bovines, sheep and goats with functioning rumen	17.01.02
Ammonium sulphate for bovines, sheep and goats with functioning rumen	17.01.03
Animal fat	19.04.01
Apple molasses	06.05.03
Apple vinasse	05.04.02
Bacteria cultivated on methanol for calves, pigs, poultry and fish	14.01.01
Bacterial protein of Escherichia coli K12	14.02.02
Barley	01.02.01
Barley bran	01.02.05
Barley flakes	01.02.03
Barley hulls and bran	01.02.06
Barley middlings	01.02.04
Bean bran	03.02.04
Bean flakes	03.02.02
Bean middlings	03.02.03
Beans, toasted	03.02.01
Beet leaves	07.07.01
(Beet) sugar / sucrose	04.10.03
Black cumin expeller	02.19.02
Blood plasma powder, from pigs	19.01.01
Borage expeller	02.17.02
Brassica plants	07.02.01
Brewers' grains	05.01.01
Brewer's yeast, fresh	14.04.01
Buckwheat	06.01.01
Buckwheat hulls and bran	06.01.03
Buckwheat, dehulled	06.01.02
Buttermilk	09.03.01
Buttermilk powder	09.03.02
By-product from the production of L-glutamic acid, for bovines, sheep and goats with functioning rumen	18.01.01
By-product from the production of L-lysine, for bovines, sheep and goats with functioning rumen	18.01.02
By-product of fermentation of solid material with fungi, rich in crude protein	14.06.01
By-product of the production of citric acid with Aspergillus niger	14.09.01
By-product of the production of citric acid with Pichia guilliermondii	14.10.01
By-product of the production of enzymes with Aspergillus niger	14.08.01
Calcareous marine algae	11.01.20
Calcium carbonate	11.01.03
Calcium carbonate from crustacean shells	11.01.55
Calcium carbonate, Decarbonisation	11.01.61

<b>Designation</b>	<b>Number</b>
Calcium carbonate-magnesium oxide	11.01.57
Calcium chloride	11.01.04
Calcium fumarate	11.01.07
Calcium gluconate	11.01.08
Calcium magnesium carbonate	11.01.11
Calcium magnesium phosphate	11.01.12
Calcium pidolate	11.01.56
Calcium sodium phosphate	11.01.13
Calcium sulphate	11.01.14
Camelina expeller	02.26.02
(Cane) sugar molasses	08.04.02
(Cane) sugar/sucrose	08.04.01
Carob meal	06.03.01
Carrot	04.02.01
Carrot pulp	04.02.02
Casein powder	09.06.01
Caseinate, dried	09.06.02
Cellobiose	12.16.01
Cereal grains / mixed cereals	01.10.02
Cereal plants	07.03.01
Cereal pulp	01.10.03
Chia press cake	02.21.02
Chia seed	02.21.01
Chick peas	03.05.01
Chickling vetch	03.07.01
Chicory	04.09.01
Chicory pulp, dried	04.09.03
Chicory roots	04.09.02
Chlorella algae	08.07.01
Citrus pulp, (Partially) depectinised	06.07.02
Citrus pulp, dried	06.07.01
Clover meal	07.04.01
Cocoa husks	02.03.01
Coffee skin pellets	06.04.01
Coffee waste pellets	06.04.02
Colostrum	09.09.01
Colostrum feed, standardised	09.09.03
Colostrum powder, defatted, rich in immunoglobulins	09.09.02
Colostrum, defatted, decaseinated, partly demineralized, rich in immunoglobulins	09.09.04
Condensed/grain steep water	01.10.05
Copra expeller	02.05.02
Copra, extracted	02.05.03
Cotton seed	02.01.01
Crude protein rich by-product of the production of amino acids by <i>Corynebacterium glutamicum</i>	14.07.01
Dehusked barley	01.02.02
Dehusked oat	01.03.02
Dehusked Spelt	01.01.02

<b>Designation</b>	<b>Number</b>
Dextrose (glucose)	12.06.02
Dextrose molasses	12.01.01
Dicalcium phosphate	11.01.15
Dicalcium phosphate, dihydrat	11.01.54
Dimagnesium phosphate	11.01.16
Disodium phosphate	11.01.18
Distillers dried grains feed	05.06.01
Distillery spent wash	05.05.01
Dried (sugar) beet pulp	04.10.08
Dried cereal pulp	01.10.04
Dried copra	02.05.01
(Drinking) Water	00.01.01
Egg powder	20.01.01
Egg powder, sugared	20.01.02
Egg shells, dried	20.03.01
Evening primrose expeller	02.18.02
Fatty acid distillates from physical refining	02.10.05
Fatty acids from chemical refining	02.10.04
First wort	05.08.01
Fish liver oil	10.01.01
Fish meal	10.02.01
Fish oil	10.02.03
Fish oil, refined, hydrogenized	10.02.04
Fish protein hydrolysate	10.05.01
Fish solubles, condensed	10.02.02
Fodder beat	04.01.01
Fodder rice	01.06.03
Former foodstuff	13.01.01
Fragrant agrimony	08.11.01
Fructo-Oligosaccharides	12.14.01
Fruit pulp	06.05.01
Fruit pulp, depectinised	06.05.02
Gelatine, from pigs	19.03.01
Glucose molasses	12.02.01
Grain bran	01.10.10
Grain expanded with caustic soda	01.10.06
Grain feed flour	01.10.07
Grain middlings	01.10.08
Grain semolina bran	01.10.09
Grape kernels, de-oiled	06.06.02
Grape pulp from wine production	05.07.01
Grass / legume plant	07.01.02
Green meal	07.01.03
Groundnut expeller	02.02.02
Groundnut extracted	02.02.03
Groundnuts	02.02.01
Guar germs, extracted	03.04.01
Haemoglobin powder, from pigs	19.01.02
Hemp expeller	02.20.02

<b>Designation</b>	<b>Number</b>
Hen's egg albumen, pasteurised	20.02.01
Hop cones pellets, debittered	08.01.01
Horse bean	03.01.01
Horse bean flakes	03.01.02
Horse bean fruit water	03.01.05
Horse bean protein	03.01.03
Horse bean pulp	03.01.04
Horseradish pulp	04.05.01
Isomaltulose (palatinose-) molasses	12.03.01
Jerusalem artichoke	04.08.01
Jerusalem artichoke chips / Jerusalem artichoke meal	04.08.02
Lactose powder	09.04.01
Lactulose	12.12.01
Leaves of the wax-leaved leaf cherry	08.13.01
Legumes bran	03.11.01
Lentil hulls	03.06.02
Lentils	03.06.01
Lignocellulose	12.08.01
Lignocellulose from bark	12.08.05
Linseed	02.07.01
Linseed cake	02.07.02
Linseed extraction meal, partially extracted	02.07.04
Linseed, extraction meal	02.07.03
Lucerne meal	07.05.01
Magnesium acetate	11.01.22
Magnesium aspartate (-hydrochloride)	11.01.53
Magnesium carbonate, basic	11.01.21
Magnesium chloride	11.01.23
Magnesium citrate	11.01.24
Magnesium fumarate	11.01.25
Magnesium gluconate	11.01.26
Magnesium glycinate	11.01.59
Magnesium lactate	11.01.27
Magnesium oxide	11.01.28
Magnesium phosphate	11.01.30
Magnesium propionate	11.01.29
Magnesium sulphate	11.01.31
Maize	01.05.01
Maize bran	01.05.05
Maize flakes	01.05.02
Maize germ	01.05.06
Maize germ and bran	01.05.07
Maize germ expeller	01.05.12
Maize germ, extracted	01.05.13
Maize gluten	01.05.11
Maize gluten feed	01.05.14
Maize hulls	01.05.17
Maize middlings	01.05.04
Maize plants	07.06.01

<b>Designation</b>	<b>Number</b>
Maize screenings	01.05.03
Maize starch	01.05.08
Malt bran	05.03.02
Malt coffee spent wash	12.09.01
Malt germs (Malt sprouts)	05.03.01
Manioc / tapioca	04.04.01
Marigold meal	08.03.01
Milk	09.01.01
Milk fat	09.02.01
Milk powder	09.01.02
Milk thistle expeller	02.23.01
Millet	01.04.01
Monantha vetch	03.10.01
Mono and diglycerides of fatty acids	02.24.01
Monoammonium phosphate	11.01.33
Monocalcium phosphate	11.01.32
Mono-dicalcium phosphate	11.01.34
Mono-dicalcium sodium phosphate	11.01.35
Monopotassium phosphate	11.01.52
Monosodium phosphate	11.01.36
Mussel meatmeal, dried	10.04.01
Oat	01.03.01
Oat flakes	01.03.04
Oat groat	01.03.03
Oat hulls and bran	01.03.07
Oat husks	01.03.08
Oat middlings	01.03.05
Oat-Spelt-husks	01.03.09
Olives	02.08.01
Oregano leaves	08.08.01
Palm kernel expeller	02.09.02
Palm kernel, extracted	02.09.03
Palm kernels	02.09.01
Pea bran	03.03.04
Pea flakes	03.03.02
Pea fruit water	03.03.07
Pea hulls	03.03.08
Pea middlings	03.03.03
Pea protein	03.03.05
Pea pulp	03.03.06
Peas	03.03.01
Peat, dried	12.08.06
Pectin	12.13.01
Permanent pasture products	07.01.01
Plant glycerine	12.07.02
Potassium chloride	11.01.19
Potato fibre / starch mixture	04.03.06
Potato flakes	04.03.02
Potato fruit water, condensed	04.03.08

<b>Designation</b>	<b>Number</b>
Potato peels	04.03.10
Potato protein	04.03.07
Potato pulp	04.03.09
Potato starch	04.03.03
Potato steaming water	04.03.12
Potatoe bits and pieces	04.03.11
Potatoe granules	04.03.13
Potatoes	04.03.01
Poultry grit from quartz	12.15.01
Powdercellulose	12.08.02
Pre-gelatinised maize flour	01.05.15
Pre-gelatinised maize starch	01.05.09
Pre-gelatinised oat flour	01.03.06
Pre-gelatinised potato starch	04.03.04
Pre-gelatinised rice flour	01.06.06
Pre-gelatinised rye flour	01.07.07
Pre-gelatinised wheat flour	01.09.08
Pre-gelatinised wheat starch	01.09.13
Preserved wet grain	01.10.01
Pressed (sugar) beet pulp	04.10.07
Pressed (Sugar) beet pulp, (partially) depectinised	04.10.11
Product obtained from brown coal, rich in humic acid	12.08.07
Products and by-product from processing fresh fruit and vegetables	13.02.05
Products and by-products from the baking and pastry industry	13.02.02
Products and by-products from the dairy industry	13.02.06
Products and by-products from the sweets industry	13.02.03
Products and by-products of the confectionary and ice-cream industry	13.02.04
Products and by-products of the convenience food industry	13.02.01
1.2 Propanediol (Propylenglycol)	12.07.01
Protein hydrolysate, from pigs	19.02.01
Protein hydrolyzate from porcine blood plasma	19.01.04
Protein hydrolyzate from porcine hemoglobin	19.01.03
Protein hydrolyzate of gelatine extraction of pigs	19.03.02
Protein product of fermentation from natural gas obtained by culture of Methylococcus capsulatus (Bath) strain NCIMB 11132, Alcaligenes acidovorans strain NCIMB 12387, Bacillus brevis strain NCIMB 13288 and Bacillus firmus strain NCIMB 13280 for pigs for fattening from 25 to 60kg and for salmon	14.02.01
Psyllium husks	12.08.03
Pumpkin seed expeller	02.06.01
Rape seed	02.11.01
Rape seed cake	02.11.03
Rape seed extraction meal, partially extracted	02.11.05
Rape seed hulls	02.11.02
Rape seed, extraction meal	02.11.04
Raw phosphate, defluorinated	11.01.48
Raw plant glycerine	12.07.03
Rice	01.06.01

<b>Designation</b>	<b>Number</b>
Rice bran	01.06.10
Rice bran with calcium carbonate	01.06.09
Rice flakes	01.06.04
Rice gluten/Rice protein	01.06.15
Rice middlings	01.06.07
Rice semolina/rice flour	01.06.05
Rice, broken	01.06.02
Roselip oilcake	06.09.01
Rye	01.07.01
Rye bran	01.07.06
Rye feed	01.07.05
Rye flakes	01.07.02
Rye middlings	01.07.03
Rye screenings	01.07.04
Safflower seed	02.12.01
Safflower seed expeller	02.12.02
Safflower seed, extracted	02.12.03
Salt from the processing of plant crude glycerol, rich in sodium	11.01.60
Salts from fatty acids	12.10.01
Schizochytrium limacinum algae	08.09.01
Sea weed meal	08.05.01
Sesame seed	02.13.01
Sesame seed expeller	02.13.02
Sesame seed, extracted	02.13.03
Shrimps	10.03.01
Skimmed milk	09.01.03
Skimmed milk powder	09.01.04
Small barley flakes, expanded	01.02.08
Small maize flakes, expanded	01.05.16
Small water lens	08.10.01
Sodium acetate	11.01.39
Sodium bicarbonate	11.01.40
Sodium calcium magnesium phosphate	11.01.38
Sodium carbonate	11.01.41
Sodium chloride	11.01.42
Sodium sulphate, anhydrous	11.01.47
Sorghum	01.04.02
Soya (bean) extraction cake	02.14.04
Soya (bean) extraction meal, toasted	02.14.05
Soya (bean) hulls	02.14.03
Soya (bean) protein concentrate	02.14.07
Soya (bean) protein isolate	02.14.08
Soya (bean) extraction meal from, dehulled seeds, toasted	02.14.06
Soya beans	02.14.01
Soya beans, toasted	02.14.02
Spelt	01.01.01
Spelt flakes	01.01.03
Spelt husks	01.01.04
Spirulina algae	08.06.01

<b>Designation</b>	<b>Number</b>
Spruce branch powder	12.08.04
Starch mixture	12.11.01
Starch sugar	12.06.01
Straw	07.03.02
Straw, expanded	07.03.03
Sugar beet	04.10.01
(Sugar) beet cooking chips	04.10.10
(Sugar) beet molasses	04.10.04
(Sugar) beet molasses, partially desugared	04.10.05
(Sugar) beet pulp, molassed	04.10.09
(Sugar) beet seeds	06.08.01
(Sugar) beet tops and tails	04.10.02
Sunflower cake	02.15.04
Sunflower cake poor in husks	02.15.03
Sunflower extraction meal	02.15.05
Sunflower extraction meal from peeled or partially peeled seed	02.15.06
Sunflower husk	02.15.09
Sunflower protein concentrate	02.15.07
Sunflower seed	02.15.01
Sunflower syrup	02.15.08
Sweet lupins	03.08.01
Sweet potato / batata	04.07.01
Sweet potato chips or sweet potato meal	04.07.02
Tetraselmis algae	08.12.01
Tricalcium phosphate	11.01.49
Trimagnesium phosphate	11.01.51
Tripotassium citrate	11.01.58
Trisodium phosphate	11.01.50
Triticale	01.08.01
Triticale flakes	01.08.02
Turnip	04.06.01
Vegetable fat , protected / vegetable oil, protected	02.10.03
Vegetable fat, refined / vegetable oil, refined	02.10.02
Vegetable oil / vegetable fat	02.10.01
Vetches	03.09.01
Vinasse	05.04.01
Vinasse from ketogulonic acid production	05.04.03
Walnut expeller	02.16.01
Wet (sugar) beet pulp	04.10.06
Wheat	01.09.01
Wheat bran	01.09.06
Wheat feed	01.09.05
Wheat flakes	01.09.02
Wheat germ	01.09.09
Wheat germ expeller	01.09.17
Wheat gluten	01.09.15
Wheat gluten feed	01.09.16
Wheat middlings	01.09.04
Wheat protein, hydrolysed	01.09.07

<b>Designation</b>	<b>Number</b>
Wheat screenings	01.09.03
Wheat starch	01.09.11
Wheat starch containing protein, partially desugared	01.09.14
Whey	09.05.01
Whey permeate	09.05.06
Whey powder	09.05.03
Whey powder, partly desugared	09.05.04
Whey powder, partly desugared and partly demineralised	09.05.05
Whey protein powder	09.07.02
Whey retentate	09.05.07
Whey, partly desugared	09.05.02
Yeast	14.03.01