



COSMOS STANDARD

Criteria

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1. INTRODUCTION

This Standard has been developed at the European and international level by BDIH (Germany), COSMEBIO & ECOCERT (France), ICEA (Italy) and SOIL ASSOCIATION (UK) who are the founders of the COSMOS-standard AISBL (an international non-profit association registered in Belgium) in order to define common requirements and definitions for organic and/or natural cosmetics.

1.1 *Main objectives of the COSMOS-standard*

Addressing the excesses and failures of current developments is a key challenge for our society. Establishing a sustainable development that would reconcile economic progress, social responsibility and maintain the natural balance of the planet is a project in which the cosmetics sector is willing to be fully involved. The application of the principles of sustainable development in economic activity implies, however, changing patterns of production and changing consumption practices. Recognising these challenges, the responsibility of its actors, the organic and natural cosmetics sector clearly shows its ambition to go further in sustainable development with the setting at the European and international level of this Standard for organic and natural cosmetics.

To stimulate processes for sustainable production and consumption, the organic and natural cosmetics sector is using some simple rules governed by the principles of prevention and safety at all levels of the chain from production of raw materials to the distribution of finished products.

These rules are:

- promoting the use of products from organic agriculture, and respecting biodiversity
- using natural resources responsibly, and respecting the environment
- using processing and manufacturing that are clean and respectful of human health and the environment
- integrating and developing the concept of green chemistry

This last point, an important aspect of the COSMOS-standard is key to the success of this ambition considering the specificities and constraints of the formulation of cosmetic products (particularly versus food products).

With this green philosophy and this desire to actively contribute to sustainable development, the cosmetics sector is committed to define and implement a standard for organic and natural cosmetics. This Standard takes into account the current technological reality while infusing a dynamism that will lead to innovative developments.

To facilitate the translation of these rules at the level of a standard, it is necessary to distinguish the five categories of ingredients contained in a cosmetic product (listed below in ascending order of human intervention):

1. water — vital and basic raw material in product development; its quality is essential
2. mineral ingredients — interesting and necessary, but not renewable; they require clear environmental rules in their use, and in further processing
3. physically processed agro-ingredients — already benefit from satisfactory European and other recognised standards on organic agriculture

4. chemically processed agro-ingredients — certifiable by using agricultural organic raw materials and manufacturing processes that are clean and authorised, all under the umbrella of green chemistry
5. other ingredients — this is the category to actively manage the transition from the current situation to the objectives and direction of this Standard

The COSMOS-standard's ultimate objective is to address the major issues essential to the environment and welfare of man on the planet. For practical purposes, it aims to ensure the transition between today's and tomorrow's possibilities of technological advances to promote the development of cosmetics ever more organic and natural. This is necessary for the respect of consumers who must be informed clearly and transparently so that they can themselves be actors for sustainable development.

1.2 Documents

1.2.1 Documents

The scheme documents are the:

- COSMOS-standard Criteria
- COSMOS-standard Technical Guide which contains additional interpretation and explanation
- COSMOS-standard Labelling Guide
- COSMOS-standard Control Manual – Certification and Accreditation Requirements

These scheme documents and any further relevant public information as released by COSMOS-standard AISBL are available for download on the website www.cosmos-standard.org.

1.2.2 Copyright

This Standard is the property of the COSMOS-standard AISBL and shall not be copied, reproduced or otherwise used except with its express written permission.

1.2.3 Revision

The organic and natural cosmetics sector is still developing and both technology and understanding are advancing. The COSMOS-standard will therefore be subject to periodic review and amendment in line with the objectives above, taking into account availability of ingredients and technology, and after full and open consultation with stakeholders.

1.2.4 Official language and verbal forms

The COSMOS-standard documents are published in British English. Available translations are informative documents only.

The following verbal forms are used to indicate requirements, recommendations, permissions or capabilities in this Standard:

- 'can', 'could' and 'might' indicate a possibility or capability
- 'may' indicates a permission
- 'shall' & 'must' indicate a mandatory requirement
- 'should' indicates a recommendation

2. REGULATIONS

The users of this Standard are expected to comply with all relevant legislation, including the EU Regulation on cosmetic products (EC No. 1223/2009) as amended, the EU REACH REGULATION (EC No. 1907/2006), the Commission Regulation on claims in cosmetic products (EU No. 655/2013), and/or other local or national laws concerning cosmetic products where appropriate.

The regulations of this Standard for organic and natural products are in line with the legal framework of a large number of countries but without prejudice to additional legal provisions that might exist in some other countries.

3. SCOPE

This Standard applies to cosmetic products and raw materials intended to be used in cosmetic products in two scopes:

- **scope 1:** certification of organic or natural cosmetic products, raw materials with organic content, base formulas, bulkware
- **scope 2:** approval of non-organic raw materials that can be used in finished products, raw materials and base formulas certified according to scope 1

The users of this Standard are manufacturers, service providers and brand owners of organic or natural cosmetic products and raw materials.

4. DEFINITIONS

In the context of this Standard, the definitions below will apply.

'Agro-ingredient' — any plant, animal or microbial product derived from agriculture, aquaculture or wild collection/harvest.

'Auxiliary' — any substance used during the manufacturing process of an ingredient to facilitate the reaction but not considered as part of the ingredient.

'Base formulas' — mixtures of ingredients formulated as a basis for making cosmetic products, eg. shampoo bases, soap bases and cream bases.

'Bulkware' (bulk goods) — an intermediate product where the formulation is completed (no more ingredients are added) but which is not yet filled and packed into a finished product.

'Catalyst' — a substance used to modify or increase the rate of a reaction without being consumed in the process.

'Chemically processed' — processed or extracted using chemical processes such as those listed in Appendix II (which are allowed) and Appendix III (which are not allowed).

'Cosmetic ingredient' — (taken from Regulation (EC) No. 1223/2009) any substance or mixture intentionally used in the cosmetic product during the process of manufacturing. The following shall not be regarded as ingredients:

- impurities in the raw materials used
- subsidiary technical materials used in the mixture but not present in the final product

'Cosmetic product' — (taken from Regulation (EC) No. 1223/2009) any substance or mixture intended to be placed in contact with the external parts of the human body (epidermis, hair system, nails, lips and external genital organs) or with the teeth and the mucous membranes of the oral cavity with a view exclusively or mainly to cleaning them, perfuming them, changing their appearance, protecting them, keeping them in good condition or correcting body odours.

'Decorative cosmetic' — cosmetic product intended to modify the appearance of the area to which they are applied by the use of colour (eg. eye shadow, lip gloss, beauty balm (BB) cream, hair dye).

'Genetically Modified Organisms (GMOs)' — (taken from the Directive 2001/18/EC) means an organism, with the exception of human beings, in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination. Annex 1A (taken from the Directive 2001/18/EC) summarises what techniques are included as genetic modification.

'Derivative of GMO' — any substance which is produced from or by a GMO where the GMO is the source organism of the substance or is involved directly in the last process that accomplishes an essential conversion of the substance.

'Manufacturer' — (taken from Regulation (EC) No. 1223/2009) any natural or legal person who manufactures a cosmetic product or has such a product designed or manufactured and markets that cosmetic product under his name or trademark.

'Manufacturing' — group of operations carried out in the factory or the laboratory, for obtaining, preparing, processing and labelling products.

‘Mineral’ — raw material obtained from naturally occurring substances formed through geological processes but excluding fossil fuel-derived materials.

‘Mixture’ — (taken from Regulation (EC) No. 1223/2009) a mixture or solution composed of two or more substances.

‘Moiety’ — a specific segment of a molecule.

‘Nanomaterial’ — (taken from Regulation (EC) No. 1223/2009) an insoluble or biopersistent and intentionally manufactured material with one or more external dimensions, or an internal structure, on the scale from 1 to 100 nm.

‘Natural origin’ — the following are of natural origin: water, minerals and ingredients of mineral origin, physically processed agro-ingredients, chemically processed agro-ingredients (and parts thereof) derived wholly from the above. The following are not of natural origin: petrochemical moieties, preservatives and denaturing agents from petrochemical origin.

‘NNI’ (Non-Natural Ingredient) — preservatives and denaturing agents from petrochemical origin. Although they are usually from petrochemical origin, all or most of their structures are found in nature (nature identical).

‘Organic’ — production system that complies with and is certified to Regulation No. (EC) 2018/848, USDA NOP, Brazilian Organic Standard No.10.831 2003 or this Standard, or certified to other internationally recognised organic standards by a duly constituted Certification Body or authority. When referring to organic in this Standard, other terms that mean the same in other languages are also included and are subject to the same limitations.

Considered as internationally recognised organic standards are the following:

- standards that have been officially accepted as compliant or equivalent by the EU (<https://eur-lex.europa.eu/eli/reg/2018/848/oj>) or the US organic regulations (<https://www.ams.usda.gov/rules-regulations/organic>) through the mechanisms set out in those regulations or government official decisions
- national or regional (multi-country) organic standards or regulations that are approved in the IFOAM Family of Standards (<https://www.ifoam.bio/our-work/how/standards-certification/organic-guarantee-system/ifoam-family-standards>)

‘Organic content’ — that part of an ingredient (or product) coming from an organic production system where the ingredient is certified in accordance with Regulation No. (EC) 2018/848 or an equivalent national or international standard or this Standard by a duly constituted Certification Body or authority.

‘Petrochemical moiety’ — a part of a molecule that is derived from petroleum.

‘Physically processed’ — processed or extracted using physical processes such as those listed in Appendix I (which are allowed).

‘Primary raw material’ — any product of plant, animal, or microbial origin, as well as minerals, which is used as raw material in the manufacture of cosmetic ingredients.

‘Primary packaging’ — it is the packaging in direct contact with the formulation itself. The main purpose of primary packaging is to protect and/or preserve, contain, and inform the consumer.

'Raw materials' —

- a) substances and mixtures which are provided to cosmetic manufacturers to be used as ingredients during the process of manufacturing.
- b) substances and mixtures which are provided to end users to be used together with other substances and mixtures for a cosmetic purpose (to be placed in contact with the external parts of the human body [epidermis, hair system, nails, lips and external genital organs] or with the teeth and the mucous membranes of the oral cavity with a view exclusively or mainly to cleaning them, perfuming them, changing their appearance, protecting them, keeping them in good condition or correcting body odours), independently if these substances and mixtures as such meet also the definition of 'cosmetic products'.

'Rinse-off product' — (taken from Regulation (EC) No. 1223/2009 - a cosmetic product which is intended to be removed after application on the skin, the hair or the mucous membranes. Depilatory waxes and peel-off masks are not considered rinse-off products; the wax/mask is removed physically and not intended to be rinsed off with water.

'Soap' — product (liquid or solid) obtained through a saponification reaction.

'Secondary packaging' — it is the packaging not in contact with the product itself and which can be used for the branding and display of the product.

'Substance' — (taken from Regulation (EC) No. 1223/2009) - a chemical element and its compounds in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

'Sunscreen product' — cosmetic product intended to be placed in contact with human skin for the sole or main purpose of protecting from the UV radiation by absorbing, dispersing or reflecting radiation.

'Total product' — the total finished cosmetic product including all ingredients (water, mineral ingredients, physically processed agro-ingredients, chemically processed agro-ingredients and other ingredients).

'Wild plant' — plant that grows spontaneously in natural areas, forests and agricultural areas.

5. GENERAL

5.1 *Precautionary principle*

When there is scientific evidence that an ingredient, technology or process could pose a health or environmental risk, then the precautionary principle will be applied, and it will not be allowed.

The following are not allowed:

5.1.1 *Nanomaterials*

In the absence of functioning alternatives from an environmental point of view, and considering their relevance in cosmetics, nanomaterials, as defined by the European cosmetic regulation, are accepted for:

- titanium dioxide and zinc oxide as UV filters restricted to sunscreen products
- silica

Any other nanomaterials, as defined by the European cosmetic regulation, that have a particle size distribution (number of particles) of 50% or more, on the scale from 1 to 100 nm, are prohibited. The particle size distribution in number of particles is required, based on a quantitative analysis method.

5.1.2 *Genetically modified organisms (GMOs)*

Primary raw materials or ingredients that are GMOs or derivatives of GMOs are forbidden. Contamination of primary raw materials or ingredients with genetically modified material must not be above 0.9% for that primary raw material or ingredient and can only be above the reliable detection limit of 0.1% if adventitious or technically unavoidable.

5.1.3 *Ionising irradiation*

Ionising irradiation is forbidden.

5.2 *Animal testing*

Cosmetic products must not be tested on animals by the manufacturer or any third party induced to do so by it. Cosmetic ingredients must not be tested on animals by the manufacturer or any third party induced to do so by it, except where required by law, other than cosmetic law.

5.3 Sustainability

Preservation of biodiversity and sustainability are important factors to take into account when selecting materials to be used in certified products/ingredients.

5.3.1 Palm oil

Palm oil, palm kernel oil and their derivatives used in cosmetic products and ingredients must be from certified organic origin or sustainable sources.

See section 7.4 for specifications and ingredients this applies to.

COSMOS is committed to ensuring that the sourcing of palm oil ingredients across all COSMOS supply chains has no negative impact on natural ecosystems, including primary rainforest.

6. ORIGIN AND PROCESSING OF INGREDIENTS

In this Standard, the ingredients of a cosmetic product are classified in five categories, each being subject to requirements:

- water
- minerals and ingredients of mineral origin
- physically processed agro-ingredients (PPAI)
- chemically processed agro-ingredients (CPAI)
- other ingredients

The same classification will apply to the origin and composition of a single cosmetic ingredient or a mixture of cosmetic ingredients. Manufacturers of ingredients must provide the corresponding percentages in the technical documentation.

Only physically processed agro-ingredients and chemically processed agro-ingredients can be certified organic. To be considered as organic or with organic content, they must be certified. Detailed requirements and calculation rules for organic percentage of ingredients are given below.

6.1 *Ingredients categories*

6.1.1 *Water*

The water used must comply with hygienic standards (CFU less than 100/ml) and may be:

- potable water
- spring water
- water obtained by osmosis
- distilled water
- sea water

Water can be treated with the physical processes allowed in Appendix I.

6.1.2 *Minerals and ingredients of mineral origin*

Minerals can be used as long as they are obtained without intentional chemical modification and preferably from environmentally sound extraction processes. It is recommended for all companies with COSMOS certified products and/or approved raw materials to ensure ethical and socially responsible sourcing and to use independent certification where possible (eg. Global MICA standard).

Minerals can be treated using the physical processes listed in Appendix I.

Ingredients of mineral origin can be used only if they are listed in Appendix IV based on their environmental impact and they must comply with relevant legislation.

Ingredients of mineral origin must comply with the following green chemistry principles:

- atom economy:
 - reaction mass efficiency (of last reaction step): $\geq 50\%$
 - reaction mass efficiency = (weight of desired product(s)/weight of all reactants) x 100
- review/ reduce energy consumption during manufacturing
- minimise waste during manufacturing
- ensure human health and safety throughout the supply chain

Manufacturers will need to provide evidence of compliance.

6.1.3 Physically processed agro-ingredients (PPAI)

Included is any physically processed product of plant, animal, or microbial origin that complies with the conditions below:

- only primary raw materials of plant, animal or microbial origin that have been extracted using the physical processes listed in Appendix I are allowed
- only primary raw materials that respect the requirements of the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES) are allowed

It is forbidden to use:

- plants, plant materials and microorganisms that have been genetically modified
- primary raw materials extracted from living or slaughtered animals
- primary raw materials harvested/collected by threatened species listed in the IUCN red list (<https://www.iucnredlist.org/search>). Threatened species with global extinction as defined by IUCN (<https://www.iucn.org/resources/conservation-tool/iucn-red-list-threatened-species>) include Critically Endangered (CR), Endangered (EN) and Vulnerable (VU) species

It is allowed to use ingredients of animal origin as long as they:

- are produced by animals but are not a part of the animal
- do not entail the death of the animal concerned, and
- have been obtained using only the processes listed in Appendix I

6.1.4 Chemically processed agro-ingredients (CPAI)

Included is any chemically processed product of plant, animal, or microbial origin that complies with the conditions below.

Only primary raw materials that respect the requirements of the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES) are allowed to be used.

It is forbidden to use:

- plants, plant materials and microorganisms that have been genetically modified
- primary raw materials extracted from living or slaughtered animals

It is allowed to use ingredients of animal origin as long as they:

- are produced by animals but are not a part of the animal
- do not entail the death of the animal concerned, and
- have been obtained using only the processes listed in Appendix I and II

Chemically processed agro-ingredients can contain mineral moieties.

Note — alcohol and other by-products of fermentation are chemically processed agro-ingredients.

The following requirements apply to manufacturers of chemically processed agro-ingredients who should follow the principles of green chemistry for all the sequence of reactions that are needed to make each ingredient (Environmental Protection Agency Green Chemistry Programme, USA, 1998; www.epa.gov/greenchemistry).

The manufacturer of chemically processed agro-ingredients:

- must only use the chemical processes listed in Appendix II (an indicative list of those not allowed is in Appendix III) and must use renewable resources
- can use ingredients derived from culture or fermentation and other non-GMO biotechnology, the cultures must use only feedstock from natural vegetable or microbial raw materials without using genetically modified organisms or their derivatives
- must comply with the following quantitative requirements for their chemically processed agro-ingredients (see table page 14)

Principle	Requirement
Atom economy	Reaction mass efficiency (of last reaction step): $\geq 50\%$ Reaction mass efficiency = (weight of desired product(s) / weight of all reactants) x 100
Non-persistent, non-bioaccumulative and non-toxic products	Allowed are substances/preparations that meet the following requirements: Aquatic Toxicity (LC50, EC50, IC50) > 1 mg/l and Biodegradability > 95% Aquatic Toxicity (LC50, EC50, IC50) > 10 mg/l and Biodegradability > 70% (or 60% depending on test below) <i>With regards to Aquatic Toxicity:</i> performing fish and daphnia tests to determine unknown LC50/ EC50 values for COSMOS certification is not allowed (also refer to §5.2). Instead, the use of calculation from available data based on indirect alternatives methods and in vitro tests must be used. <i>Accepted methods for biodegradability:</i> - OECD 301A (ISO 7827) or OECD 301E, percentage of degradation > 70% - OECD 301B (ISO 9439), OECD 301C, OECD 301D (ISO 10707), OECD 301F (ISO 9408) or OECD 310 (ISO 14593) meet a percentage degradation > 60%

Note — Appendix VIII provides information on exemptions, namely for certain categories of ingredients for which it is not necessary to meet the atom economy or non-persistence requirements.

With the current state of development of green chemistry, it is not yet possible to specify limits or requirements for all principles. Chemically processed agro-ingredients must comply with the following green chemistry principles:

- review/ reduce energy consumption during manufacturing
- minimise waste during manufacturing
- ensure human health and safety throughout the supply chain

Manufacturers will need to provide evidence of compliance.

As the principles and practice of green chemistry evolve, these will be further elaborated and incorporated into this Standard.

6.1.5 Other ingredients

Certain other ingredients are allowed as long as there are no effective natural alternatives available to ensure the safety of consumers or efficacy of the product. Only those listed in Appendix V are allowed.

6.2 Calculation rules for organic percentage

The calculation rules below must be used to determine the proportion of organic content for each cosmetic ingredient.

Physically processed agro-ingredients or chemically processed agro-ingredients not falling within the scope of the recognised organic production systems as defined in section 4 'definitions', must be certified according to this Standard for a manufacturer to claim they have organic content that complies with this Standard. For these ingredients to be certified there is no minimum percentage of organic content.

For all ingredients, the actual organic percentage, calculated according to this Standard, must be provided in the technical documentation.

6.2.1 Water

Water cannot be calculated as organic. This includes water that is:

- added directly, or
- added indirectly as mixtures or components of other ingredients, for example minerals, physically or chemically processed agro-ingredients

The liquid (juice) content of fresh plants is not considered as water. Please refer to 6.2.3 for extracts and reconstitution of dried or concentrated ingredients.

6.2.2 Minerals and ingredients of mineral origin

Minerals and ingredients of mineral origin cannot be calculated as organic.

6.2.3 Physically processed agro-ingredients (PPAI)

a) for physically processed agro-ingredients, using only organic primary raw materials or only organic primary raw materials and organic solvents, the organic percentage is 100%.

b) for water-based extracts, the organic percentage is calculated as follows:

first step

Ratio = [organic fresh plant / (extract - solvents)]

If the ratio is greater than 1, then it is counted as 1

second step

% organic = {[ratio x (extract - solvents) / extract] + [organic solvents / extract]} x 100

Conditions:

- solvent should be understood as the quantity of solvent present in the final extract
- water is not considered as a solvent
- mixtures of organic and non-organic of the same plant cannot be considered as organic

For water-based extracts using only water, the organic percentage is calculated as follows: % organic = (organic fresh plant / extract) x 100

c) for non-water-based extracts, the organic percentage is calculated as follows:

% organic = (organic plant* + organic starting solvents) / (plant* + all starting solvents) x 100.

*fresh or dried

Conditions:

- solvent should be understood as the quantity of solvent present in the final extract
- water is not considered as a solvent
- mixtures of organic and non-organic of the same plant cannot be considered as organic

General conditions (for a, b and c):

- if alcohol is used as an extraction solvent, it must be organic. If an organic ingredient is extracted using non-organic alcohol, the ingredient does not count towards the organic percentage
- if a physically processed agro-ingredient is diluted with water, non-organic solvent or carrier or mixed with other additives after processing, the organic percentage will be reduced proportionately

To calculate the equivalent fresh weight of dried plants in the calculation of organic content of extracts, it is possible:

- to either use the actual dry to fresh ratio for the material (information to be provided)
- or use the following ratios:

wood, bark, seeds, nuts and roots	1 : 2.5
leaves, flowers and aerial parts	1 : 4.5
fruits (eg. apple, grape, sweet cherry)	1 : 5
watery fruits (eg. apricot, orange, pineapple, grapefruit, strawberries, acerola, cherry sour)	1 : 8

For fruits other than those listed, it is advised to check on this database (<https://fdc.nal.usda.gov/index.html>) and use the 86% threshold to define if the plant is considered a fruit or a watery fruit.

It is possible to reconstitute pure concentrates and dried powders to their natural state provided:

- the reconstitution is done before adding to a formulation, and
- the concentrate or powder must not contain any other ingredients, additives or carriers (for example, those mixed with carriers such as maltodextrin cannot be reconstituted)

Note — freeze drying preserves quality the most.

To calculate the percentage of physically processed agro-ingredient in extracts if the fresh plant is non-organic, a calculation analogous to b) or c) above must be used by substituting organic plant with plant.

6.2.4 Chemically processed agro-ingredients (CPAI)

In chemically processed agro-ingredients, the organic percentage of that ingredient is calculated as the proportion (by weight) of the organic primary raw materials in that ingredient, taking into account all the starting primary raw materials used to make that ingredient:

CPAI % organic = [(all organic starting primary raw materials – organic starting primary raw materials in excess) / (all starting primary raw materials – all starting primary raw materials in excess)] x 100.

Conditions:

- non-reacting solvents are not considered as starting primary raw materials
- excess means the amount of starting primary raw materials that is recycled or removed later on
- if a chemically processed agro-ingredient is diluted with water, non-organic solvent or carrier, the organic percentage will be reduced proportionately
- any chemically processed agro-ingredient obtained by cleavage of 100% organic primary raw materials only would be counted as 100% organic

Chemically processed agro-ingredients can be certified in their own right according to this Standard, however:

- there is no minimum percentage of organic content, and
- the percentage of organic content, as measured above, must be clearly displayed

7. COMPOSITION RULES

This Standard covers two levels for finished products and two levels for raw materials:

- cosmetic products under organic certification
- cosmetic products under natural certification
- COSMOS certified raw materials (organic content)
- COSMOS approved raw materials (non-organic content)

The physically processed agro-ingredients (PPAI) percentage of a cosmetic product is calculated as follows:

% PPAI product = Σ weight of PPAI of each ingredient / weight of all ingredients x 100

% ORG PPAI product = Σ weight of ORG PPAI of each ingredient / weight of all ingredients x 100

% ORG product = [Σ weight of ORG PPAI of each ingredient + Σ weight of ORG CPAI of each ingredients] / weight of all ingredients x 100

7.1 Cosmetic products under organic certification

7.1.1 Ingredients

- at least 95% of the physically processed agro-ingredients must be organic
- the remaining physically processed agro-ingredients must be organic if they are listed in Appendix VI
- the chemically processed agro-ingredients listed in Appendix VII must be organic

Due to the composition of soap and alcohol-based products, such as alcohol spritzer perfume, eau de toilette, cologne water where it is not possible to meet the >95% organic PPAI requirement, this criterion is adapted:

- for alcohol-based product (alcohol $\geq$ 50% in formula), at least 95% of [PPAI + alcohol] must be organic: $[\text{Organic PPAI} + \text{organic alcohol}] / [\text{all PPAI} + \text{alcohol}] > 95\%$
- for soaps:
 - when making soaps from raw materials into finished products (use of plant oils), no change of the criterion: $\text{organic PPAI} / \text{all PPAI} > 95\%$
 - when soap noodles are used, and other ingredients are added use this calculation: at least 95% of [PPAI + CPAI soaps] must be organic: $[\text{organic PPAI} + \text{organic CPAI soap}] / (\text{all PPAI} + \text{CPAI soap}) > 95\%$

using the following equations:

organic CPAI soap =

$[(\text{organic saponification agro-ingredients} - \text{organic saponification agro-ingredients in excess}) / (\text{all saponification agro-ingredients} - \text{all saponification agro-ingredients in excess})] \times 100$

CPAI soap =

$$\frac{[(\text{all saponification agro-ingredients} - \text{all saponification agro-ingredients in excess}) / (\text{all saponification agro-ingredients} - \text{all saponification agro-ingredients in excess})]}{x 100}$$

Any ingredients that are additives and not used for saponification such as citric acid, are not considered in these equations.

- the remaining physically processed agro-ingredients must be organic if they are listed in Appendix VI

7.1.2 Total product

- at least 20% of the total product must be organic
- by exemption, for rinse-off products, non-emulsified aqueous products, and products with at least 80% minerals or ingredients of mineral origin, at least 10% of the total product must be organic
- for bulkware, the same calculation rules as for finished products apply

7.2 Cosmetic products under natural certification

There is no requirement to use a minimum level of organic ingredients (however, see 10.3 for requirements for how organic ingredients can be identified on the product labels).

Base formulas with no organic content (eg. shampoo bases, soap bases) cannot go through the normal approval process. Instead, they must be certified under COSMOS CERTIFIED without organic % (therefore including an on-site inspection).

For bulkware, the same calculation rules as for finished products apply.

7.3 Calculation rules for natural origin percentage

The natural origin percentage of a cosmetic product is calculated as follows:

$$\% \text{ natural origin of total} = \frac{[\text{weight of total product} - \text{weight of non-natural origin ingredients (Appendix V.1)} - \text{weight of petrochemical moieties (Appendix V.3)}]}{\text{weight of all ingredients}} \times 100.$$

7.4 Palm oil, palm kernel oil and derivatives

Palm oil, palm kernel oil and their derivatives used in cosmetic products and cosmetic ingredients must be certified organic or sustainable to the following standards: RSPO, SAN, RSB or UEBT. The minimum level required to RSPO certification is the Mass Balance (MB) supply chain model. This means that Certified Segregated (S) and Identity Preserved (IP) are acceptable but Book & Claim (B&C) is not.

This criterion will be applicable for single substances, substances mixed in a blend with other substances derived from palm/palm kernel oil or mixed with other substances such as water and plant extracts.

For blends to show compliance with the criterion, a CSPO (Certified Sustainable Palm Oil) certificate of blend will be accepted. If this cannot be provided, the following will be required:

- a statement from the company producing the blend, stating that they only use sustainable ingredients, and
- the sustainable certificate of the company producing the certified ingredient

7.5 Raw materials with organic content under certification

For the raw materials with organic content which apply for a COSMOS certification, there is no minimum percentage of organic content required as soon as there is at least one organic ingredient in that raw material.

7.6 Raw materials without organic content under approval

For the raw materials without organic content which apply for a COSMOS approval, no minimum of organic content is required.

8. STORAGE, MANUFACTURING AND PACKAGING

8.1 Storage

Storage areas must be clearly labelled to avoid any confusion or risk to the integrity of the products.

8.2 Manufacturing

Different manufacturing processes must be separated to prevent contamination of organic or natural ingredients.

There must be a Quality Control System which includes:

- complete traceability of ingredients and final products
- manufacturing procedures throughout all stages
- ingredient and product testing, and
- analysis, manufacturing and storage records

8.3 Packaging

Primary and secondary packaging for finished cosmetic products as well as fabric components must meet the criteria below.

Bulkware and accessories sold with products, such as brushes, applicators or technical parts, do not need to meet the criteria for packaging.

8.3.1 Each sales unit (Stock Keeping Unit) will have to comply with a minimum of three indicators (written as bullet points below), from a minimum of two different principles, for all certified cosmetic products.

Other indicators can be submitted and evaluated for approval before use.

PRINCIPLE 1: REDUCE

- appropriate volume or weight ratio between packaging (primary and secondary) and product
- no secondary packaging
- sale in bulk product
- no single use products such as samples

PRINCIPLE 2: REUSE

- refillable/reusable packaging
- returnable glass and other materials
- second life packaging organised by the operator (ie. primary packaging, secondary packaging, shipping materials...)

PRINCIPLE 3: RENEWABLE

- renewable materials (a renewable material is a material derived from natural resources that can be replenished over generations)
- biodegradable and compostable packaging material
- environmental certification, such as FSC/PEFC, for paper/card
- use natural based inks and adhesives on labels or silkscreen printing

PRINCIPLE 4: RECYCLE

- use minimum 20% recycled content in the primary packaging
- use monomaterials for primary packaging (containers and lids)
- use monomaterial pump
- use primary and secondary packaging materials (if not monomaterials) that can be separated as per companies' local recycling instructions
- organise empty packaging recollection/deposit by company itself or external third party
- use recyclable label materials to help recycling process

8.3.2 Packaging should be improved against Standard 8.3.1 at least every three years and it must be demonstrated that opportunities for improvements were reviewed, for example by keeping minutes of review meetings.

In addition, as basis for possible improvements, records of packaging material quantities used against quantities of sales unit (in number or in weight) must be kept.

8.3.3 Appendix IX lists accepted packaging materials. They will be permitted in virgin and/or recycled versions.

8.3.4 It is forbidden to use these materials in packaging:

- acrylonitrile styrene acrylate (AS)
- acrylonitrile styrene acrylate (ASA)
- bakelite
- ethylene based octene plastomer (OP)
- expanded polystyrene (EPS)
- materials or substances that contain, have been derived from, or manufactured using, genetically modified organisms
- part of animals or substances produced by animals (eg. leather, silk)
- phenol formaldehyde (PF)
- poly(styrene/ butadiene/ methyl methacrylate) (MBS)
- polycarbonate (PC)
- polymethyl methacrylate (PMMA)
- polystyrene and other plastics containing styrene
- polyvinyl chloride (PVC) and other chlorinated plastics
- urea formaldehyde (UF)

8.3.5 It is recognised that there may need to be exceptions for specific technical purposes (eg. pumps, applicators, droppers, brushes) where no other materials can deliver the required properties. Applications for exceptions supported by technical dossiers will be considered.

8.3.6 Only the following propulsive gasses can be used:

- air
- argon
- carbon dioxide
- nitrogen
- oxygen

8.4 Fabrics

Some cosmetic products include fabric components (wipes, strips, masks, pads, felted soap, etc.) which can be used if they meet the following requirements:

- for COSMOS ORGANIC products, the cosmetic formula must meet this Standard and the fabric material must be 100% certified organic, ie.:
 - the fabric must be composed of 100% organic natural fibers
 - the fabric must be certified according to GOTS (Global Organic Textile Standard) or OCS 100 (Organic Cotton Standard)

If pigments are added, they need to be compliant with the COSMOS-standard or GOTS.

- for COSMOS NATURAL products, fabric components must meet the requirements for physically and chemically processed agro-ingredients in this Standard but do not need to be organic. Lyocell and viscose are allowed
- the weight of the fabrics is not included in the organic and natural origin calculations of the total product
- processes not allowed in the Standard (refer to Appendix III) also apply to fabrics

Fabric and non-woven fabric materials used in cold depilatory wax products can be used for COSMOS NATURAL if they meet the following requirements:

- fabric materials allowed are natural and natural origin fibers
- fabric materials do not contain any synthetic fibers
- fabric material binder might contain some petrochemical origin additives for technical reasons, at level of 3% maximum in the binder and 1% maximum in the fabric

Wool used for felted soap is considered as fabric materials, not as packaging materials, and should therefore comply with the requirements related to fabrics.

It is recognised that there may need to be exceptions if other materials are required and applications for exceptions supported by technical dossiers will be considered.

9. ENVIRONMENTAL MANAGEMENT

9.1 *Environmental management plan*

9.1.1 An environmental management plan must be put in place which addresses the whole manufacturing process and all the residual products and waste resulting from this. It must be implemented effectively.

As part of the environmental management plan, a waste management plan must be put in place which addresses manufacturing waste, including gaseous, liquid and solid waste. The waste management plan must aim to reduce, reuse, recycle waste products on an efficient and rational basis.

Note — compliance with ISO 14000 or national legislation that already covers this will be accepted.

9.1.2 It is required to:

- sort cardboard, glass, paper and all other waste materials
- recycle or process this waste, and
- send all other waste to a specialised recycling firm which deals with specific packaging that it is not possible to recycle

9.2 *Cleaning and hygiene*

9.2.1 It is required to use cleaning and disinfection materials in which the ingredients comply with this Standard (eg. vegetable derived alcohol, decyl glucoside). This applies to all processing stages (eg. tanks, tools).

9.2.2 In addition, the following disinfection materials can be used:

- 1-propanol
- acetic acid (any origin)
- amphoteric surfactants
- formic acid
- glutaric aldehyde
- hydrogen peroxide
- iso-propyl alcohol
- mineral acids and alkalis
- ozone
- peracetic acid (and stabilising agents)

9.2.3 In addition, the following cleaning materials may contain:

- plant based surfactants which meet the following criteria:
 - biodegradability: complying with Annex III (ultimate biodegradability) of Regulation No. (EC) 648/2004
 - aquatic toxicity: EC50 or IC50 or LC50 > 1 mg/l
- plant-based cleaning products certified according to standards recognised as equivalent (these are listed in the Technical Guide)
- palm ingredients and/or derivatives not certified CSPO (although it is encouraged to use CSPO)

Special exceptions due to specific industry requirements (eg. pharmaceutical / food) may be considered by the authorised Certification Body.

9.2.4 It must be ensured by the client that there are no residues from cleaning products.

9.2.5 An inspection system must be implemented by the client to ensure compliant cleaning/disinfection products are used before and after manufacture. This must include the procedures, data records and details of staff training.

10. LABELLING AND COMMUNICATION

10.1 General rules

Labelling and communication must be clear and must not mislead consumers.

Note — the requirements listed below are intended to provide clear consumer information and are in line with the legal framework of most countries, but additional legal provisions could exist in some other countries.

The requirements below are further elaborated in the Labelling Guide.

The labelling requirements for finished products do not apply to bulkware.

10.2 For products under organic certification

Products under organic certification:

- must be labelled with the signature 'COSMOS ORGANIC' in conjunction with the seal of the COSMOS-standard AISBL member organisation as detailed in the Labelling Guide
- must indicate the Certification Body on the label
- must indicate on the label the percentage of organic origin ingredients:
 - a) by weight of the total product, as:
'x% organic of total' or
'x% organic' or
'x% certified organic'
or
 - b) by weight of the total product without water and minerals (as defined in 6.2.1 and 6.2.2) or without water and salt, as:
'y% organic of total, minus water and minerals',
'y% certified organic minus water and minerals', or
'y% organic of total, minus water and salt',
'y% certified organic minus water and salt'
or
 - by using both of a) and b) indications above

If there are two qualities, organic raw material as single ingredient and non-organic raw material in extracts mixture in the formula, with a minimum proportion of 95% of organic quality, then this wording can be used on labels:

- 'made using organic and non-organic ingredients/sources' for CPAI, and
- 'from organic and non-organic agriculture' for PPAI
or similar expressions
- must indicate the percentage of natural origin ingredients by weight of the total product, as:
 - 'x% natural origin of total' or
 - 'x% natural origin' or
 - 'x% certified natural origin'

- must indicate organic ingredients and those made from organic raw materials in the INCI list by one of the following wording options:
 - 'from organic agriculture' for physically processed agro-ingredients and 'made using organic ingredients' for chemically processed agro-ingredients or similar expressions using the same text as used for the INCI list, or
 - 'organic' for organic physically processed agro-ingredients and 'organic origin' for organic chemically processed agro-ingredients

The percentages of natural origin ingredients and organic origin ingredients must be indicated on the label with a precision of maximum two decimals. It is possible to round down to the last unit. However, it is forbidden to round up to the next unit.

- the product must not be called 'organic', for example, 'organic shampoo', unless it is at least 95% organic, measured as a percentage of the total product

For products that are 100% organic or 100% natural origin, the indication of the percentage natural origin is not obligatory.

In case of conflict with national laws, products can indicate the percentage of organic origin ingredients by weight of the total product, as 'x% certified ingredients of total'.

10.3 For products under natural certification

Products under natural certification:

- must be labelled with the signature 'COSMOS NATURAL' in conjunction with the seal of the COSMOS-standard AISBL member organisation as detailed in the Labelling Guide
- must indicate the Certification Body on the label
- must indicate the percentage of natural origin ingredients by weight of the total product on the label, as:
 - 'x% natural origin of total' or
 - 'x% natural origin' or
 - 'x% certified natural origin'

If there are regulatory concerns, the percentage of natural origin product without water and minerals or without water and salt can be applied instead

- can indicate organic ingredients and those made from organic raw materials in the INCI list by one of the following wording options:
 - 'from organic agriculture' for physically processed agro-ingredients and 'made using organic ingredients' for chemically processed agro-ingredients or similar expressions using the same text as used for the INCI list, or
 - 'organic' for organic physically processed agro-ingredients and 'organic origin' for organic chemically processed agro-ingredients

If there are two qualities, organic raw material as single ingredient and non-organic raw material in extracts mixture in the formula, with a minimum proportion of 95% of organic quality, then this wording can be used on labels:

- 'made using organic and non-organic ingredients/sources' for CPAI, and
- 'from organic and non-organic agriculture' for PPAI

or similar expressions

- can indicate the percentage of organic origin ingredients by weight of the total product, as:
 - 'x% organic of total' or
 - 'x% organic' or
 - 'x% certified organic'
- can indicate the percentage of organic origin ingredients by weight of the total product without water and minerals (as defined in 6.2.1 and 6.2.2) or without water and salt, as:
 - 'y% organic of total, minus water and minerals',
 - 'y% certified organic minus water and minerals' or
 - 'y% organic of total, minus water and salt',
 - 'y% certified organic minus water and salt'

The percentages of natural origin ingredients and organic origin ingredients must be indicated on the label with a precision of maximum two decimals. It is possible to round down to the last unit. However, it is forbidden to round up to the next unit.

Organic claims on the front of the packaging are limited to the organic content of the total product and the organic ingredient(s) concerned, and must:

- appear in text that is no more prominent than the smallest text on the front of the packaging
- appear in conjunction with the COSMOS NATURAL signature (which must therefore also be on the front and in accordance with the first bullet of the paragraph above), and

- the organic ingredients concerned are also identified in the INCI list (in accordance with the third bullet of the paragraph above)

For products that are 100% natural origin, the indication of the percentage natural origin is not obligatory.

10.4 For raw materials with organic content

Raw materials under organic certification:

- must be labelled with the signature 'COSMOS CERTIFIED' in conjunction with the seal of the COSMOS-standard AISBL member organisation as detailed in the Labelling Guide. In case of raw materials as defined by the definition of 'raw materials' part b) in the definition section of this document, the signature 'COSMOS CERTIFIED' must be used
- must indicate the Certification Body on the label
- must indicate clearly on the label and/or appropriate documents, the percentage of organic content of the raw material by weight of the total raw material, as 'x% organic content'

10.5 For raw materials with no organic content

Raw materials with no organic content that are approved:

- may be labelled with the signature 'COSMOS APPROVED' in conjunction with the seal of the COSMOS-standard AISBL member organisation as detailed in the Labelling Guide
- may indicate the Certification Body on the label
- must make no reference on the label or on relevant documents to the term certified or to organic

10.6 Supporting literature

If any reference to organic or natural products or ingredients or raw materials are made in advertising or supporting literature, they must comply with the appropriate rules in 10.2, 10.3, 10.4 and 10.5.

10.7 Organic in the name of a company or product range

If the company name or product range includes the word organic, the use of that name or branding in conjunction with certified products must not be such that it might mislead the consumer.

10.8 Use of the signature, name or term related to this Standard

The COSMOS term and COSMOS signatures are registered trademarks (®) of the COSMOS-standard AISBL and must only be used in accordance with the COSMOS-standard.

The COSMOS signatures, names or terms can be used in literature, advertising, publicity or websites, etc:

- if the signature is used, only in the way described in 10.2, 10.3, 10.4 and 10.5
- only in conjunction with the products or raw materials that are certified, and
- only in a way that does not mislead the consumer, for example where it might mistakenly be associated with non-certified products

Note — the danger of such a mistake arises in particular, if the name is used in documents that are connected with the marketing of any non-certified products, without a clear statement explaining the situation.

The use of pseudo-organic logos and seals, that might mislead or confuse consumers, must not be used in conjunction with COSMOS certified products or approved ingredients.

11. CERTIFICATION AND APPROVAL

11.1 Certification

To be certified for cosmetic raw materials or cosmetic products under natural or organic certification according to this Standard, it is required to fulfil the requirements described in the documents of the Scheme.

The certification delivered by an authorised Certification Body is based on a documentary validation and an on-site inspection. It concerns the entire process from checking ingredients to final products validation.

11.2 Approval of raw materials

The approval of non-organic cosmetic raw materials as defined by the definition of 'raw materials' part a) in the definition section of this document consists of a documentary validation without on-site inspection, whereas the approval of non-organic raw materials as defined by the definition of 'raw materials' part b) follows the provisions described by 11.1. The approval delivered by a Certification Body is not a certification: it only states that a non-organic ingredient is acceptable for use under this Standard.

It is required to:

- supply all information and documents needed for the approval as requested by the Certification Body, and
- declare to the Certification Body any changes to the processing of that ingredient that could affect its approval

It is forbidden to label or otherwise indicate that approved cosmetic ingredients are certified according to this Standard. However, there is provision for labelling in 10.5 and as further elaborated in the Labelling Guide.

11.3 Certification Bodies

Bodies certifying to this Standard must be (associate) members of the COSMOS-standard AISBL and must comply with the requirements defined within the Control Manual — Accreditation and Certification Requirements: the prerequisite is the accreditation according to the COSMOS-standard scheme which includes compliance to ISO 17065.

Certification Bodies must use the COSMOS-standard, and the COSMOS signatures, names and terms only in accordance with the requirements set out in this Standard, the Control Manual - Accreditation and Certification Requirements, and the Labelling Guide, or otherwise only with the prior written consent of the COSMOS-standard AISBL.

12. IMPLEMENTATION OF THIS STANDARD

12.1 *Coming into force*

The Standard, Version 4.2 will come into force on the 1st September 2025.

12.2 *Application date*

The Standard, Version 4.2 shall apply from the 1st September 2025.

12.3 *Transitional measures*

12.3.1 *General rules*

All raw materials and cosmetic products previously submitted and confirmed as compliant to version 4.0 and version 4.1 of the COSMOS-standard are automatically considered as compliant with this version of the Standard.

All raw materials and cosmetic products that are submitted for certification or approval after the 1st of September 2025 must comply with this version of the Standard.

NOTE: cosmetic products that have been certified under version 3.1 of the COSMOS-standard can still be manufactured until 1st December 2025. For those products only, raw materials certified or approved under version 3.1 of the COSMOS-standard can still be used until 1st December 2025. However, any cosmetic product manufactured after 1st December 2025 must comply with this version of the Standard.

12.3.2 *Specific cases*

- §6.1.3 — physically processed agro-ingredients/ primary raw materials harvested/ collected by threatened species listed in the IUCN red list: criteria must be met before the 1st December 2025, regardless of the submission date
- Appendix II — sulphated surfactants are allowed until the 1st January 2029

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APPENDIX I: PHYSICAL PROCESSES ALLOWED

The following criteria have been used to select these processes:

- processes which respect natural active substances that are present in ingredients
- processes which encourage good waste management and energy use and take into account ecological balance

All EXTRACTIONS must be with natural materials with any forms of water or with a third solvent of plant origin, such as:

- ethyl alcohol
- glycerine
- honey
- supercritical CO₂ absorption
- vegetable oils

ABSORPTION ON AN INERT SUPPORT CONFORMING TO THIS STANDARD

BLEACHING - DEODORISATION (on an inert support conforming to this Standard)

BLENDING

CENTRIFUGING

DECOCTION

DECOLORATION (allowed decolorizing agents: bentonite, activated charcoal, bleaching earth, hydrogen peroxide, ozone)

DESICCATION - DRYING (progressive or not, by evaporation / natural under sun)

DETERPENATION (if fractionated distillation with steam)

DISTILLATION, EXPRESSION or EXTRACTION (steam)

EXTRACTION

FILTRATION and PURIFICATION (ultra-filtration, dialysis, crystallisation, ion exchange)

FREEZING

GRINDING

INFUSION

LYOPHILISATION

MACERATION

MICROWAVE

PERCOLATION

PRESSURE

ROASTING

SETTLING AND DECANTING

SIFTING

SQUEEZING, CRUSHING

STERILISATION BY MEANS OF UV

STERILISATION WITH THERMAL TREATMENTS (according to a temperature respectful of the active substances)

ULTRASOUND

UV TREATMENTS

VACUUM

At any step of the manufacturing process:

- aqueous solutions of mineral acids (hydrochloric acid, sulphuric acid, phosphoric acid, etc.) are allowed as manufacturing auxiliaries for neutralisation, purification and extraction. They are not allowed as reactants (raw material or ingredient)
- manufacturing auxiliaries are therefore not listed in the INCI list of the ingredient or cosmetic finished product
- preservation or treatment of primary plant materials are not checked for non-organic raw materials as long as they don't remain in the final ingredient

For the physical processing of organic agro-ingredients, auxiliaries need to meet the ingredient requirements of this Standard.

APPENDIX II: CHEMICAL PROCESSES ALLOWED FOR PROCESSING AGRO-INGREDIENTS

The following criteria have been used to select these processes:

- processes which allow the formation of biodegradable molecules
- processes which respect natural active substances that are present in ingredients
- processes which encourage good waste management and energy use and take into account ecological balance

ALKYLATION

AMIDATION

BIOTECHNOLOGY PROCESSES

CALCINATION of plants residues

CARBONISATION (resins, fatty organic oils)

CONDENSATION / ADDITION

ESTERIFICATION / TRANS-ESTERIFICATION / INTER-ESTERIFICATION

ETHERIFICATION

HYDRATION

HYDROGENATION

HYDROLYSIS

IONIC EXCHANGE

NEUTRALISATION

OXIDISATION / REDUCTION

PHOSPHORYLATION (permitted only for ingredients for leave-on products)

SAPONIFICATION

SULPHATION/SULPHONATION (at carbon or oxygen atom, without use of chlorinated sulfation reagents) – permitted only for surfactants for rinse-off products

Use of petrochemical solvents

COSMOS-standard promotes the use of natural origin solvents in the processing of chemically processed agro-ingredients. Taking account of the current state of development, petrochemical solvents can be used. Such solvents can only be used provided there are no effective natural alternatives and they are recycled and eliminated at the end of the process.

However:

- there must be no use of aromatic, alkoxylated, halogenated, nitrogen or sulphur based (except DMSO) solvents with any chemical processing of agro-ingredients
- use of formaldehyde is not allowed, even if the process solvent is completely removed
- preservation or treatment of primary plant materials are not checked for non-organic raw materials as long as they don't remain in the final ingredient

For the chemical processing of organic agro-ingredients:

- there must be no use of petrochemical solvents and/or petrochemical auxiliaries (including catalyst, anti-foaming, etc, even if removed)
- auxiliaries need to meet the ingredient requirements of this Standard
- halogenation process is not allowed (even as activating step)

At any step of the manufacturing process:

- aqueous solutions of mineral acids (hydrochloric acid, sulphuric acid, phosphoric acid, etc.) are allowed as manufacturing auxiliaries for neutralisation, purification and extraction. They are not allowed as reactants (raw material or ingredient)
- manufacturing auxiliaries are therefore not listed in the INCI list of the ingredient or cosmetic finished product
- there are exemptions for sulphuric acid which is allowed for sulphation/sulphonation reactions, and for phosphoric agents which are allowed to produce phosphorylated ingredients, for leave on products only
- sodium hypochlorite can be used as auxiliary to inactivate enzymes present in the non-organic physically processed agro-ingredients

Specifications for phosphorylated compounds:

- permitted only for leave-on products and specific cases of rinse-off products
- ingredients containing phosphates can be used in rinse off products, providing:
 - no halogenated phosphorus reagents are used during the manufacturing steps
 - the phosphate content of the organic phosphate molecule is 5% or less
 - the production facilities include their own sewage treatment plant

APPENDIX III: EXAMPLES OF PROCESSES NOT ALLOWED

Only the processes listed in Appendix I and Appendix II are allowed. Those below represent a non-exhaustive list which only identifies the main ones that are not allowed.

BLEACHING - DEODOURISATION (on a support of animal origin)

DECOLORATION with sodium hypochlorite

DETERPENATION (other than with steam)

ELECTRICITY or any process putting the animal under stress (eg. bee venom and snail slime)

HALOGENATION (as main reaction)

IONISING RADIATION (for example alpha, beta, gamma and X-ray)

TREATMENTS USING MERCURY

USE OF ETHYLENE OXIDE, PROPYLENE OXIDE OR OTHER ALKYLENE OXIDES (for example, as part of ethoxylation and propoxylation)

APPENDIX IV: INGREDIENTS OF MINERAL ORIGIN ALLOWED

Ingredients of mineral origin* can only be used if they are listed below and they must comply with relevant legislation. These substances are allowed:

- within the limitations of use listed
- or for general purposes if no limitation of use is listed

Phosphate ingredients of mineral origin are allowed other than those listed below, but only for buffering, chelating and anti-caking properties if no other alternative is available.

The mono-, di-, tri- or poly- etc. salts of the listed 'ingredients of mineral origin' are also permitted.

Metals from natural origin directly obtained from pure metals or from electrolysis are accepted.

**For minerals, see Standard 6.1.2*

INCI Name (chemical name)	CAS number	Limitation of use	Examples of occurrence in nature
Aluminum Hydroxide	21645-51-2		Bauxite (Gibbsite, Hydrargillite)
Aluminum Iron Silicates	-		Ceramics, obtained by heating of silicate minerals
Alumina	1344-28-1		Corundum, clay
Ammonium Sulfate	7783-20-2		
Calcium Aluminum Borosilicate	65997-17-3		Tourmalines
Calcium Carbonate, CI 77220	471-34-1		Sediment rocks, calcite, aragonite, vaterite. Main component in marble, chalk, dolomite
Calcium Chloride	10043-52-4		
Calcium Fluoride	7789-75-5	Only in oral cavity hygiene product	Fluorite or fluorspar, frequently occurring mineral from the mineral group of the simple halides
Calcium Hydroxide	1305-62-0		
Calcium Sodium Borosilicate	-		
Calcium Sulfate	7778-18-9		Gypsum
Cerium Oxide	1306-38-3		Cerit
CI 77163 (Bismuth Oxychloride)	7787-59-9		Bismoclite
CI 77289 (Chromic Oxide hydrated)	1308-14-1 / 12001-99-9		Guyanait, Grimaldiit, bracewellit, eskolaite

INCI Name (chemical name)	CAS number	Limitation of use	Examples of occurrence in nature
CI 77489 (Iron Oxides)	1345-25-1		Bernalit, Feroxygit Ferrihydrite, Goethite Lepidocrocit
CI 77491 (Iron Oxides)	1309-37-1 / 1317-61-9 / 1345-27-3 / 52357-70-7 / 1345-25-1		
CI 77492 (Iron Oxides)	51274-00-1 / 1345-27-3 / 20344-49-4 / 52357-70-7		
CI 77499 (Iron Oxides)	12227-89-3 / 1309-37-1 / 1317-61-9 / 1345-25-1 / 1345-27-3 / 52357-70-7		
CI 77510 (Prussian Blue)	12240-15-2 / 25869-00-5		Kafehydrocyanite
CI 77742 (Manganese Violet)	10101-66-3		Derived from the breakdown of bat guano
CI 77745 (Trimanganese Bis(orthophosphate))	10124-54-6 / 14154-09-7		
Diatomaceous Earth	61790-53-2		
Dicalcium Phosphate Dihydrate	7757-93-9 / 7789-77-7	Only in oral cavity hygiene product	
Glass	65997-17-3		
Gold	7440-57-5		
Hydrated Silica	10279-57-9 / 1343-98-2 / 7631-86-9 / 112926-00-8 / 63231-67-4		Quartz sand
Hydroxyapatite	1306-06-5	Only in oral cavity hygiene product OR in leave-on products	Constituent of teeth enamel
Iron Hydroxide	20344-49-4		
Magnesium Aluminum Silicate	1327-43-1		
CI 77713 (Magnesium Carbonate)	546-93-0 / 7757-69-9		Magnesite, Dolomite
Magnesium Carbonate Hydroxide	12125-28-9		Artinite, Hydromagnesite and Dypingite

INCI Name (chemical name)	CAS number	Limitation of use	Examples of occurrence in nature
Magnesium Chloride	7786-30-3 / 14989-29-8		
Magnesium Hydroxide	1309-42-8		
Magnesium Oxide	1309-48-4		
Magnesium Phosphate	10043-83-1	Only in association with Zinc Oxide	
Magnesium Silicate	1343-88-0		Talc, Sepiolite, minerals of the serpentine group
Magnesium Sulfate	7487-88-9 / 18939-43-0		Kieserite
Manganese Sulfate	7785-87-7 / 10124-55-7		
Mica	12001-26-2		Annite, Phlogopite, Muscovite
Potassium Alum	10043-67-1 / 7784-24-9		
Potassium Carbonate	584-08-7		In ash, in inland waters (Dead Sea, Lop Nor desert)
Potassium Chloride	7447-40-7		Sylvite, Carnallite, Kainite
Potassium Hydroxide	1310-58-3		
Potassium Iodide	7681-11-0		
Potassium Sulfate	7778-80-5		
Silica	7631-86-9 / 112945-52-5 / 60676-86-0		Quartz sand
Silver	7440-22-4		
Silver Oxide	20667-12-3		Silver ores, often together with lead-copper and zinc ores as sulphides, sulphates or oxides
Silver Sulfate	10294-26-5		Silver ores, often together with lead-copper and zinc ores as sulphides, sulphates or oxides
Sodium Bicarbonate	144-55-8		Natron, mineral nahcolith
Sodium Carbonate	497-19-8		Soda (various crystal forms), in soda lakes
Sodium Chloride	7647-14-5		
Sodium Fluoride	7681-49-4	Only in oral cavity hygiene product	Sea water, spring water
Sodium Hydroxide	1310-73-2		
Sodium Magnesium Silicate	101659-01-2		

INCI Name (chemical name)	CAS number	Limitation of use	Examples of occurrence in nature
Sodium Metasilicate	6834-92-0		
Sodium Monofluorophosphate	10163-15-2 / 7631-97-2	Only in oral cavity hygiene product	
Sodium Silicate	1344-09-8		
Sodium Sulfate	7727-73-3 / 7757-82-6		Glauber salt; in mineral waters, mineral thenardite
Sodium Thiosulfate	7772-98-7 / 10102-17-7	Only in soaps	
Titanium Dioxide, CI 77891	13463-67-7 / 1317-70-0 / 1317-80-2	See 5.1.1 of the Technical Guide Only for sunscreen product and decorative cosmetic product	Anatas, brookite, rutile
Tin Oxide	18282-10-5		Cassiterite in alluvial deposits
Ultramarines, CI 77007	1302-83-6 / 1317-97-1 / 1345-00-2 / 11118-33-5 / 12703-66-1 / 12769-96-9 / 57455-37-5		Gemstone (lapis lazuli)
Zinc Oxide, CI 77947	1314-13-2	See 5.1.1 of the Technical Guide	Wulfit, sweetit, ashoverit
Zinc Sulfate	7733-02-0 / 7446-19-7 / 7446-20-0		Goslarite

APPENDIX V: OTHER INGREDIENTS ALLOWED

Only those ingredients listed are allowed to be used in COSMOS NATURAL and COSMOS ORGANIC certified products. Other ingredients with petrochemical moieties, other than those listed, are not allowed to be used.

This appendix contains those ingredients that are temporarily allowed and will be reviewed at every Standard revision with the aim of removing those where compliant alternatives exist. These ingredients cannot be certified as organic.

1. Preservatives and denaturing agents from petrochemical origin (non-natural ingredients – NNI)

Ingredient	Restrictions
Benzoic Acid and its salts	
Benzyl Alcohol	
Dehydroacetic Acid and its salts	
Denatonium Benzoate and Tertiary Butyl Alcohol and other denaturing agents for alcohol (excluding phthalates)	Only as denaturing agent for ethanol – where required by law
Salicylic Acid and its salts	
Sorbic Acid and its salts	

The percentage of these NNI do not count towards the limit of 2% petrochemical moiety in the total finished product.

2. Petrochemical solvents are allowed for extraction of the following agro-ingredients

Ingredient	Restrictions
Absolutes, Concretes, Resinoids	<i>COSMOS NATURAL</i> only
Annatto	
Betaine	
Carotenoids/ Xanthophylls	
Carrageenan	
Glycosphingolipids and Glycolipids	
Lanolin	
Lecithin and lecithin derivatives	
Oryzanol	
Phytosterol	
Tocopherol/ Tocotrienol	

In any event, there must be no use of aromatic, alkoxyated, halogenated, nitrogen- or sulphur-based solvents. The solvents used must be completely removed or removed to technologically unavoidable and technologically ineffective concentrations in the finished product and must be recycled.

3. Ingredients containing both natural origin and petrochemical moieties (PeMo)

Family	INCI accepted Note — only those substances listed in this column can be used. Where no substances are named in this column all substances in the family can be used.	Restriction of use
<u>Alkyl</u> amidopropylbetaine	Cocoamidopropylbetaine / Olive amidopropyl betaine/ Cocobetaine	
<u>Alkyl</u> amphoacetate/ diacetate		
<u>Alkyl</u> dimonium Hydroxypropyl Hydrolyzed <u>Vegetal protein</u>	Cocodimonium Hydroxypropyl Hydrolyzed Wheat Protein	Use in hair/beard products only
<u>Alkyl</u> glucosidecarboxylate		
<u>Alkyl</u> Methyl Glucamide		
Carboxy Methyl - <u>Vegetal polymer</u>	Carboxy Methyl Cellulose (Cellulose Gum)	
<u>Dialkyl</u> Carbonate	Dicaprylyl Carbonate	
Dialkyl Dimonium Chloride	Distearoylethyl Dimonium Chloride	Use in hair/beard products only
Tetra Sodium Glutamate Diacetate	Tetra Sodium Glutamate Diacetate	Only for the function of chelating agent of product/ingredient (liquid or solid) obtained through a saponification reaction
<u>Vegetal polymer</u> - Hydroxypropyl Trimonium Chloride	Guar Hydroxypropyl Trimonium Chloride	Use in hair/beard products only

This table of ingredients that are temporarily allowed will be reviewed on a regular basis with the aim of removing those where compliant alternatives exist or replacing those with a better ecological profile.

The sum of petrochemical moieties must not exceed a total of 2% of the total finished product.

In those ingredients containing petrochemical moieties the proportion of the petrochemical moiety is calculated as follows:

- % Petrochemical moiety = (molar weight of petrochemical part of the molecule) / (molar weight of the molecule) x 100

Those ingredients containing both natural origin and petrochemical moieties cannot be organic.

4. Other ingredients

Ingredient	Restrictions
Caramel	Only allowed if reagents and processes are compliant
Carmines	
CI 77288 (Dichromium trioxide, Chromic oxide; Chromium (III) oxide)	
Mother of pearl/Ostrea Shell Powder	Only from naturally dead shells, and only from wild harvest, not from food waste
Silk	
Squalane	Vegetable origin

APPENDIX VI: PHYSICALLY PROCESSED AGRO-INGREDIENTS THAT MUST BE ORGANIC

These physically processed agro-ingredients are considered to be available in organic form in sufficient quantity and quality and therefore must be organic in products under COSMOS ORGANIC certification. Wild plants are accepted if certified organic.

Note — see Technical Guide for details.

The following are exempt:

- ingredients that are complex mixtures, such as perfumes and elements of perfumes
- ingredients that are extracted using petrochemical solvents (as per Appendix V.2)

The list will be reviewed and updated regularly based on the availability of organic physically processed agro-ingredients on the market.

Common name	INCI NAME
Aloe	Aloe Barbadensis Extract Aloe Barbadensis Leaf Extract Aloe Barbadensis Leaf Juice Aloe Barbadensis Leaf Juice Powder Aloe Barbadensis Leaf Powder Aloe Barbadensis Leaf Water
Almond	Prunus Amygdalus Dulcis Oil
Apricot	Prunus Armeniaca Kernel Oil (only for plant oil)
Argan	Argania Spinosa Kernel Oil
Arnica	Arnica Montana Extract Arnica Montana Flower Extract Arnica Montana Flower Oil Arnica Montana Flower Water
Camomile Chamomile	Chamomilla Recutita Extract Chamomilla Recutita Flower Water Chamomilla Recutita Flower Extract Chamomilla Recutita Leaf Extract Chamomilla Recutita Flower Oil Chamomilla Recutita Oil Chamomilla Recutita Flower/ Leaf/ Stem Extract Chamomilla Recutita Flower/ Leaf/ Stem Water Anthemis Nobilis Flower Extract Anthemis Nobilis Flower Oil Anthemis Nobilis Flower Water
Castor	Ricinus Communis Seed Oil
Cinnamon	Cinnamomum Zeylanicum Bark Extract Cinnamomum Zeylanicum Leaf Oil Cinnamomum Zeylanicum Bark Oil Cinnamomum Zeylanicum Bark Powder Cinnamomum Zeylanicum Leaf Extract

Common name	INCI NAME
Citronella	Cymbopogon Winterianus Herb Extract Cymbopogon Winterianus Herb Oil Cymbopogon Nardus Herb Extract Cymbopogon Nardus Herb Oil
Cocoa butter	Theobroma Cacao Seed Butter
Coconut palm	Cocos Nucifera Oil
Cow's Milk	Lac
Cypress	Cupressus Sempervirens Bark Extract Cupressus Sempervirens Cone Extract Cupressus Sempervirens Fruit Extract Cupressus Sempervirens Leaf Extract Cupressus Sempervirens Leaf Water Cupressus Sempervirens Oil Cupressus Sempervirens Seed Extract
Egg = non-fertilised chicken eggs and derivatives	Egg Egg oil Egg powder Egg shell membrane Egg shell membrane extract Egg shell membrane powder Egg shell powder Egg yolk powder
Eucalyptus	Eucalyptus Oil Eucalyptus Globulus Leaf Eucalyptus Globulus Leaf Extract Eucalyptus Globulus Leaf Oil Eucalyptus Globulus Leaf Powder Eucalyptus Globulus Leaf Water Eucalyptus Citriodora Leaf Extract Eucalyptus Citriodora Oil Eucalyptus Radiata Leaf Extract Eucalyptus Radiata Flower Extract Eucalyptus Radiata Stem Extract
Fennel	Foeniculum Vulgare Fruit Extract Foeniculum Vulgare Fruit Oil Foeniculum Vulgare Leaf Extract Foeniculum Vulgare Water Foeniculum Vulgare Oil
Geranium	Pelargonium Graveolens Leaf/ Flower Oil Pelargonium Graveolens Flower/ Leaf/ Stem Water
Grape seed	Vitis Vinifera Fruit Extract Vitis Vinifera Fruit Water Vitis Vinifera Leaf Extract Vitis Vinifera Leaf Water Vitis Vinifera Seed Oil/ Extract
Hemp	Cannabis Sativa Seed Oil

Common name	INCI NAME
Honey	Mel
Hypericum	Hypericum Perforatum Extract Hypericum Perforatum Oil Hypericum Perforatum Flower/ Leaf Extract
Jojoba	Simmondsia Chinensis Seed Oil
Lemon	Citrus Limon Extract Citrus Limon Fruit Extract Citrus Limon Leaf Extract Citrus Limon Juice Citrus Limon Peel Extract Citrus Limon Oil Citrus Limon Flower Oil Citrus Limon Peel Oil Citrus Limon Leaf Oil
Lemon grass	Cymbopogon Flexuosus Oil
Linum	Linum Usitatissimum Seed Extract Linum Usitatissimum Seed Oil
Macadamia	Macadamia Integrifolia Seed Oil
Marigold	Calendula Officinalis Flower Oil
Melissa	Melissa Officinalis Flower Extract Melissa Officinalis Leaf Extract Melissa Officinalis Leaf Oil Melissa Officinalis Leaf Water
Mint	Mentha Arvensis Flower/ Leaf/ Stem Extract Mentha Arvensis Leaf/ Stem Water Mentha Piperita Flower/ Leaf Oil Mentha Piperita Flower/ Leaf/ Stem Extract Mentha Piperita Flower/ Leaf/ Stem Oil Mentha Piperita Flower/ Leaf/ Stem Water Mentha Spicata Flower/ Leaf/ Stem Extract Mentha Spicata Flower/ Leaf/ Stem Oil
Neem	Melia Azadirachta Bark/ Flower/ Leaf/ Seed Extract Melia Azadirachta Seed Oil
Nettle	Urtica Dioica Leaf/ Root Extract
Olive	Olea Europaea Fruit Oil Olea Europaea Flower Extract Olea Europaea Flower Water Olea Europaea Fruit Extract Olea Europaea Fruit Water Olea Europaea Leaf Extract Olea Europaea Leaf Oil Olea Europaea Leaf Water

Common name	INCI NAME
Orange	Citrus Aurantium Flower Extract Citrus Aurantium Flower Oil Citrus Aurantium Leaf Extract Citrus Aurantium Leaf Oil Citrus Aurantium Peel Extract Citrus Aurantium Peel Oil Citrus Aurantium Dulcis Flower Extract Citrus Aurantium Dulcis Flower Oil Citrus Aurantium Dulcis Flower Water Citrus Aurantium Dulcis Fruit Extract Citrus Aurantium Dulcis Peel Extract Citrus Aurantium Dulcis Peel Oil Citrus Aurantium Amara Flower Extract Citrus Aurantium Amara Flower Oil Citrus Aurantium Amara Flower Water Citrus Aurantium Amara Fruit Extract Citrus Aurantium Amara Fruit Juice Citrus Aurantium Amara Peel Extract Citrus Aurantium Amara Peel Oil
Palm	Elaeis Guineensis Oil
Patchouli	Pogostemon Cablin Leaf Oil
Peppermint	Mentha Piperita Water Mentha Piperita Extract Mentha Piperita Leaf Water Mentha Piperita Leaf Extract Mentha Piperita Flower/ Leaf/ Stem Extract Mentha Piperita Flower/ Leaf/ Stem Water Mentha Piperita Oil
Rapeseed	Brassica Campestris Seed Oil
Rosemary	Rosmarinus Officinalis Extract Rosmarinus Officinalis Flower Extract Rosmarinus Officinalis Leaf Extract Rosmarinus Officinalis Flower/ Leaf/ Stem Extract Rosmarinus Officinalis Water Rosmarinus Officinalis Flower/ Leaf/ Stem Water Rosmarinus Officinalis Leaf Oil Rosmarinus Officinalis Flower Oil Rosmarinus Officinalis Stem Oil
Safflower	Carthamus Tinctorius Seed Oil
Sage	Salvia Officinalis Oil Salvia Officinalis Flower/ Leaf/ Stem Extract Salvia Officinalis Flower/ Leaf/ Stem Water Salvia Sclarea Flower/ Leaf/ Stem Extract Salvia Sclarea Flower/ Leaf/ Stem Water Salvia Sclarea Oil
Sesame	Sesamum Indicum Seed Oil
Shea butter	Butyrospermum Parkii Butter Butyrospermum Parkii Butter Extract

Common name	INCI NAME
Soya	Glycine Soya Oil
Sunflower	Helianthus Annus Seed Oil
Tea tree	Melaleuca Alternifolia Leaf Oil Melaleuca Alternifolia Leaf Water Melaleuca Alternifolia Leaf Extract
Thyme	Thymus Vulgaris Flower/ Leaf Extract Thymus Vulgaris Flower/ Leaf Oil Thymus Vulgaris Leaf Water Thymus Vulgaris Oil
Witch hazel	Hamamelis Virginiana Bark/ Leaf Extract Hamamelis Virginiana Bark/ Leaf Water Hamamelis Virginiana Flower Water
Ylang ylang	Cananga Odorata Flower Extract Cananga Odorata Flower Water Cananga Odorata Flower Oil Cananga Odorata Leaf Oil

In the case of a shortage of an organic raw material listed in Appendix VI authorised Certification Bodies can grant exceptions according to the rules as laid down in the Control Manual and Technical Guide.

APPENDIX VII: CHEMICALLY PROCESSED AGRO-INGREDIENTS THAT MUST BE MADE FROM ORGANIC ORIGIN AGRO-INGREDIENTS

These chemically processed agro-ingredients are considered to be available with organic origin agro-ingredients in sufficient quantity and quality and these therefore must be used for COSMOS ORGANIC certification.

The list will be reviewed and updated regularly based on the availability of chemically processed agro-ingredients with organic content on the market.

INCI	Chemical name
Ethanol, ethyl alcohol, alcohol	Ethyl alcohol

In the case of a shortage of an organic raw material listed in Appendix VII authorised Certification Bodies may grant exceptions according to the rules as laid down in the Control Manual and Technical Guide.

APPENDIX VIII: EXEMPTIONS REGARDING ATOM ECONOMY TOXICITY AND BIODEGRADABILITY DATA

Part 1: exemptions for aquatic toxicity and biodegradability

This data is not required for:

- naturally occurring molecules obtained by fermentation (eg. hyaluronic acid)
- molecules resulting from a cleavage of a molecule existing in nature (eg. maltodextrin obtained by hydrolysis of starch). Allowed cleavage reactions are enzymatic hydrolysis and hydrolysis with mineral acids or bases
- polymers, only obtained by esterification of monomers, that meet the criteria for non-persistent products as defined in 6.1.4
- hydrogenated oils and butters
- perfumes
- salts of naturally occurring molecules (obtained by solvent/physical extraction and salification to obtain associated salt). However, data for zinc salts has to be provided
- poorly soluble esters (polyesters included) resulting from esterification between acid and alcohol that meet the criteria for non-persistent products as defined in 6.1.4

Part 2: exemptions for atom economy

This data is not required for:

- naturally occurring molecules obtained by fermentation (eg. hyaluronic acid)
- perfumes

For other ingredients, if no test is done, there is the possibility to submit written (bibliographic) data or to apply alternative methods such as the Read Across or QSAR approach.

Note — see Technical Guide for further information.

APPENDIX IX: PACKAGING MATERIALS

List of accepted materials (non-exhaustive):

- CA - Cellulose Acetate
- cellulose
- ceramic
- glass
- metals such as: aluminium, iron, stainless steel, etc
- paper / cardboard
- PE - Polyethylene
- PET - Polyethylene Terephthalate
- PETG - Polyethylene Terephthalate Glycol
- PLA - Polylactic Acid
- PP - Polypropylene
- rubber (from natural origin)
- wood
- or any other material 100% from natural origin (non GMO)

The list of accepted materials applies to the main parts of the packaging, which are:

- bottle
- box
- cap
- jar
- sachet
- tube

These parts have to be made with the accepted materials listed above. It applies to all kinds of products: skincare, healthcare, decorative cosmetic, etc. If a material is not listed above, a technical documentation can be submitted to the Technical Committee for review.

Protection Sleeves and Over packaging

Protection Sleeves and over-packaging are not allowed except for:

- closure system
- small products (eg. decorative cosmetic)
- solid soaps and massage bars (where it will be considered as primary packaging)



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