

COSMOS-standard

Technical Guide

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Technical Guide – version 2.11

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1. Introduction

This information is intended to give guidance on interpreting technical points and criteria of the COSMOS-standard.

2. Definitions

Cf COSMOS Standard – 4. Definitions

“Soap”

‘Soap’ is considered as the product (liquid or solid) obtained through a saponification reaction.

“Organic” precision

- Considered as complying with Regulation No. (EC) 834/2007 are those countries/standards/certifiers that have been accepted as compliant or equivalent through the mechanisms set out in that regulation.
- Considered as using as their reference point the Codex Alimentarius GL 32 are those national standards (ie recognised by or within national legislation) where Codex Alimentarius GL 32 is clearly referenced within the standard.

In all cases, the certification to such standards must be carried out by a certification body or authority that is duly authorised and/or independently accredited for the standard in question. In addition, the standard and/or respective product must not be in conflict with the relevant provisions of the COSMOS-standard.

Examples:

- National Program for Organic Production (NPOP)
- National Organic Program (NOP)
- Canada Organic Regime (COR)
- Australian National Food standards
- Brazilian Organic Regulation
- Japanese Agricultural Standard (JAS)

“NNI” (Non Natural Ingredient)

In the COSMOS standard the preservatives and denaturing agents listed in Appendix V.1 are referred to as Non Natural Ingredients. Although they are usually from petrochemical origin, all or most of their structures are found in nature (nature identical). The percentage of these NNI do not count towards the limit of 2% petrochemical moiety in the total finished product.

“PeMo” (Petrochemical Moiety)

A small part of all the ingredients listed in Appendix V.3 comes from petrochemical origin. The percentage of this petrochemical part is referred to as PeMo in the COSMOS standard. The percentage of these ingredients do count towards the limit of 2% petrochemical moiety in the total finished product.

3. General

Cf COSMOS Standard – 5.General

Article 5.1.1 Nanomaterials

Particles with a coating (eg. TiO₂ with coating) are allowed when the minimum particle size is above 100 nm. Otherwise, all nanomaterials, whether required to be labelled or not according to European cosmetic regulations, are not allowed.

TiO₂ and ZnO used as UV filters are acceptable if the following conditions are met:

- As per chapter 2 of the standard, the raw material must fulfil the requirements of the Cosmetic Regulation (EC) 1223/2009 (namely the regulations (EU) 2016/11431 and (EU) 2016/6212 amending Annex VI of Regulation (EC) 1223/2009 for TiO₂ and ZnO respectively)
- The particle size distribution (number of particles) under 100 nm must be less than 50%
- The mass distribution (weight of particle fraction) under 100 nm must be less than 10%.

¹ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R1143>

² <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R0621>

Article 5.1.2 GMOs

The COSMOS-standard does not allow the use of GMO plants to obtain cosmetic raw materials and ingredients. Therefore the manufacturer must indicate in the Raw Material questionnaire the name of the plant and the country of origin of the vegetable source which was used to produce that particular cosmetic raw material or ingredient.

Certification bodies will assess the GMO risk according to a common Geographical Risk Matrix developed by the Soil Association. If necessary, they may require additional information from the manufacturer.

The Regulation that COSMOS is referring to when discussing Genetic Modification, is Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms. Article 2 gives definitions of GMO. Annex 1A summarizes what techniques are included as genetic modification.

Article 5.2 Animal testing

Animal tests are allowed only if mandatorily requested by law for ingredients.

4. Origin and processing of ingredients

Cf COSMOS Standard – 6.1 Ingredients categories

Article 6.1.3 Ingredients of animal origin

Milk, honey, beeswax, etc. are ingredients of animal origin that are allowed (as long as the processes comply with Appendices I and II and criteria of the standard).

Other ingredients of animal origin may be approved after submission of additional documents.

Bee venom is prohibited.

Snail slime is prohibited when produced using salt and electricity, but is permitted otherwise if the details are checked by the 'Independent Expert of Snails'.

Mother of pearl can be accepted if it is collected from naturally dead shells. Wild harvest is compulsory.

Article 6.1.4 Chemically processed agro-ingredients

Atom economy – Reaction mass efficiency

If several products are obtained (i.e. the oil is saponified into glycerol and fatty acid) and all products are used at the end of the manufacturing process, the weight of each of the products must be considered for the calculation, even if only one item is submitted as the raw material.

Biodegradability and Aquatic toxicity

Requirement on aqua toxicity are with tests LC50 or EC50 or IC50 (anyone of these 3 tests can be provided for approval of the raw material). Test on algae, fish or daphnia are accepted.

This data is not required for:

- 1) Naturally occurring molecules obtained by fermentation (e.g. hyaluronic acid)
- 2) Molecules resulting from a cleavage of a molecule existing in nature (e.g. maltodextrin obtained by hydrolysis of starch). Allowed cleavage reactions are enzymatic hydrolysis and hydrolysis with mineral acids or bases
- 3) Polymers, only obtained by esterification of monomers, which are readily biodegradable and non-toxic to aquatic systems (in compliance with the Standard).
- 4) Hydrogenated oils and butters
- 5) Perfumes.
- 6) 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
- 7) Poorly soluble esters (polyesters included) resulting from esterification between acid and alcohol that meet the COSMOS ecological criteria.

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 approach.

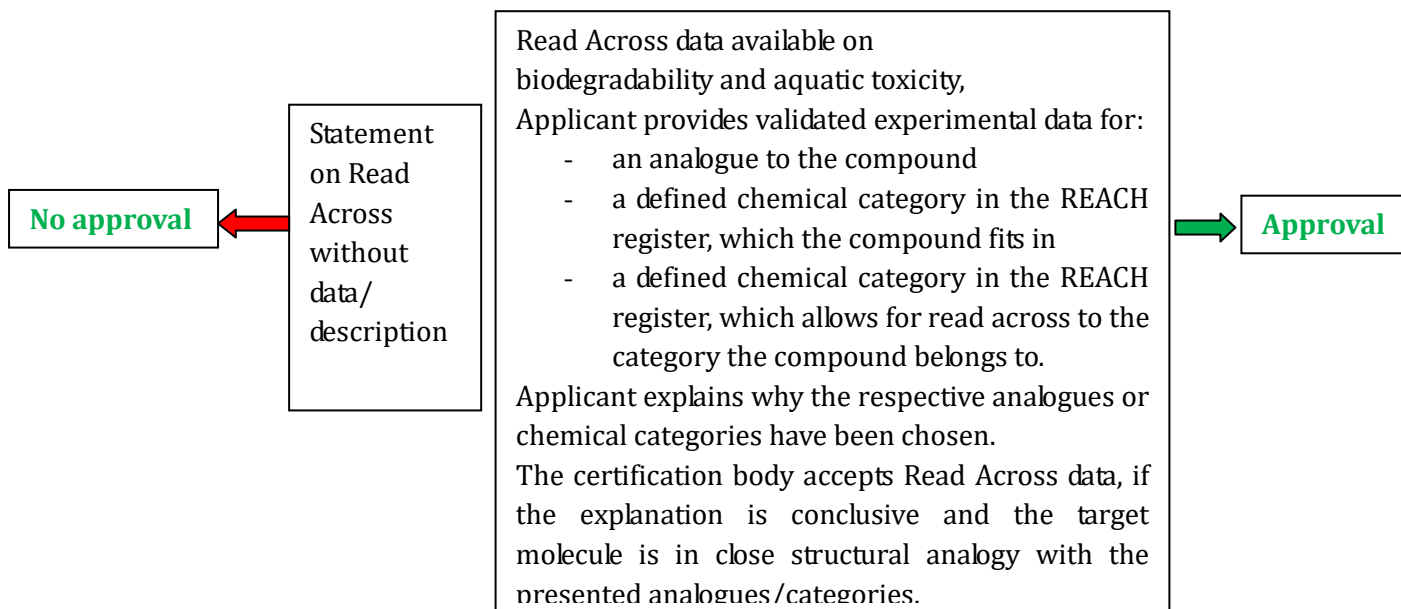
- Follow this link for available data of compounds registered for REACH:
<http://www.echa.europa.eu/web/guest/information-on-chemicals/registered-substances>

What to do if no data is available:

Performing new animal tests to evaluate the ecological profile of a COSMOS ingredient is prohibited.

If the required ecological data (biodegradation and aquatic toxicity) is not available in the literature (ECHA database or other publication sources), the following alternative methods can be used:

-Analogy approach - read across:



Structural analogy of molecules can be determined based on:

- The functional groups present in a molecule
- The chemical class the molecule belongs to
- The carbon skeleton of the molecule; the most reactive functional group in the molecule determines the chemical class membership.

With the same functional groups present, properties do not differ too much with slight changes in the carbon skeleton (4 to 8 carbons).

For Read Across data, only really close analogues based on the above basic criteria will be accepted.

Example:

Myristyl Myristate: REACH category: Fatty acids, C10-18 and C12-22-unsaturated, C14-18 and C16-18-unsaturated alkyl esters.

-QSAR (Quantitative Structure-Activity Relationship)-

Data coming from QSAR computational approach can be accepted under the following conditions:

- the results provided are derived from a validated model ([link](#) to Reach guidance)
- the chemical falls under the applicability domain of the validated model

Both alternative methods have to be well documented to be accepted.

When the commercial reference contains several CPAI, the manufacturer must provide data on each CPAI or on the commercial reference itself.

Stem cells

Stem cells, used as active ingredients only, are allowed as long as the culture media is also compliant with the standard. The following must be from natural or microbiological origin (and not be synthetic): substrates, culture mediums. The use of inputs (eg. hormones, growth factors or similar components) at low levels (ppm scale) is permitted in stem cell culture mediums. These inputs have to be metabolized/removed and not detectable in the final product. A specific statement from the supplier has to be provided.

Ingredients from biotechnology

The culture medium must be in conformity with the COSMOS-standard. Therefore, each ingredient in the medium must be from mineral, vegetable, microbial, animal or marine origin (meeting the criteria of the Standard) and, where appropriate, must be guaranteed non-GMO origin.

Biotechnological processes are allowed as far as no genetically modified bacteria, fungi, yeast, etc. are used.

If enzymes derived from GMOs are used to produce the cosmetic ingredient, the manufacturer must prove they comply with the following conditions:

- Enzymes from GMO are purified before use
- The GMO must be used in closed vessel
- The GMO are deactivated after the process
- Risk assessment on GMO impact on environment is implemented
- Risk plan is established, if GMO is released in the environment
- PCR (-) or any other method must be provided to prove that no DNA of the GMO is present in the final raw material.

Defoamers and other auxiliaries can be used in biotechnology (as long as there are removed in final raw material).

5. Calculation rules and examples

Cf COSMOS Standard – 6.2 Calculation rules for organic percentages

Article 6.2.3 Physically processed agro-ingredients

Dry to fresh plant ratios to be used:

Watery fruit: 1:8 (eg. pineapple, orange)

Other fruits: 1:5 (eg. apricot, grape)

Alcohol as a single ingredient

When validating alcohol as a raw material (from the cosmetic manufacturer) the actual percentage of alcohol is counted as the CPAI % (and CPAI ORG % if the alcohol is organic). So the dilution and purification is taken in to account and the organic alcohol content could be various percentages. Note, if organic, %CPAI =% ORG CPAI.

The calculation of CPAI is made by weight (remaining water, etc) and not by volume.

Alcohol used in an extract

Organic alcohol (even if completely removed) has to be used in organic extracts. If conventional alcohol is used during the process, the ingredient cannot have an organic contribution.

Alcohol and extracts have to respect Appendix VI and VII for COSMOS ORGANIC certification.

As it is often difficult to obtain information about dilution and purification etc. in organic alcohol for extracts (already certified to organic farming), the alcohol content is counted as 100% organic (100% CPAI / 100% ORG CPAI). This is for consistency.

Aqueous extract (including hydrolates)

Standard:

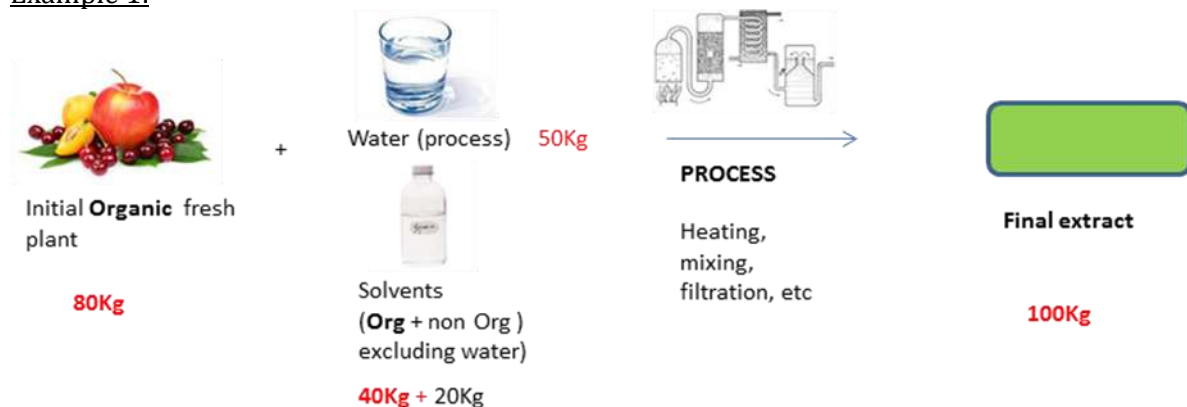
Ratio = [organic fresh plant / (final extract - solvents)]

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

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

•Organic alcohol in organic extract
•No mixture of organic and non organic quality of the same plant

Example 1:



Ratio: $80 / (100 - 60)$; Ratio >1, counted as 1

% Organic = $\{[1 \times (100 - 60) / 100] + [40 / 100]\} \times 100 = 80\%$

Example 2:

Used:

Organic dried flowers: 2,5 Kg → equivalent to 11,25 Kg of organic fresh plant

Water: 95,7 Kg

Citric Acid: 1,5 kg (CPAI)

Sodium benzoate: 0,2 Kg (NNI)

Potassium Sorbate: 0,1 Kg (NNI)

Total Extract obtained: 100 Kg

% ORG PPAI= (organic fresh plant/ extract) X 100=11.25%

% NNI= 0,3%

% CPAI= 1.5%

% ORG= 11,25%

% Natural origin = 100- NNI= 99,7%

Hydroglyceric extracts (specific case of Aqueous extract)

To calculate the organic percentage of the total extract, you need to calculate the PPAI organic percentage and CPAI organic percentage separately.

% ORG PPAI:

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.

% ORG CPAI:

Glycerin in formula X organic index of the glycerin (0,967)

The total percentage of organic in an hydroglyceric extract is the sum of CPAI ORG% and PPAI ORG %

Example:

Used:

Organic Plant seed extract (organic fresh plant) = 0.25 Kg

Organic glycerin = 0.7 Kg (100% CPAI and 96,7% CPAI ORG)

Water = 0.75kg

Total extract obtained = 1Kg including: Potassium Sorbate = 0.5 % (NNI) and Sodium Benzoate = 0.5 % (NNI)

% NNI= 1%

% CPAI = % Glycerin in extract= 70%

% CPAI ORG= % Glycerin in extract X 0,967 = 67,7%

To calculation %PPAI, you need first to calculate the ratio:

Ratio = [org fresh plant/(extract- solvent)] = [0,25Kg/ (1Kg - 0,7Kg)]=0,8 <1

% PPAI= %PPAI ORG

$= \left\{ \left[\frac{\text{ratio} \times (\text{extract} - \text{solvents})}{\text{extract}} \right] + \left[\frac{\text{organic PPAI solvents}}{\text{extract}} \right] \right\} \times 100$.
 Because ratio < 1 you insert it in the next calculation. And organic PPAI solvents = 0 so:
 $= \left\{ \left[\frac{\text{org fresh plant}}{(\text{extract} - \text{solvent})} \right] \times (\text{extract} - \text{solvents}) / \text{extract} \right\}$
 $= (\text{org fresh plant} / \text{extract}) \times 100$
 $= (0,25 \text{Kg} / 1 \text{Kg}) \times 100 = 25\%$

$\% \text{ ORGANIC} = \% \text{ PPAI ORG} + \% \text{ CPAI ORG} = 25 + 67.7 = 92,7\%$
 $\% \text{ NATURAL ORIGIN} = 100 - \% \text{ NNI} = 99\%$

Hydroalcoholic extracts (specific case of Aqueous extract)

To have the organic percentage of the total extract, it needs to calculate separately the PPAI organic percentage and CPAI organic percentage.

% ORG PPAI:

First step:

Ratio = $\left[\frac{\text{organic fresh plant}}{(\text{extract} - \text{solvents})} \right]$

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

Second step:

$\% \text{ organic} = \left\{ \left[\frac{\text{ratio} \times (\text{extract} - \text{solvents})}{\text{extract}} \right] + \left[\frac{\text{organic solvents}}{\text{extract}} \right] \right\} \times 100$.

% ORG CPAI:

$\% \text{ Org Alcohol} - \% \text{ denaturing agent}$

NB: the percentage of denaturing agent is counted as non-natural ingredient

Example:

Organic fresh plant = 80 kg

Water = 50 Kg

Extract obtained = 100 Kg with denaturated organic Alcohol = 60% (including denaturing agent at 1.2%: 58.8% CPAI + 1.2% NNI)

Ratio = $80 / (100 - 60) = 2 \rightarrow \text{ratio} = 1$

$\% \text{ org} = \% \text{ PPAI org} + \% \text{ CPAI org}$

$= \left\{ \left[\frac{\text{ratio} \times (\text{extract} - \text{solvents})}{\text{extract}} \right] + \left[\frac{\text{organic CPAI solvents}}{\text{extract}} \right] \right\} \times 100$.

$= \left\{ \left[1 \times \frac{(100 - 60)}{100} \right] + \left[\frac{58,8}{100} \right] \right\} \times 100$

$= 40 + 58,8$

$= 98,8\%$

$\text{PPAI}\% = 100 - \% \text{ CPAI} - \% \text{ NNI} = 40\%$

$\text{PPAI ORG}\% = 40\%$

$\text{CPAI} = 58,8\%$

$\text{CPAI ORG} = 58,8\%$

$\text{NNI} = 1,2\%$

Non aqueous extract (Oleolita/Macerate)

For non-water based extracts, the organic percentage is calculated as follows:

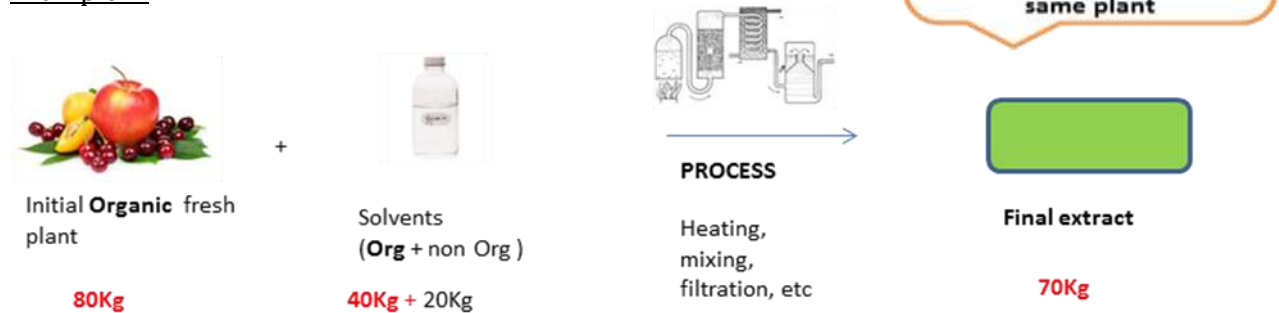
$$\% \text{ organic} = (\text{organic plant}^* + \text{organic starting solvents}) / (\text{plant}^* + \text{all starting solvents}) \times 100$$

*fresh or dried plant

Standard:

$$\% \text{ organic} = (\text{organic fresh plant} + \text{organic starting solvents}) / (\text{fresh plant} + \text{all starting solvents}) \times 100$$

Example 1:



$$\% \text{ Organic} = (80 + 40) / (80 + 60) \times 100 = 85.7\%$$

Example 2:

Used: 45 Kg organic fresh plant and 100 Kg organic oil

Obtained: 100 Kg extract

$$\% \text{ ORG PPAI} = 100\%$$

$$\% \text{ NNI} = 0\%$$

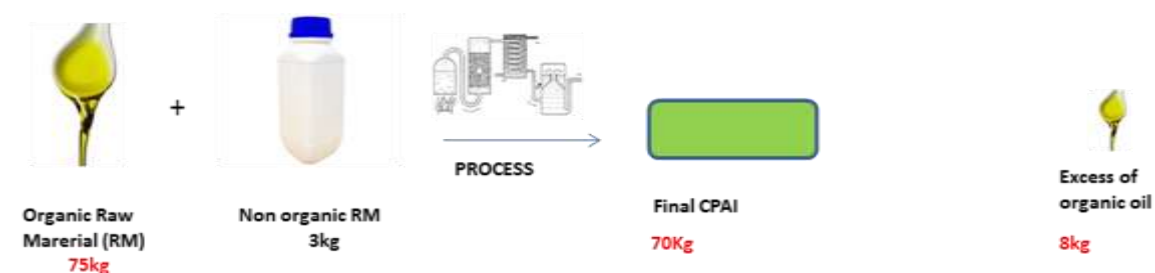
$$\% \text{ CPAI} = 0\%$$

$$\% \text{ CPAI ORG} = 0\%$$

$$\% \text{ ORG} = \% \text{ ORG CPAI} + \% \text{ ORG PPAI} = 100\%$$

Article 6.2.4 Chemically processed agro-ingredients

General case



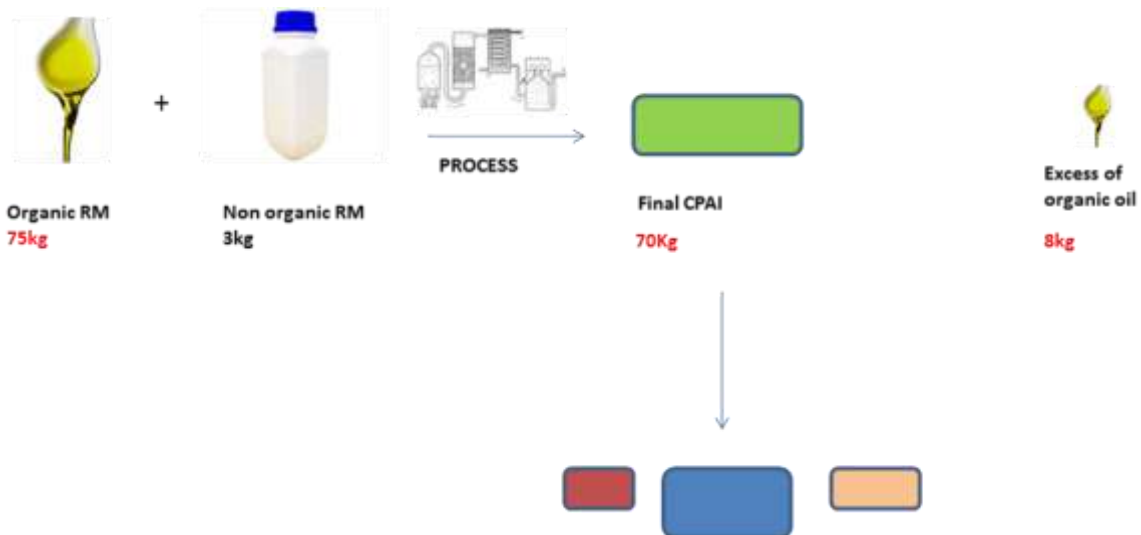
Standard:

% 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

Example:

$$\% \text{ Organic} = [(75 - 8) / (75 + 3 - 8)] \times 100 = 95.7\%$$

Specific case

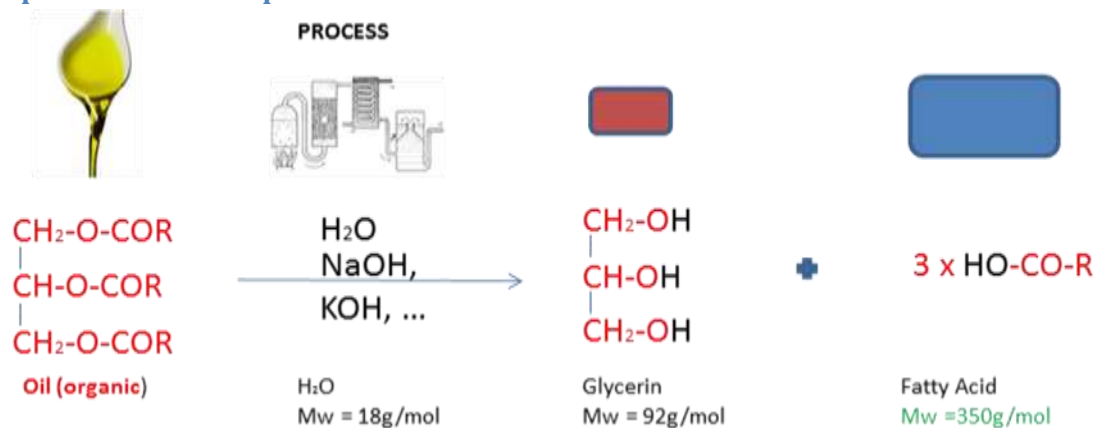


If the final CPAI obtained contains several different molecules, the organic % of each molecule can be different.

The main CPAI calculation can be used if the final product is a single ingredient, OR if the resulting mixture is not separated.

If the result produces more than one material, specific calculations are made based on the molecules obtained (considering the molecular organization, see below).

Saponification example



Example:

$$\begin{aligned}\% \text{ organic Glycerin} &= \text{Organic part} / \text{total} = (\text{Mw Glycerin} - \text{Mw 3 hydrogen}) / \text{Mw Glycerin} \\ &= (92 - 3) / 92 \\ &= \mathbf{96.7\%}\end{aligned}$$

$$\begin{aligned}\% \text{ organic Fatty Acid (FA)} &= \text{Organic part} / \text{total} = (\text{Mw FA} - \text{Mw OH}) / \text{Mw FA} \\ &= (350 - 17) / 350 \\ &= \mathbf{95.1\%}\end{aligned}$$

6. Composition of total product

Cf COSMOS Standard – 7. Composition of total product

Article 7.1 Rules for cosmetic products under organic certification

Due to the composition of soaps, alcohol spritzers and perfumes (high majority of CPAI), where it is not possible to meet the >95% organic PPAI requirement, this criterion is adapted:

- For alcohol spritzer/perfume products, at least 95% of [organic PPAI + **organic alcohol**] must be organic :
$$[\text{organic PPAI} + \mathbf{\text{organic alcohol}}] / [\text{all PPAI} + \mathbf{\text{alcohol}}] > 95\%$$

- For soap, 2 cases are possible:
 - For use of plant oils, no change of the criterion :
$$\text{organic PPAI} / \text{all PPAI} > 95\%$$
 - For use of soap noodles: at least 95% of [organic PPAI + **organic CPAI soaps**] must be organic :
$$[\text{organic PPAI} + \mathbf{\text{organic CPAI soap}}] / (\text{all PPAI} + \mathbf{\text{CPAI soap}}) > 95\%$$

Article 7.2 Rules for cosmetic products under natural certification

Complex bulk ingredients (eg. shampoo bases, soap bases) without organic content cannot go through the standard approval service for COSMOS. It can be certified under COSMOS Certified for COSMOS NATURAL applications only. In such cases, an inspection on site is required.

7. Storage, manufacturing and packaging

Cf COSMOS Standard – 8. Storage, manufacturing and packaging

A company that fills samples in sachets for 'free giveaway' (eg. at trade shows) does not have to be licenced/audited by COSMOS. (Obviously the product inside has to be made by a company approved by COSMOS.)

Cf COSMOS Standard – 8.3 Packaging

Primary and secondary packaging, and fabric components must meet the criteria for packaging. Accessories sold with products such as brushes or applicators, or technical parts are not concerned.

List of accepted materials (Non exhaustive)

CA – Cellulose Acetate

Cellulose

Ceramic

Glass

Metals such as: Aluminum, 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). 8.3

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

- Bottle,
- Jar,
- Tube,
- Cap
- Sachets
- Boxes

These parts have to be made with the accepted materials listed above. It applies to all kind of products: skincare, healthcare, make-up, etc. If a material is not listed above, a file 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: make-up products)
- solid soaps and massage bars (where it will be considered as primary packaging).

8. Environmental management

Cf COSMOS Standard – 9. Environmental management

Article 9.2 Cleaning and Hygiene

Plant based cleaning products certified by one of the following organic certification bodies may be used: Ecocert, Ecogarantie, ICEA, Nature & Progress, Soil Association, United States National Organic Program (NOP), or Australian Organic Standards (AOS).

Products endorsed by labels including Nordic Swan or Ecolabel may be used if the natural origin of their ingredients can be checked.

Other standards for cleaning products can be submitted to the Technical Committee for assessment.

If national regulations force the use of specific cleaning products, exemptions can be studied to the Technical Committee.

9. Changes after 2016

Cf COSMOS Standard – 12. Implementation of this Standard

Precision of 12.2 (founders)

Products certified under private standard and application for certification received before 31/12/2016 can remain under that standard after this date.

Certification of a new product made after 01/01/2017 has to be according to COSMOS Standard.

Precision of 12.3 (other certification bodies)

Other certification bodies need to certify products according to COSMOS-Standard and/or according to existing own standard which has to be fully in accordance with the COSMOS-Standard. If necessary they have to ask for a transitional period to the AISBL.

10. Raw material questionnaire

For all non-organic raw materials, each certification body will use a questionnaire based on common questions defined by the COSMOS-standard AISBL for raw material approval. The common questions are to be found on the www.cosmos-standard.org website but are there for reference only – the questionnaire used must be that supplied by the certification body concerned. Please note that not all certification bodies are accredited for the scope of approving non-organic raw materials.

11. Non organic raw materials available on the database

Compliant non-organic raw materials are available on www.cosmos-standard-rm.org.

Ingredients published on the COSMOS database are recognized and accepted by all certification bodies.

Raw materials identified with an asterisk* relate to Appendix II or Appendix V, Article 2. (petrochemical solvents and/or halogenation processes in activating steps). The same INCI can be with or without this identification depending on the manufacturing process.

On periodical review of the raw material database these raw materials may be removed, when raw materials which do not use these processes become available in sufficient amounts.

Re assessment of non-organic raw materials need to be made at least every 3 years (or as soon as any change) in order to confirm any change on process and origins of accepted raw materials. It can be done through a declaration.

12. Appendixes

Appendix I and II

Allowed decolorizing agents: bentonite, activated charcoal, bleaching earth, hydrogen peroxide, ozone.

Neutralization processes are allowed to obtain Na, Ca, Mg and K salts.

Ammonia is allowed in the neutralization process to form Ammonium Lauryl Sulphate and Ammonium Glycyrrhizate (and any other ammonium salt – as long as the other criteria including biodegradability and Ecotoxicity are fulfilled).

Fermentation processes: ammonia/ammonium salts and other nitrogen sources are allowed. Selenium selenite / sodium selenite is allowed as Se source.

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 neutralization, 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/sulphatation reactions, and for phosphoric agents which are allowed to produce phosphorylated ingredients, for leave on products only.

Use of petrochemical solvents

Use of formaldehyde is not allowed, even if the solvent is completely removed.

Appendix III

All caustic sodas and potashes (INCI: Sodium Hydroxide, Potassium Hydroxide) are allowed. The decision will be reviewed depending on any technical developments.

Ingredients changing of status

For several reasons (change in process, error, etc), ingredients may change status (become non-compliant or remain compliant but with different percentages that may affect the final ingredients/products percentages). These cases are studied by the technical committee who may decide to allow a transition period depending on the context, impacts and potential alternative. Non-compliant ingredients will be removed from the database and cannot be used in any new formula.

Appendix IV

Phosphate ingredients of mineral origin, other than those listed in Appendix IV, are permitted for anticaking properties.

Magnesium phosphate can be accepted as ingredient of mineral origin with the restriction of being used in association with Zinc Oxide.

Potassium thiocyanate can be accepted as ingredient of mineral origin with the restriction of additive for preservative/anti-oxidant systems, maximum concentration 1%.

Potassium Alum, Calcium Hydroxide, Calcium chloride and **Silver** can be accepted as ingredient from mineral origin.

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

Appendix V

Appendix V.1

Possibility to allow other denaturing agents for alcohol when required by law and no natural alternative.

Appendix V.2

Tocopherol includes tocotrienol.

Addition to V.2:

Phytosterol

Appendix V.3

Cocoamidopropyl Betaine includes Coco Betaine.

Additions to V.3:

Ingredient	Restrictions
Olive Amidopropyl Betaine	
Alkyl Methyl Glucamide	
Cocodimonium Hydroxypropyl Hydrolyzed Wheat Protein	Hair products only

Appendix V.4

Ingredient	Restrictions
Caramel	Compliant reactants and process

Calculation of synthetic moieties

Example of a reference of cocoamidopropylbetaine at 30% in water:

Molecular weight of the whole molecule = 342 g/mol

Molecular weight of the petrochemical part = 159 g/mol

1. % of petrochemical moiety of the molecule = $159/342 \times 100 = 46.4\%$
2. % of petrochemical moiety of the reference = $0.3 \times 0.464 \times 100 = 13.9\%$

➔ **The reference would be considered 16.1% CPAI and 13.9% synthetic moiety.**

Appendices VI and VII

Appendix VII only applies for products under COSMOS ORGANIC certification, as appendix VI

Clarification of ingredients that must be ORGANIC for COSMOS ORGANIC certification (which belong to the lists):

- No mixture (one component)
 - o Ingredients must be used in organic quality according to Appendix VI (example: Sunflower oil or Wax)
 - o This also applies to single ingredients which are stabilized with additives or contain preservatives (example: Sunflower oil, stabilized with Tocopherol)
- Non-complex/simple mixture (two components) – Hydrolates with two plants would enter in the category.
 - o Ingredients must be used in organic quality according to Appendix VI (example: Herbal extract/macerate with Sunflower oil)
 - o if one of the ingredients is added as a solvent to other active ingredients, to make them available, the ingredient does not need to be used in organic quality (example: Tocopherol dissolved in Sunflower oil)
- Complex mixture (three and more components)
 - o Exemption from Appendix VI/VII (except when all certifiable ingredients of the mixture are listed in Appendixes VI/VII)

In the case of a shortage of an organic raw material listed in appendix VI or VII:

The client needs to inform the certification body that none is available, why and, if known, provide details of how long (e.g. poor harvest for certain year). The certification body needs to check their records and with the other partners that none is available. The client/company then needs to provide three written confirmations from reputable organic suppliers that the material is not available organically. Labels and promotional materials have to be changed temporarily so that it is clear at point of sale that the material's organic status has changed (for example by over-stickering of product labels, or a clear indication on the client's website for the product etc.).

These indications must be verified by the certification body. Provided all of the above has been followed permission can be granted for a certain period.