NATURLAND STANDARDS

PROCESSING

General part and appendices

Version 06/2021

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Preface

Introduction

Certified organic agriculture, as practised in accordance with the written standards of the Naturland Association, has become an established concept. A comparison of the first draft of the "Standards for Organic Agriculture" passed in 1982 after the association was founded with the currently valid version will reveal two aspects of this modern form of land cultivation: on the one hand its dynamism and potential for development and on the other the stability and consistency of this modern form of agriculture and the processing of its produce. The development of standards and their implementation are the core mission of any certified association for organic agriculture. Standards have to be proven to be workable. They have to be adapted to changing conditions and be extended to cover new areas. The growth of Naturland and its organisations since the association's establishment is a reflection of the success of its work and confirms that this form of cultivation has gained wide acceptance and appreciation among farmers, food producers and consumers.

Standards for specific areas

The Naturland standards existed long before the EU passed its first legal regulations on organic agriculture. Even today the consistent development of our standards provides major impetus; they incorporate ideas that are taken seriously by the legislators. As they stand today, Naturland's standards are not limited solely to the specific method of cultivation described in detail in its standards on plant production and animal husbandry. For some years now, standards have been developed to cover many specific areas which require special guidelines, such as horticulture and viniculture, bee-keeping, harvesting of wild grown products, and aquaculture. In the same measure that the standards have evolved to cover various forms of cultivation, they also incorporate the next stage - the processing of this produce. The production and processing of food, such as bread and bakery products, milk and dairy products, beer and meat, etc. are described in specific standards for different categories of food produce. Whilst foodstuffs are the original sphere of interests, standards have also been drawn up to cover other areas of cultivation, such as organic forestry and timber processing.

Adherence to the elementary principles

To ensure that Naturland's standards develop consistently, it is essential that the fundamental principles of organic agriculture are adhered to. It is also crucial to withstand hasty and short-lived trends and any temptation to sacrifice elementary principles for the sake of immediate success. Standards can only provide a framework, since organic agriculture cannot function on the basis of mere regulations. It is realised by consensus on a common aim. Nevertheless, exact and binding rules are necessary in practice, whilst leaving enough flexibility for adaptation to the particular requirements of each agricultural operation.
The experts - farmers, consumers, processors and scientists - who contribute to the development of Naturland's standards have always offered new solutions to the problems posed. The framework of Naturland's standards is dictated by the core fundamental principles of certified organic agriculture: the obligation to treat the elementary basics of our lives with prudence and responsibility. A common starting-point, sustained management, the active protection of nature and the climate, safekeeping and preservation of the soil, air and water and the protection of the consumers are at the heart of all Naturland's standards. Mutual tolerance, respectful interaction with others and the acceptance of social responsibility are part of the framework and general approach.

Naturland's standards - the basis for certification

Standards will only endure and make a lasting impact if they can be clearly monitored and be put into consistent practice. Any decisions involved have to be seen to be made impartially and on neutral, unbiased terms. This is guaranteed by calling on the services of independent and autonomous committees - standards committee, inspection body and certification committee - as well as by the composition of the committees consisting of diverse interest groups such as scientists, agriculturists and consumers. Independent inspection procedures and the consistent application of Naturland's standards form the basis of the production of high quality products cultivated in a balance with nature and the environment. This quality is visibly documented by the Naturland logo.

Naturland's quality management - national and international

For producers, processors and consumers, certification by Naturland stands for a reliable quality management system, for the dependability of the organically grown produce, from its cultivation to the finished product.
Naturland has been accredited to the international norm ISO/IEC 17065 since 1998. This accreditation confirms that certification is performed to defined norms.

Part C. General Processing Standards

I. Goals

The goal when processing organic agricultural produce as understood under the Naturland standards is to manufacture products attaining a high organic and social quality standard, also with respect to their nutritional physiology. For this reason, the processing methods used need to undergo continuous improvements in the light of new scientific findings and amendments to principles of the Naturland standards. Risk technologies, such as the use of genetic engineering or nanotechnology, have to be excluded from processing; new technologies must be scrutinized for possible risks.
Consumers are to be protected from deception and fraud by the highest possible degree of transparency.

II. Area of application

These standards are binding on all operations and companies that have signed a sublicence agreement with Naturland Zeichen GmbH (hereinafter referred to as "contractual partner"). They apply to all forms of further processing of raw agricultural goods, generally in conjunction with the respective processing standards applicable to any specific group[1]. The current version of the standards as passed by the bodies of the Naturland association is at all times the applicable one.
In addition, the statutory regulations apply, in particular Council Regulations (EC) No. 834/2007 and 889/2008 governing organic agriculture and related amending ordinances, and the laws governing food and non-food articles (LFGB, the German Food and Feed Code) and ordinances governing food labelling (LMKV – Lebensmittelkennzeichnungsverordnung) and information (LMIV - Lebensmittelinformationsverordnung; European Food Information Regulation).
Naturland reserves the right to amend these standards. Any amendments made are in keeping with practical experience and the contractual partners are informed in good time of the amendments. Contractual partners are obliged to consult Naturland if they have questions or doubts in relation to the standards and certification.

III. Contracts

Contractual partners who have concluded a sublicence agreement are obliged to comply with the processing standards and, where applicable, with the processing standards for specific groups of products, from the very beginning (The standards for specific groups of products are available from Naturland e.V., Kleinhaderner Weg 1, 82166 Gräfelfing, Germany, or by making a request by email to naturland@naturland.de, or can be downloaded from www.naturland.de.).
Besides this, the sublicence agreement also governs the use of the Naturland trademark (Naturland logo).

IV. Inspection and Certification

Compliance with the Naturland standards and the statutory provisions is checked regularly at least once a year by authorised agents of Naturland, who makes pre-arranged and/or unannounced visits to the operations, where they perform inspections. The inspectors have to be granted full access to and rights of inspection of all relevant areas of the operation. All documents concerning production have to be produced and information provided on request. Where a third party is appointed to operate on behalf of the contractual partner (e. g. treatment, storage, processing, transport), provisions must be made (such as the conclusion of a subcontractor agreement) to ensure that the Naturland standards are implemented and that Naturland may monitor them for compliance with its standards.
In its annual deed of certification (including a Naturland certificate) the Naturland certification committee confirms that the contractual partner has complied with the Naturland standards. If the contractual partner infringes current Naturland standards, penalties may be imposed.
It is standard practice for complaints in connection with matters within Naturland's sphere of responsibility to be addressed to the head offices of Naturland in Gräfelfing, Germany.

[1] If no separate processing standards for specific groups of products have been produced for any particular processed products, then these will be certified on the basis of the general section of the Naturland processing standards.

V. Product identification/labelling

1. Processed products

The endorsement of foodstuffs, fodder and articles for daily use by making a reference to Naturland, to certification by Naturland or by applying the Naturland trademark is solely permitted on the basis of a valid sublicensing agreement and a valid Naturland certificate.
In addition to fulfilling statutory requirements, the following must be observed when labelling products certified by Naturland:

- Full declaration: All the ingredients of each product must be listed completely (even in the case of compound ingredients) in the order of their weight as a percentage of the total weight.
- In the case of herbs and spices, the general term may be used if their weight does not exceed 2% of the weight of the product.
- The use of iodised table salt has to be indicated clearly.
- Food additives must be listed with their complete designation.

Contractual partners (manufacturers) who have concluded contracts with other businesses as suppliers or subcontractors are advised to use the following wording to ensure transparency of information towards the customer: "Manufactured by …. on behalf of …".

2. Raw materials and semi-finished products

All raw materials and semi-finished products certified by Naturland must be labelled in the production facility itself clearly and unambiguously with the word NATURLAND or bear the Naturland logo.

VI. General regulations and other predominant (production) provisions

1. Sustainable management

Organic agriculture is particularly committed to sustainable management. This includes the respectful treatment of nature and the environment, the sustainable use of natural resources, the acceptance of social responsibility and the maintenance of economic performance.
The benefits derived from natural ecosystems and their economic performance must be maintained. Damage to ecosystems should be kept to a minimum.
Biological diversity or biodiversity is to be maintained and fostered on farms to the best of the farmer's ability; this includes diversity of ecosystems, diversity of species and genetic diversity.
Water and soil are valuable natural commodities whose is of crucial importance and which must therefore be used carefully and sustainably.
Energy should be used as efficiently as possible and renewable energy resources should be used for preference.
Wherever waste is unavoidable, it should be disposed of in an eco-friendly manner or recycled. Organic residues should be re-used and preferably composted.
Preference is to be given to procuring raw materials and goods from suppliers in close proximity.

2. Non-employment of GMO and GMO derivatives

Genetically modified organisms (GMOs) and their derivatives are incompatible with organic production. Products produced according to the Naturland standards must therefore be manufactured throughout the whole of their production and value chain without the use of genetically modified organisms (GMOs) and GMO derivatives[2].

[2] A "GMO derivative" is any substance produced from or by means of GMOs but not containing any GMOs itself. "The use of GMOs and GMO derivatives" means their use as a foodstuff, an ingredient of foodstuffs (including additives and flavouring), processing additives (including extraction solvents), animal feed, compound feed, the raw materials of animal feed, fodder additives, processing additives for animal feed, certain products for animal feed, pesticides, fertilisers, soil ameliorators, seed, vegetative propagation material and animals.
For the purposes of these standards, the following definitions apply: 1. organism: any biological unit capable of reproduction or passing on genetic material. 2. genetically modified organism (GMO): an organism, the genetic material of which has been modified in such a way as is not possible in a natural manner by cross-breeding and/or natural recombination.

The definitions given under sec. 2 of Directive 2001/18/EC of the European Parliament and of the Council, and the exclusion criteria for genetic engineering of the eco-regulations Council Regulation (EC) No. 834/2007 and Commission Regulation (EC) No. 889/2008 apply.
Even the unintentional contamination of products certified by Naturland with genetically modified organisms may also lead to certification being denied.

3. Non-use of nanomaterials

By "nanomaterials", Naturland means: substances which have been consciously and deliberately designed, technically manufactured or produced by human inducement (anthropogenic) with the intention to obtain very specific characteristics (e. g. shape, surface properties or chemical properties) at the nanoscale (approx. 1-300 nm in at least one dimension) such as only possible at the nanoscale. Particles with larger diameters may come under this definition in cases where there is evidence of effects specific to the nanoscale at this size.
Particles accidentally generated at the nanoscale, which can occur in the course of traditional processing methods (such as, for example, homogenisation, grinding, foaming, freezing) and particles at the nanoscale that occur as natural environmental elements (e. g. volcanic or airborne particles) or in foodstuffs (e. g. monosaccharides, amino acids or fatty acids) are excluded from this definition.
The environmental effects of nanomaterials and their impact on human beings are so far not sufficiently known. For this reason, products grown and processed and certified by Naturland must be manufactured without the application of anthropogenic nanomaterials. Nanomaterials should also be avoided in packaging. They are only permissible if the nanomaterials are firmly integrated in the packaging material. Nanomaterials in layers or coatings which are in direct contact with products certified to the Naturland standards must not be used.

4. Ingredients from agricultural and non-agricultural origin

4.1 List of priorities

Products labelled with the Naturland trademark, bearing reference to Naturland or to certification by Naturland, contain raw goods, ingredients, food additives and processing additives from agricultural sources (hereinafter referred to as primary substances) which have been certified by Naturland. If primary substances certified by Naturland are not available in the right quality or in sufficient quantity, application may be made to use primary substances from other sources from the following **list of priorities.**

a. The highest priority is accorded to the use of primary substances certified by Naturland.
b. Primary substances from certifiers whose certification is recognised by Naturland as being of an equivalent standard may be used after receiving written approval from the Naturland certification committee
c. If the primary substances cited under a. and b. are not available, raw goods recertified[3] by Naturland and primary substances from other certifiers may only be used after receiving written approval from the Naturland certification committee (for a limited period).
d. If the primary substances cited under a., b. and c. are not available, organically produced primary substances may be employed for a limited period where sufficient justification exists and then only after receiving written approval from the Naturland admissions committee, provided these primary substances at least comply with the statutory requirements for organic products under currently valid national legislation (e. g. EU directive, NOP) of the country in which the goods are to be put on the market. However, the manufacturer is obliged to replace these primary substances with primary substances certified by Naturland as quickly as possible.
e. Conventional primary substances may only be used after receiving prior approval from the Naturland certification committee and even then only for max. 5% (not including water and salt) of the final product, on condition that they are not available from organic sources and that the primary substances have not been genetically modified.

The proportion of the primary substances is calculated on the basis of their proportionate weight at the time they are used when manufacturing the foodstuff.
Naturland makes regular evaluations of what primary substances are available in what quantities. Contractual partners should address any questions as to the availability of raw goods certified by Naturland to Naturland.

[3] Recertification means the admission of raw goods or of any ingredient for a limited time or in a limited quantity on the basis of documents provided by third parties (inspection reports) which were not produced originally by order of Naturland.

4.2 Flavouring

The general use of flavouring is not permitted. Natural flavouring may only be used in individual cases after receiving approval from the Naturland certification committee and providing the processing standards for specific groups of products are observed.

4.3 Water and salt

Water must be of drinking water quality; only table salt or iodised table salt free of anti-caking agents or containing the anti-caking agent E 170 (calcium carbonate) may be used.

4.4 Cultures of micro-organisms

Wherever available, the micro-organisms are to be grown on organic substrata or substrata which comply with the requirements of these standards.

4.5 Enzymes

The general use of enzymes is not permitted. Enzymes may only be used in individual cases after receiving approval from the Naturland certification committee and providing the processing standards for specific groups of products are observed.

4.6 Food additives

The general use of food additives is not permitted. Food additives may only be used in individual cases after receiving approval from the Naturland certification committee and providing the processing standards for specific groups of products are observed.

4.7 Mineral nutrients, trace elements, vitamins

The general use of mineral nutrients, trace elements and vitamins is not permitted. Mineral nutrients, trace elements and vitamins may only be used in individual cases after receiving approval from the Naturland certification committee and with due regard for legal requirements such as those on minimum levels and providing the processing standards for specific groups of products are complied with.

4.8 Permissible processing additives

The general use of processing additives is not permitted. Processing additives may only be used in individual cases after receiving approval from the Naturland certification committee and providing the processing standards for specific groups of products are observed.

5. Processing procedures

Only such equipment and procedures may be used which do not have any harmful or detrimental effect on the health of the consumer in the foodstuff, and which guarantee the least impact on the environment and such resources as water, air and energy sources. Besides this, the processing methods may not be detrimental to the health of those working in the production facility.

5.1 Permissible processing procedures

- mechanical, physical and biological procedures
- curing
- extraction (solely by using the following extraction media of foodstuff quality: water, organic ethyl alcohol, organic vegetable oils and organic animal fats, organic vinegar, CO_2, nitrogen, organic acids upon approval).
- precipitation
- filtration (only with asbestos-free filtration materials, provided the product quality is not impaired by filtration. Filtration techniques that are associated with a chemical reaction and by means of which the molecular structure of the foodstuff is modified are subject to approval.).

5.2 Prohibited processing procedures

- The use of microwaves for the treatment of products certified by Naturland is not permitted
- The use of ionising rays to treat foodstuffs or fodder or the primary substances used in foodstuffs or fodder is prohibited.

The processor has to ensure that such substances and procedures are used neither directly (raw goods, food additives, processing additives) nor indirectly (in semi-finished products) for products certified by Naturland. Further rulings with regard to processing methods are to be found in the corresponding processing standards applicable to specific groups of products.

6. Quality assurance

Partners of Naturland are obliged to institute quality management systems in their businesses in order to guarantee the uninterrupted traceability of the products manufactured and the safety of these products. In addition, businesses certified by Naturland undertake the following:

- to hold regular instruction courses for their workers (at least once a year, with an additional introductory course for new employees)
- to take appropriate measures to avoid contamination with prohibited substances and agents which could impair the quality of the organic produce. Where reasonable suspicion exists that the product quality is substantially impaired by contamination with prohibited substances, Naturland has to be informed. Naturland may require an analysis to be made to detect the level of contamination and the source of contamination and instigate further measures. Naturland recommends that processors and wholesalers make spot checks of organically grown products to check for contaminants, as a supplementary quality assurance measure.

Partners of Naturland who process or manufacture[4] conventional produce or products certified to the EU eco-regulation besides the products certified by Naturland are required to observe the following:

- The individual processing stages have to be carried out in one block for each sequence and have to be separated spatially or in time from similar processing stages for conventional products or EU organic products. This means that measures suitable for the clear and unambiguous distinction between the different production processes and products must be adopted. Any admixture or commingling of raw materials not certified by Naturland must be made impossible. Where appropriate, Naturland may impose further requirements specific to the plant in question in order to ensure compliance.
- Before processing[4] products certified by Naturland, all machines, tools etc. have to be cleaned thoroughly to exclude the possibility of any mixing of conventional or EU organic with products certified by Naturland or of contamination with substances which are prohibited under these standards.
- No parallel products may be included in the product range, i. e. the range produced in accordance with the Naturland standards has to be distinguished in a clear and comprehensible way from the rest of the range (conventional products and products which are certified to the EU eco regulation), in the product designation, design and/or packaging.
- If genetically modified ingredients, additives or processing additives are used in the conventional area, Naturland has to be informed and appropriate additional quality assurance measures (traceability, analysis etc.) taken to exclude any risk of possible contamination.

7. Documentation

Businesses certified by Naturland must be able to present the following documents in their current version (and keep older versions in their archives):

- product overview (complete list of all products produced in this facility)
- list of ingredients of each of the products certified by Naturland with details of the quantity and certified quality of each primary substance.
- list of suppliers with a declaration of all primary substances and their certification
- overview of the quality assurance system including the results of analyses
- list of training sessions performed on the topic of organic production and Naturland standards
- list of the packaging materials used
- list of the cleansing agents and pesticides used
- list of the processing methods used (e. g. in the form of a flow chart)
- list of the production facilities, stores, machines and devices and their functions
- production diary
- complaint management records[5]

[4] This includes all stages of cleaning, sorting, filling, packaging or labelling, as well as the actual treatment and processing of the products.

[5] The operator must follow up on complaints addressed to him by third parties and which are related to requirements made by Naturland with respect to certification in an appropriate manner and must document the complaints as well as any action taken.

8. Packaging

The choice of the correct packaging for foodstuffs certified by Naturland is based on conformity with the statutory requirements, including those of the EU eco regulation.
Since sustainable management is the aim striven for throughout the whole production chain of foodstuffs certified by Naturland, special regard should be paid to the sparing use of raw materials and to minimising the impact on the environment in production, use and disposal of packaging materials when choosing the most suitable form of packaging. The role of packaging, therefore, should be restricted to that of a means of fulfilling hygienic requirements and preserving the condition and sensory quality of the products. The packaging material used must not impair the product quality (e. g. through substance migration of printing inks or emollients). Packaging material that contains, for example, synthetic pesticides, preservatives or disinfectants, or has come into contact with such substances, may not be used.
When choosing the most suitable packaging for products certified by Naturland, the following criteria should be observed:

- The packaging should be manufactured in an eco-friendly manner and similarly disposable or recyclable.
- The size and weight of the packaging should be kept to a minimum. The goal is to have as little packaging as possible.
- Returnable packaging should only not be used if this is not possible or reasonable e. g. because of inefficient transport distances.
- Preference for packaging with a high proportion of recycled and/or renewable raw goods should be given over packaging made of fossil or exhaustible raw materials such as metal or petroleum-based plastics.
- The possibility of re-using the packaging should be aimed for, e. g. as a drinking glass, storage container or alternative fuel.
- The use of bioplastics is desirable. However, genetically modified raw goods must not be used in its production. Proof by the manufacturer of the packaging or by the supplier of the fact that no genetically modified organisms (GMOs) or their derivates were used in the production of the packaging is to be given in the form of a declaration of compliance to be submitted during organic inspection.
- The printing inks chosen should be free of harmful solvents.
- No packaging containing chlorine, metal or aluminium should be used.
- Modified atmosphere packaging using a mixture of oxygen, carbon dioxide and nitrogen is permitted.

Irradiation (both electrical and ionising) of packaging to reduce micro-organism levels is only permitted upon request.
Cork treated with chlorine is not permissible.
When choosing suitable packaging, the guideline issued by the German Federation of the Organic Food Industry (BÖLW) “Nachhaltige Verpackung von Bio-Lebensmitteln – Ein Leitfaden für Unternehmen”[6] can be very helpful. It can be downloaded from Naturland’s homepage (www.naturland.de).

9. Storage and transport

- All products according to these standards as well as the used primary substances are to be stored and transported in such a way as to keep any reduction of their quality or impairment of the environment to a minimum.
- Storage under special conditions (controlled atmosphere, temperature control and humidity regulation as well as drying the stored material) is permitted.
- Storage facilities, containers and silos which contain residues of, for example, GMO storage products, synthetic fungicides, preservatives and disinfectants, may not be used.
- Products certified by Naturland must be clearly and unmistakably labelled during storage and transport; this applies especially to businesses which also store, process and transport products certified under the EU eco regulation and/or conventional products, besides products certified by Naturland.
- During storage, raw goods and ingredients certified by Naturland must be spatially separated from conventional and EU organic raw goods.

10. Cleaning and hygiene

Every processor must ensure that he for his part has undertaken everything in his power to prevent the products being contaminated or polluted with cleaning agents (particularly with quaternary ammonium com-

[6] Only available in German.

pounds). Naturland reserves the right to proscribe certain cleaning agents and procedures. Cleaning methods and the substances used therein must be recorded in a comprehensible manner for inspection purposes.
The Naturland Betriebsmittelliste[7] (list of tools and materials) can be helpful when deciding on a suitable cleaning agent. This can be ordered from Naturland. In cases of doubt, the cleaning methods and substances have to be checked with Naturland.

11. Pest control

Preventive measures are to be used carefully and comprehensively in order to prevent the occurrence of pests. These should be documented by monitoring. If pest control measures are unavoidable, mechanical and physical, biological resp. biotechnological methods are to be preferred; permissible pesticides are listed in appendix 3 to these standards.
The application of chemical storage protection substances, especially the use of ethylene oxide, methyl bromide, aluminium phosphide and hexachlorocyclohexane (HCH; Lindane) is prohibited.
Where gassing measures are necessary with other measures than listed in appendix 3, approval by Naturland is to be obtained in advance. The application must include details of the substances to be applied, the waiting period scheduled and the date on which the measure is to be carried out.
Enterprises specialising in pest control must be informed of the Naturland standards and must guarantee in writing that the Naturland standards on pest control will be complied with. The application form for pest control is available from Naturland on request.
If pest control measures are applied, products manufactured to the Naturland standards must at all events be protected from direct or indirect contact with prohibited substances.
If prohibited substances or methods are applied directly to the products which are manufactured according to the Naturland standards, the products in question may no longer be endorsed with a reference to the Naturland certification or the Naturland trademark.

[7] Only available in German.

VII. Social responsibility

The holistic claim of Naturland standards also includes the social treatment of the people who work and live on the operations.

1. Human rights

The basic rights of the people living and working on Naturland operations are respected as described in national regulations or the International Labour Organisation Conventions and Recommendations (ILO)[8], the UN conventions on children's rights[9] and the United Nations Declaration on the Rights of Indigenous Peoples[10], should these be more comprehensive.
A product created under conditions violating basic human rights, under gross violation of social justice or infringing indigenous land and water rights can not be traded as a product certified by Naturland.

2. Freedom to accept or reject employment

The operations commit themselves to exclude forced labour or any type of involuntary work. The operation shall not retain any part of workers' salary, benefits, property, or documents in order to force workers to remain on the operation.

3. Freedom of association, access to trade unions

All workers have the freedom of association and collective bargaining.
No one shall be discriminated against because of his or her membership in a trade union.

4. Equal treatment and opportunities

No discrimination on the basis of race, creed, sex, or political opinion or membership shall be tolerated. All workers irrespective of their sex, skin colour or religion receive the same pay and face the same opportunities for work of the same nature and same degree of responsibility.

5. Children's rights

No children shall be employed on operations. Children may work on the farms of their own families or a neighbouring farm provided that:

- the work is not hazardous and endangers neither the health nor the safety of the children
- the work jeopardises neither the educational nor the moral, social or physical development of the children
- the children are supervised by adults while working or have been given permission by a parent or legal guardian

6. Health and safety

All workers, employees and their families shall have access to drinking water, food, accommodation and basic medical care.
The employer is responsible for safety, health and hygiene at the workplace. If necessary, this implies holding training courses for employees to raise their awareness of any dangers at their workplace and of the contents of hygiene standards. Operations with more than 10 workers have to draw up a policy on safety at work and make these available to all employees.

7. Employment conditions

Workers for the purpose of these standards are, besides the permanent workers, also seasonal workers and sub-contracted workers.
All operations commit themselves to meet the following requirements[11]:

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[8] http://www.ilo.org/declaration/lang--en/index.htm

[9] http://www.ohchr.org/en/professionalinterest/pages/crc.aspx

[10] http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

[11] Naturland may determine that in any one country the legal control of employment conditions the opportunities for further education offered publicly suffices to ensure compliance with these standards.

7.1 Contracts

All workers receive a written contract of employment describing the basic conditions of employment.[12] Working conditions and contracts have to be documented by the employer to be verified at any time. The employment contract shall at least define the following: job description, scope and limits of the job, and type as well as amount of remuneration. The employment conditions of all workers have at least to comply with respective higher requirements of national regulations and ILO standards.

7.2 Equal treatment

The different kinds of employment shall in no case result in the unequal treatment of any workers; all workers enjoy the same rights and working conditions including social benefits and other privileges for work of the same nature and same degree of responsibility (see point IV.5).

7.3 Wages

Workers shall be paid at least the official national minimum wage currently applicable or the relevant industry standard in processing operations or the wages approved on the basis of collective bargaining, whichever is the higher. Workers shall be paid in cash, or in any mode they prefer.

7.4 Payment in kind

Workers may if they choose receive part of their wages in kind for board, lodging or other services offered by the operation. The value attributed to such deductions shall be fair and reasonable. A compulsory reduction of the minimum wage by the employer for such services is not permitted.

7.5 Working hours

To permit flexibility and overtime in the peak season (e.g. harvest) it is necessary to define an annual limit of working hours or to conclude a mutual agreement on work in peak periods. Such an agreement has to be in line with current national labour legislation and negotiated agreements.

7.6 Social benefits

The employer ensures a basic coverage for maternity, sickness and retirement. Operations with more than 10 workers need to have a policy on wages and social benefits, and this information should be made available to all the employees.

7.7 Further education

The unit offers its employees the possibility of further education and professional training.

[12] Legally binding contracts (in this particular case not necessarily in writing) are required even for workers not registered. Furthermore, they have to be informed of their rights.

Appendices processing

Appendix 1: Transport and slaughtering

1.1 Loading density (in the case of journeys lasting more than 4 hours or at outside temperatures of over 24°C)

The specifications as to available space are based on an expert opinion drafted by the EFSA (European Food Safety Authority) in 2011 resp. the SCAHAW (Scientific Committee on Animal Health and Animal Welfare) issued by the EU in 2002

Cattle

The area is calculated according to the following equation: $A = 0.0315\ W^{0.67}$
(A = area, W = live weight)

live weight per animal up to kg	minimum floor area per animal in m² according to the Naturland standards
50	0.43
110	0.73
200	1.09
325	1.52
550	1.6
600	1.6
750	1.6
> 750	1.6

Pigs

The area is calculated according to the following equation: $A = 0.0274\ W^{0.67}$
(A = area, W = live weight)

live weight per animal up to kg	minimum floor area per animal in m² according to the Naturland standards
6	0.09
10	0.13
15	0.17
20	0.20
25	0.24
30	0.27
35	0.30
40	0.32
45	0.35
50	0.38
60	0.43
70	0.47
80	0.52
90	0.56
100	0.60
110	0.64
120	0.68
>120	> 0.7

Sheep/goats

The area is calculated according to the following equation: $A = 0.033\ W^{0.67}$
(A = area, W = live weight) for unshorn sheep

live weight per animal up to kg	minimum floor area per animal in m² according to the Naturland standards
10	0.15
20	0.25

30	0.32
40	0.39
55 kg	0.48
>55 kg	> 0.48

The area is calculated according to the following equation: $A = 0.026\ W^{0.67}$
(A = area, W = live weight) for shorn sheep

live weight per animal up to kg	**minimum floor area per animal in m² according to the Naturland standards**
10	0.12
20	0.19
30	0.25
40	0.31
55 kg	0.38
>55 kg	> 0.38

Poultry

An extra area of 20% is added to the statutorily permissible minimum area. The extended space requirements need not be complied with at low temperatures[13] if there is any risk of the poultry suffering from hypothermia despite the implementation of standard protective methods (e. g. covering the sides of the transport vehicle without interrupting the supply of fresh air).

weight up to (kg)	**minimum floor area (in cm²)/kg according to the Naturland standards**
1.0	240
1.3	228
1.6	216
2.0	204
3.0	192
4.0	156
5.0	138
10.0	126
15.0	126
30.0	126

Besides the figures supplied for loading density, the following maximum group sizes are to be observed:

cattle up to 100 kg	15 animals
sheep	30 animals

Breeding boars must be transported separately and old sows which were not members of a group should not, wherever possible, be transported with strange sows in one and the same compartment.

1.2 Minimum dimensions lairage

cattle (550 kg live weight)	3 m²/animal
cattle (700 kg live weight)	4 m²/animal
cattle (1000 kg live weight)	6 m²/animal
fattening pig (110 - 120 kg live weight)	0.6 – 0.8 m²/animal
sows and breeding boars	1.5 m²/animal

1.3 Electrical stunning of ruminants and pigs

The figures are based on alternating currents of 50 to 100 Hertz (Hz). The minimum current must be maintained at least 4 seconds (except in individual cases explicitly dealt with below).

[13] according to the Naturland specifications

sheep and goats	In the case of head-only or head-to-body stunning, the current value must be at least 1.0 A.
cattle	In the case of head-only or head-to-body stunning, the current value must be at least 2.5 A (from an age of 6 months) or at least 1.5 A (below 6 months). Ventricular fibrillation must last at least 10 seconds at least 1.5 A.
pigs (up to 130 kg live weight)	In the case of head-only stunning, the current must be at least 1.3 A.
pigs (over 130 kg live weight)	In the case of head-only stunning, the current must be at least 1.8 – 2.0 A at 50 Hz and 250 V and last at least 4 seconds. After this ventricular fibrillation must be applied.

1.4 Stunning of poultry

waterbath stunning	The time elapsing between shackling and immersion in the waterbath should be 30 seconds at the most and must at all events not take longer than 60 seconds. Breast comforters are to be used and soothing lighting is recommended. If a conveyor belt stops running, the birds still shackled must be removed from them after no more than 3 minutes.
	Within the first second, current values of at least 120 mA at up to 199 Hertz (hens) resp. 200 – 400 Hertz 400 mA (turkeys) resp. 60 mA (quails) must be reached and last for at least 4 seconds (hens, turkeys, quails) resp. 8 seconds at 130 mA (ducks, geese).
electrical head-only stunning with tongs or wall devices	At least 240 mA must be reached for 7 seconds for hens, 300 mA for geese, 400 mA for turkeys and 600 mA for ducks.

1.5 Maximum time elapsing between the end of stunning and sticking ('stun to stick' interval)

Species	Stunning method	'stun to stick' interval
pigs	electrical head-only stunning	max. 10 seconds
	electrical head-only and head-to-body stunning	max. 20 seconds when hung up to bleed out max. 10 seconds when bleeding out lying down
	gaseous stunning	max. 20 seconds after ejection resp. max. 30 seconds after immersion in the CO_2 atmosphere (unless the plant has a licence to use higher CO_2 concentrations and longer immersion periods)
	capture bolt	max. 20 seconds
cattle	capture bolt	max. 60 seconds, preferably 20 – 60 seconds
	ventricular fibrillation	max. 10 seconds (when bleeding out lying down) 20 seconds (when hung up to bleed out)
	head-only electrical stunning	max. 8 seconds
sheep and goats	head-only electrical stunning	max. 8 seconds
	capture bolt (held to back of head)	max. 15 seconds
sheep (polled)	capture bold (held to top of skull)	max. 20 seconds
poultry	electrical waterbath	max. 10 seconds after leaving the waterbath; in the case of irreversible stunning, longer intervals are permitted

	electrical tongs, wall-mounted devices, capture bolt or blow to head	max. 10 seconds

1.6 Volume of blood bled out and bleeding-out time

To be sure that sufficient blood is bled out, the following minimum blood volumes must be measured in the first 30 seconds:

pig (120 kg, when hung up to bleed out)	> 4.5 litres resp. approx. 4% of the live weight (or 2 litres in the first 10 seconds)
cattle (500 kg)	10 litres
cattle (700 kg)	15 litres
sheep (40 kg)	1.5 litres

The following bleeding out times are to be adhered to:

cattle, pigs, sheep and goats	3 minutes minimum, preferably 5 minutes
all species of poultry	3 minutes minimum

Appendix 2: Permissible feeding stuffs

Permissible ingredients of agricultural origin

If feeding stuffs are purchased, they have to be certified by Naturland resp. meet Naturland's quality assurance requirements. If unavailability occurs feeding stuffs can be obtained according to following priority:

Origin

a) The highest priority is accorded to the use of primary substances certified by Naturland.
b) Primary substances from certifiers which meet Naturland's quality assurance requirements may be used after receiving written approval from the Naturland certification committee.
c) If the primary substances cited under a. and b. are not available, raw goods recertified[14] by Naturland and primary substances from other certifiers may only be used after receiving written approval from the Naturland certification committee (for a limited period).
d) If the primary substances cited under a., b. and c. are not available, organically produced primary substances may be employed for a limited period where sufficient justification exists and then only after receiving written approval from the Naturland admissions committee, provided these primary substances at least comply with the statutory requirements for organic products under currently valid national legislation (e. g. EU directive, NOP) of the country in which the goods are to be put on the market. However, the manufacturer is obliged to replace these primary substances with primary substances certified by Naturland as quickly as possible and to carry out supplementary quality assurance measures according to specifications of Naturland.
e) Conventional ingredients[15]

If the origin is not certified by Naturland supplementary quality assurance measures (traceability, analysis etc.) may be required depending on endangering potential.

Permissible ingredients of conventional origin

The share of ingredients of conventional origin in **feeding stuffs** refers to the dry matter of the organic substance.

For all species (in each case only if these are not available in organic quality):

- brewer's yeast and brewer's yeast products*
- spices and herbs, limited to max. 1% of the feed ration (DM)*
- molasses, limited to max. 1% of the feed ration (DM)*

Cattle, sheep, goats, horses, game (kept in reserves), rabbits:

For the above-mentioned species, no ingredients from conventional agricultural production other than those listed above may be used in the production of compound fodder certified by Naturland[16].

Pigs and poultry:

The following fodder from conventional sources used to improve the protein concentration is permissible for piglets only up to a weight of 35 kg and for young poultry, if these are not available in organic quality:

- within a transition period ending 31st December 2026, limited to 5%[17].
  - potato protein
  - maize and wheat gluten feed and shoots
  - seaweed meal
  - eggs and egg products
- fishmeal/-oil from trimmings of wild fish processed for human consumption of sustainable fishery

Aquaculture species:

[14] Recertification means the admission of raw goods or of any ingredient for a limited time or in a limited quantity on the basis of documents provided by third parties (inspection reports) which were not produced originally by order of Naturland.

[15] Specifications of EU regulations concerning the purchase of products with conventional origin have to be observed

[16] with the exception of generally permitted products of feed materials from mineral sources and additives for all species (see above)

[17] This percentage refers to the organic proportion of dry matter in the agriculturally produced fodder and is calculated on an annual basis.

- cholesterol
- phytoplankton and zooplankton (only in the larval rearing of juveniles)
- fishmeal/-oil
  The following basic principles apply:
  - Fishmeal/-oil is assessed as ingredient of non-agricultural origin in the calculation
  - Fishmeal made from a certain species must not be used as feed for the same species
  - In the case of feed materials for carnivorous species, feed components of animal origin must be used.
  - All feed originating from wild aquatic sources must be harvested in accordance with internationally established sustainability standards*. Wherever available, this must be confirmed by independent certification[18].
    The following sources are permissible:
    - products from organic aquaculture
    - fishmeal/-oil from the discards of processing of wild-caught fish destined for human consumption
    - by-catches from catching fish for human consumption within the limits of the corresponding legal regulations and initiatives

    Application may only be made to use fishmeal/-oil from other sources* and in limited proportions (max. 30% of the total fishmeal/-oil with respect to the total life expectancy of the fish) for purposes of quality assurance[19].
  - limits to the proportions of fishmeal and fish oil in feed for specific species[20]:
    - shrimps: max. 20% for fishmeal/-oil content and max. 30% for total protein
    - siamese catfish: max. 10% fishmeal/-oil
    - tilapia: fish meal and fish oil are not permitted in the feed
    - carp: fish meal and fish oil are not permitted in the feed

* The detailed stipulations of the version of Commission Regulation (EC) No. 889/2008 currently in force are to be observed.

[18] This certification is obligatory in every case for feed made from wild-caught whole fish.

[19] particularly reduction of the P content when used in inland water

[20] The maximum values of the total protein percentage and fishmeal resp. fish oil percentage may only be exceeded in the case of feed for young stock and parent stock and only upon receipt of approval from Naturland.

Appendix 3: Pest control measures

Mechanical-physical, biological resp. biotechnological measures

- the encouragement and application of the natural enemies of pathogenic agents and crop pests (e.g. predatory mites, hatching wasps (ichneumon wasp))
- insect traps (e.g. sexual pheromones, coloured attractants)
- mechanical repellents (e.g. traps, impacting, sieving)
- repellents (deterrents and expellants of animal or plant origin)
- thermal measures (e.g. heat treatments of rooms)

Agents against animal pests

- micro-organisms (virus, fungus and bacteria preparations,e.g. *bacillus thuringiensis*)
- preparations of *azadirachta indica* (neem)
- pyrethrum extract from *Chrysanthemum cinerariaefolium* (synthetic pyrethroides and synergists are prohibited)
- gassing with inert gasses (CO_2 or N_2), also under pressure
- quassia from *Quassia amara*
- oil emulsions (without synthetic chemical insecticides) on the basis of plant oils
- rodenticides (e.g. coumarin derivates) in a form which cannot be displaced (food bait in appropriate bait boxes)
- food bait gel (in appropriate bait boxes) to eliminate ants and cockroaches
- diatomaceous earth

Others

- ethylene

Appendix 4: Textiles - Abbreviations used

AOX	the sum parameter for adsorbing, organically bound halogens and substances which could cause them to be formed
AP	alkylphenol
APEO	akylphenolethoxylate
BOD	biochemical oxygen demand
COD	chemical oxygen demand; it designates the amount of oxygen which it takes to oxidise organic substances in water.
DBT	dibutyltin
DMT	dimethyltin
DOC	dissolved organic carbon
DOT	dioctyltin
DPhT	diphenyltin
DPT	dipropyltin
DTPA	diethylenetriamine pentaacetic acid
EC 50	effective concentration required for 50% of the organisms tested
EDTA	ethyldiamine tetraacetic acid
LAS	linear alkyl sulfonate
LC 50	lethal concentration 50 (concentration in water having 50% chance of causing death to aquatic life)
LD 50	lethal dose 50 (median concentration of a toxicant that will kill 50% of the test animals within a designated period)
IC 50	median inhibition concentration (concentration that reduces the effect by 50%)
α-MES	α-methane sulphonic acid (C16/18)
MBT	monobutyltin
MMT	monomethyltin
MOT	monooctyltin
MPhT	monophenyltin
NTA	nitrilotriacetic acid
OECD	Organisation for Economic Co-operation and Development

PAH	polycyclic aromatic hydrocarbons
PVC	polyvinyl chloride
SCCPs	short-chain chlorinated Paraffins
TBT	tributyltin
TCyHT	tricyclohexyltin
TeBT	tetrabutyltin
TeET	tetraethyltin
TMT	trimethyltin
TOC	total organic carbon
TOT	trioctyltin
TPhT	triphenyltin
TPT	tripropyltin

Appendix 5: Textiles - Critical values for residues in organic textiles

Textiles produced under these standards must correspond to the following chemical quality parameters:

parameter	test method	criteria
chlorophenols: PCP TeCP TrCP DCP MCP	LFGB 82-02-08 (GC/MS)	 < 0.01 mg/kg < 0.01 mg/kg < 0.2 mg/kg < 0.5 mg/kg < 0.5 mg/kg
o-phenylphenols (OPP)	Extraction, GC/MS	< 1.0 mg/kg
Alkylphenol (ethoxylate) NP, OP, NPEO, OPEO sum parameter NP, OP sum parameter	For NP, OP: Extraction, derivatisation, GC/MS or HPLC/MS For NPEO, OPEO: Extraction in methanol, derivatisation, HPLC/MS (test range for NPEO and OPEO: 3-15 moles)	 < 20 mg/kg < 10 mg/kg
arylamines with carcinogenic properties (amine-releasing azo dyes (MAK group III 1,2,3) aniline (MAK III, category 4)	EN 14362 - 1 and -3 (HPLC/GCMS)	< 20 mg/kg < 100 mg/kg
AOX	Extraction with boiling water, adsorption on charcoal, AOX–analyser, ISO 9562	< 5 mg/kg
disperse dyes (classified as allergenic or carcinogenic)	DIN 54231 (LC/MS)	< 30 mg/kg
formaldehyde	Japanese Law 112 or ISO 14184 – 1	< 16 mg/kg
glyoxal and other short-chain aldehydes (mono- and dialdehydes up to C_6)	Extraction (ISO 14184 – 1), ISO 17226 – 1 (HPLC)	< 20 mg/kg
pH	ISO 3071	4.5 – 9.0 (no skin contact) 4.5 – 7.5 (skin contact and baby clothes)
total pesticides, sum parameter	Art. 64 LFGB L 00.00-34 (GC/MS); § 64 LFGB L 00.00-114 (LC/MS/MS)	
all natural fibres (except shorn wool), cert. organic		< 0.1 mg/kg
short wool, cert. organic		< 0.5 mg/kg
heavy metals	Elution DIN EN ISO 105-E04; ISO 17294-2 (ICP/MS); EN 16711-2	in eluate: figures in mg/kg with reference to the textile
antimony (Sb)		< 0.2 mg/kg
arsenic (As)		< 0.2 mg/kg
lead (Pb)		< 0.2 mg/kg
cadmium (Cd)		< 0.1 mg/kg
chromium (Cr)		< 1.0 mg/kg
cobalt (Co)		< 1.0 mg/kg
copper (Cu)		< 25 mg/kg
nickel (Ni)		< 1.0 mg/kg
mercury (Hg)		< 0.02 mg/kg
selenium (Se)		< 0.2 mg/kg
tin (Sn)		< 2.0 mg/kg
chromium VI (Cr-VI)	Elution DIN EN ISO 105-E04, ISO 11083	< 0.5 mg/kg

heavy metals	EPA 3050 B (ICP/MS); EPA 3051 or EN 16711-1	In digested sample:
cadmium (Cd)		< 45 mg/kg
lead (Pb)		< 50 mg/kg
Organotin compounds (individually) TBT, TphT, DBT, DOT MBT DMT, DPT, MOT, MMT, MPhT, TeBT, TCyHT, TMT, TOT, TPT, DphT, TeET	Extraction in solvent, ISO 17353 (GC/MS) or ISO/TS 16179	 < 0.05 mg/kg < 0.1 mg/kg < 0.1 mg/kg
per- and polyfluorinated compounds (PFC), individually: PFOA, PFOS FTOH	Extraction in solvent, LC/MS Extraction in solvent, GC/MS	absent < 0.001 mg/kg < 0.01 mg/kg
phthalates (DINP, DMEP, DNOP, DEHP, DIDP, BBP, DBP, DIBP, DEP, DIHP, DHNUP, DCHP, DHxP, DIHxP, DPrP, DHP, DNP, DPP), sum parameter	DIN EN 15777: 2009-12 (GC/MS) or ISO 14389	< 100 mg/kg
Polycyclic Aromatic Hydrocarbons (PAH): Chrysene, Benzo[a]anthracen, Benzo[b]fluoranthene, Benzo[j]fluoranthene, Benzo[k]fluoranthene, Benzo[a]pyrene, Benzo[e]pyrene, Dibenzo[a,h]anthracene,	ISO 18287 or ZEK 01.2-08 (GC/MS) or AfPS GS 2014:01	< 0.5 mg/kg
Naphthalin, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Indeno[1,23-cd]pyrene, Benzo[g,h,i]perylene,		< 1 mg/kg
sum parameter		< 10mg/kg

Appendix 6: Textiles - Critical values for residues in additional materials and accessories

Textiles produced under these standards must correspond to the following chemical quality parameters:

parameter	test method	criteria
arylamines with carcinogenic properties (amine-releasing azo dyes; MAK group III 1,2,3)	EN 14362 - 1 and -3 (HPLC/GCMS)	< 20 mg/kg
disperse dyes (classified as allergenic or carcinogenic)	DIN 54231 (LC/MS)	< 30 mg/kg
formaldehyde	Japanese Law 112 or ISO 14184 – 1	< 300 mg/kg (no skin contact) < 75 mg/kg (skin contact) < 16 mg/kg (baby clothes and hygiene products)
Glyoxal and other short-chain aldehydes (mono- and dialdehydes up to C_6)	Extraction, (ISO 14184 – 1) ISO 17226-1 HPLC	< 300 mg/kg (no skin contact) < 75 mg/kg (skin contact) < 20 mg/kg (baby clothes and hygiene products)
pH	ISO 3071	7.5
chlorophenols PCP, TeCP TrCP DCP, MCP	LFGB 82-02-08 (GC/MS)	 < 0.05 mg/kg < 0.2 mg/kg < 0.5 mg/kg
total pesticides, sum parameter	§ 64 LFGB L 00.00-34 (GC/MS); § 64 LFGB L 00.00-114 (LC/MS/MS)	
all natural fibres (except shorn wool)		< 0.5 mg/kg (baby clothes and hygiene products) < 1.0 mg/kg
shorn wool		< 1.0 mg/kg
heavy metals	Elution DIN EN ISO 105-E04, ISO 17294-2 (ICP/MS)	in eluate: figures in mg/kg referring to additional material or accessory
arsenic (As)		< 0.2 mg/kg
lead (Pb)		< 0.2 mg/kg
cadmium (Cd)		< 0.1 mg/kg
chromium (Cr)		< 1.0 mg/kg
cobalt (Co)		< 1.0 mg/kg
copper (Cu)		< 25 mg/kg (baby clothes and hygiene products) < 50 mg/kg[21]
nickel (Ni)		< 1.0 mg/kg
mercury (Hg)		< 0.02 mg/kg
chromium VI (Cr-VI)	Elution DIN EN ISO 105-E04, ISO 11083	< 0.5 mg/kg

[21] Criterion not applicable to non-biotic material (such as metals)

heavy metals	EPA 3050 B (ICP/MS); EN 16711-1	In digested sample:
cadmium (Cd)		< 40 mg/kg
lead (Pb)		< 90 mg/kg
nickel release	EN 12472, EN 1811	< 0.28µg/cm²/week
organotin compounds (individually) TBT, TphT DBT, DOT, MBT DMT, DPT, MoT, MMT, MPhT, TeBT, TCyHT, TMT, TOT, TPT, DphT, TeET	Extraction in solvent, ISO 17353 (GC/MS) or ISO/TS 16179	 < 1.0 mg/kg < 0.05 mg/kg (baby clothes and hygiene products) < 2.0 mg/kg < 1.0 mg/kg (baby clothes and hygiene products) < 2.0 mg/kg < 1.0 mg/kg (baby clothes and hygiene products)
phthalates (DINP, DMEP, DNOP, DEHP, DIDP, BBP, DBP, DIBP, DEP, DIHP, DHNUP, DCHP, DHxP, DIHxP, DPrP, DHP, DNP, DPP), sum parameter	ISO 14389	< 0.1%
Polycyclic Aromatic Hydrocarbons (PAH): Chrysene, Benzo[a]anthracen, Ben-zo[b]fluoranthene, Ben-zo(j)fluoranthene, Ben-zo[k]fluoranthene, Ben-zo[a]pyrene, Ben-zo(e)pyrene, Dibenzo[a,h]anthracene, Naphthalin, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoran-thene, Pyrene, Indeno[1,2,3-cd]pyrene, Ben-zo[g,h,i]perylene **sum parameter** **sum parameter for baby clothes and hygiene products** **individually** **individually for baby clothes and hygiene products**	ISO 18287 or ZEK 01.2-08 (GC/MS) or AFPS GS 2014:01	< 10mg/kg < 5mg/kg < 1 mg/kg < 0.5mg/kg

Further parameters relevant for specific materials used in accessories	**test method**	**criteria**
Polyester fibres: antimony (Sb)	Elution DIN EN ISO 105-E04, ISO 17294-2 (ICP/MS)	< 30 mg/kg
Natural latex foam: Butadiene Chlorophenols (incl. salts and esters) Carbon disulphide Nitrosamines	Gas chromatography, flame-ionisation detector LFGB 82-02-08 (GC/MS) Chamber test, DIN ISO 16000-6 Chamber test; ZH 1/120-23 or BGI 505-23 for air sampling and analysis	< 1.0 mg/kg < 1.0 mg/kg < 0.02 mg/m3 < 0.001 mg/m3

Appendix 7: Permissible ingredients for cosmetics of mineral origin

The usage of ingredients of mineral origin is allowed for the specific uses listed or for general purposes if no specific uses are listed.

Substance (Chemical name and/or INCI Name)	Examples of occurrence in nature
aluminium hydroxide	bauxite (gibbsite, hydrargillite)
aluminium oxide	corundum, clay
aluminium sulphate	alunogen, naturally occurring in volcanoes
manganese violet CI 77742	derived from the breakdown of bat guano
ammonium sulphate	
bismuth oxychloride CI 77163	bismoclite
calcium aluminium borosilicate	tourmalines
calcium carbonate CI 77220	sediment rocks, calcite, aragonite, vaterite; main component in marble, chalk, dolomite
calcium sulphate	gypsum
chromium oxides CI 77289 Cl 77288	 guyanait, grimaldiit, bracewellit, eskolaite
copper oxide	
copper sulphate	weathering product, sulphidic copper ore, chalcanthite
calcium hydrogenorthophosphate/ dicalcium phosphate dehydrate	limitation of use: only in oral cavity hygiene product
hydrated Silica	quartz sand
iron hydroxide	
iron oxides CI 77480 Cl 77491 Cl 77492 Cl 77499	 bernalit, feroxygit ferrihydrite, goethite lepidocrocit
iron sulphate	
ultramarines CI 77007	gemstone (lapis lazuli)
magnesium aluminium silicate/silicic acid, aluminium magnesium salt	
magnesium carbonate CI 77713	magnesite, dolomite
magnesium chloride	
magnesium hydroxide	
magnesium oxide CI 77711	
magnesium silicate (silicic acid, magnesium salt)	talc, sepiolite, minerals of the serpentine group
magnesium sulphate	kieserite
trimanganese bis orthophosphate CI 77745	
manganese sulphate	
mica CI 77019	annite, phlogopite, muscovite
potassium carbonate	in ash, in inland waters (Dead Sea, Lop Nor desert)
potassium chloride	sylvite, carnallite, kainite
potassium hydroxide	
potassium sulphate	
prussian Blue CI 77510	kafehydrocyanite

silica	quartz sand
silver chloride	silver ores, often together with lead-copper and zinc ores as sulphides, sulphates or oxides
silver oxide	silver ores, often together with lead-copper and zinc ores as sulphides, sulphates or oxides
silver sulphate	silver ores, often together with lead-copper and zinc ores as sulphides, sulphates or oxides
sodium bicarbonate	natron, mineral nahcolith
sodium borate	borax
sodium carbonate	soda (various crystal forms), in soda lakes
sodium chloride	
sodium hydroxide	
sodium magnesium silicate	
sodium metasilicate/disodium metasilicate	
sodium silicate	
sodium sulphate	glauber salt; in mineral waters; mineral thenardite
titanium dioxide CI 77891	anatas, brookite, rutile
tin oxide CI 77861	cassiterite in alluvial deposits
zinc carbonate CI 77950	smithsonite
zinc oxide CI 77947	wulfingit, sweetit, ashoverit
zinc sulphate	goslarite

Appendix 8: Critical values for the total sulphur content in the end product of wine

wine category (under EU Reg. 606/2009)	SO_2 critical value (conventional)	SO_2 critical value for bio or organic wine
white wine, rosé wine [annex I B sec. A no. 1 letter b (**residual sugar* < 5 g/l**)	200 mg/l	150 mg/l **residual sugar < 2 g/l** 170 mg/l **residual sugar > 2 g/l and < 5 g/l**
white wine, rosé wine [annex I B sec. A no. 2 letter b (**residual sugar* ≥ 5 g/l**)	250 mg/l	220 mg/l
wines acc. to annex I B sec. A no. 2 letter c (list of the countries, e. g. late vintage (Spätlese) ≥ 5 g/l residual sugar*) paragraph 2 c paragraph 2 d paragraph 2 e paragraph 4 – weather conditions**	300 mg/l 350 mg/l 400 mg/l + 50 mg/l	270 mg/l 320 mg/l 370 mg/l (same as in CMO + 50 mg/l)
liqueur wine [annex I B sec. (**residual sugar* < 5 g/l**)	150 mg/l	120 mg/l
liqueur wine [annex I B sec. B (**residual sugar* ≥ 5 g/l**)	200 mg/l	170 mg/l
champagne, sekt, sparkling wine [annex I B sec. C paragraph 1a paragraph 1b paragraph 2 – weather conditions**	185 mg/l 235 mg/l + 40 mg/l	155 mg/l 205 mg/l + 40 mg/l
red wine [annex I B sec. A no. 1 letter a (**residual sugar* < 5 g/l**)	150 mg/l	100 mg/l **residual sugar < 2 g/l** 120 mg/l **residual sugar > 2 g/l und < 5 g/l**
red wine [annex I B sec. A no. 2 letter a (**residual sugar* ≥ 5 g/l**)	200 mg/l	170 mg/l
* residual sugar = sum of glucose and fructose ** as specified under art. 113 (2) of EU Reg. No. 479/2008		

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