

TECHNICAL STANDARD FOR ECO & ECO ORGANIC CLEANING

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RSC Drafting	RAQ Verification	CNC-CSI Verification	CDA Approval	Type of review	Date	Page/es	Ed.	Revie w
Foglia P.	Razionale V.	Ciccarese L.	Campus P.	New edition	27.07.17	all	02	00
Foglia P.	Razionale V.	Ciccarese L.	Campus P.	Foglia P.	31.08.17	4,7	02	01
Foglia P.	Razionale V.	Ciccarese L.	Campus P.	Foglia P.	07.03.18	5,6	02	02
Foglia P.	Razionale V.	Ciccarese L.	Campus P.	Foglia P.	05.02.19	7,9	02	03

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1 PREMISES

This Standard for Eco & Eco-Organic Cleaning has the purpose to improve the compatibility with the range of cleaning products and to make information regarding the environmental quality of the same products accessible and comprehensible to the different stakeholders.

This Standard is the result of discussions and sharing among all the stakeholders: producers, consumers, renowned representatives of the academic and scientific worlds and inspection bodies (ICEA).

The certification scheme of “Eco Organic Cleaning - Eco Organic Cleansers” was developed according to objectives, principles, procedures and general requirements of ISO 14024 standard: “Environmental labels and declarations - Type 1 ecolabelling - Principles and Procedures” (Environmental labels and declarations e Type I Ecolabelling – Principles and Procedures”).

2 PURPOSE OF THE DOCUMENT

The purpose of this Standard is defining features and requirements for cleansers falling within the scope of point 3 herein, having the label with the wording “Eco Organic Cleaning ICEA” or “Eco Cleaning ICEA” and for the cleansers with their own mark.

The objectives of this Standard are below detailed.

- Promoting the use of products resulting from raw materials, production processes and packaging with low environmental impact for house and community cleaning
- Offering product safe for the consumers’ health and not causing allergies and irritations.
- Promoting the use of natural raw materials, from organic agriculture, not genetically modified organism and not submitted to ionizing radiations.

3 REGULATORY REFERENCES

- EC Regulation 648/2004 on cleaners and detergents.
- EC Regulation 1907/2006 concerning registration, assessment, authorization and restrictions of chemical substances (REACH)
- EC Regulation 1272/2008 concerning classification, labelling and packaging of substances and formulations (CLP)
- D.P.R. of 6 February 2009, no. 21
- Commission’s Decision of 14 February 2003 that defined the updated ecological criteria to assign the Community trademark for ecological quality to laundry detergents and amendments of 1999/476/EC decision.

- EC Regulation 834/07, EC Regulation 889/08 and following integrations and amendments.

4 SCOPE

The products falling within the scope of this Standard are:

- A. Cleansers for the washing of dishes, equipment and other kitchen tool, by both hand and using the dishwashing machine for household and professional use.
- B. Cleansers for floors, glasses and hard surfaces used to remove limestone, both for household and professional use.
- C. Powder, liquid or other types of detergents for fabrics, by and or washing machine for household and professional use.
- D. Adjuvants used in the washing cycle that can be included among detergents' formulas for special functions (fabric softener, sparkling aid, sequestrants, pads for pH stabilization) and raw materials (betaine...)

5 RAW MATERIALS

The products for Eco Organic Cleaning ICEA may contain the following raw materials:

1. Products of plant origin
2. Products of animal origin
3. Inorganic products
4. Products resulting from chemical synthesis processes
5. Water
6. Enzymes, raw material from bacterial fermentation

Each group of raw materials shall comply with the below listed features and composition percentages as under point 6 of this Standard.

5.1 General criteria for raw materials

(a) It is not allowed the use of substances or formulations:

- Classified as carcinogenic, mutagenic or toxic for reproduction (CMR category 1 and 2);
- Classified as persistent, bio accumulative and toxic (PBT) or very persistent and very bio accumulative (vPvB);

- Forbidden or subject to restrictions within the European Community according to the standard in force;
- Those to which, when submitting the certification request, one of the following risk statements or their combination, was assigned or may be assigned according to EC Regulation no.1272/2008:

Risk code	Description	
H300	Acute toxicity (oral uptake), 1 and 2 Risk category	Lethal if ingested.
H304	Danger in case of aspiration, Risk category 1	Lethal in case of ingestion and penetration into the airways.
H310	Acute toxicity (through the skin), danger categories 1 e 2	Lethal in case of skin contact.
H330	Acute toxicity if inhaled, danger categories 1 and 2	Lethal if inhaled
H340	Mutagenicity on germinal cells, danger categories 1A and 1B	It can cause genetic modifications
H350	Carcinogenicity, danger categories 1A and 1B	It can cause cancer
H350i	Carcinogenicity, danger categories 1A and 1B	It can cause cancer if inhaled
H360F	Toxic for reproduction, danger categories 1A and 1B	It may impair fertility.
H360Df		It may be dangerous for the foetus. It is suspected to impair fertility
H360FD		It may impair fertility. I may be dangerous for the foetus.
H360Fd		It may impair fertility. It is suspected to damage the foetus.
H360D		It may be dangerous for the foetus.
H370	Specific toxicity for target organs (single exposure), Risk category 1	It may damage the organs
H372	Specific toxicity for target organs (repeated exposure), Risk category 1	It damages the organs
H373	Specific toxicity for target organs (repeated exposure), Risk category 2	It may damage the organs in case of prolonged or repeated exposure
EUH070	Toxic for eye contact	
H400	Dangerous for the aquatic environment — Acute danger, category 1	Highly toxic for aquatic organisms.
H410	Dangerous for the aquatic environment — Chronic danger, category 1	Highly toxic for aquatic organisms with prolonged effects.
H411	Dangerous for the aquatic environment — Chronic Risk category 2	Toxic for aquatic organisms with prolonged effects.
H412	Dangerous for the aquatic environment — Chronic danger, category 3	Harmful for aquatic organisms with prolonged effects.
H413	Dangerous for the aquatic environment — Chronic danger, category 4	It may be harmful for aquatic organisms with long-term effects.
H420	Dangerous for the ozone layer, Risk category 1	It may be harmful for public health and environment because it destroys the upper atmosphere ozone layer.

- (b) With the derogation to subparagraph (a), essential oils classified with the hazard statements or combinations thereof listed in subparagraph (a) may be used for a maximum total concentration of 0.3%.
- (c) With an exception to the requirements of letter a) the use of special products with the indication of hazard H412 if individually present in amounts less than 0.010% w / w in the final product.
- (d) By way of derogation from the previous point, the following ingredients with H412 danger indication, may be used:
- surfactants
 - peracetic acid and hydrogen peroxide used as whitening agents
- (e) It is not allowed the use of substances or formulations in quantities > 0,1% in the weight in case, upon certification application, one of the following danger statements or their combinations, was assigned or may be assigned to same ingredients, according EC Reg. no.1272/2008 and EC Directive no. 45/1999 (formulations):

Risk code	Description	
H351	Carcinogenicity, Risk category 2	Suspected to cause cancer.
H361fd	Toxicity for the reproduction, Risk category 2	Suspected to impair fertility. Suspected to damage the foetus.
H361f		Suspected to impair fertility.
H361d		Suspected to damage the foetus.
H362	Toxicity for reproduction, supplementary category — Effects on breastfeeding or through breastfeeding feeding	It may be dangerous for breastfed children.
H371	Specific toxicity for target organs (single exposure), Risk category 2	It may damage the organs

- (f) Upon submission of certification application, the ingredients shall not be classified with the following risk code according to EC Reg. no.1272/2008:

Risk code	Description	
H334	Airways sensitization , Risk category 1	It may provoke allergic or asthmatic symptoms and respiratory difficulties if inhaled.

Essential oils and enzymes are not included in such requirement.

- (g) It is not allowed the use of such ingredients in quantities > than 0.3% in weight in case, upon certification application, one of the following danger statements or their combinations, was assigned or may be assigned to same ingredients, according to EC Reg. no.1272/2008 and EC Directive no. 45/1999 (formulations):

Risk code	Description	
H317	Skin sensitization , Risk category 1	It may provoke a skin allergic reaction

Essential oils are not included in such requirement.

(h) All raw materials and preparation shall be compliant with the following criteria:

Parameter	Criterion
Acute oral toxicity	LD ₅₀ > 2000 mg/kg
Water toxicity	LC ₅₀ , EC ₅₀ , IC ₅₀ >1 mg/l
Ratio between biodegradability /eliminability and water toxicity	Admitted only if: < 70% and >100 mg/l > 70% and > 10 mg/l > 95% and > 1 mg/l

Criteria shall be evaluated according to the following methods:

- If subject to one of the following testing methods OECD 301A, OECD 301E, ISO 7827, OECD 302A, ISO 9887, OECD 302B, or ISO 9888, the degradation percentage must be at least 70% in 28 days;
- If subject to one of the following testing methods OECD 301B, ISO 9439, OECD 301C, OECD 302C, OECD 301D, ISO 10707, OECD 301 F, ISO 9408, ISO 10708 o ISO 14593, the degradation percentage must be at least 60 % in 28 days.
- If subject to one of the following testing methods OECD 303A, the degradation percentage must be at least 80% in 28 days.

The following categories of ingredients are exempt from this requirement:

- Essential oils
- Preservatives, because toxicity is closely linked to its own functionality. Preservatives are allowed when they have bioaccumulation potential with values <500 BCF or <4 logPow
- Substances and preparations, such as alkalis and acids, which do not meet this requirement due to their pH value

5.2 Raw materials of plant origin

a) The product reporting the “Eco Organic Cleaning” wording are obtained from raw materials from plant origin resulting from organic farming or spontaneous harvesting and certified according to EC Reg. 834/07 (or other international reference standards: e.g. NOP, JAS, COR, etc.).

b) In the products reporting the “Eco Cleaning” wording it is allowed the use of products for conventional farming but not GMO or resulting from GMO (in case of products "at risk" present on the market as GMO such as corn, soya bean, colza, etc. a producer’s declaration is required. Such declaration shall clearly state that the producer does no use genetically modified materials and that the final ingredients are not GMO)

c) Products resulting from species at risk of extinctions are not allowed and it is required the compliance with the requirements of the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES); only spices belonging to appendix II and III are allowed, taking into account the relevant limitations detailed at the link <http://checklist.cites.org/#/en>

5.3 Raw materials of animal origin

In order to safeguard animals' health both product categories shall come from organic breeding. Raw materials obtained killing the animals are not allowed.

Products resulting from species at risk of extinctions are not allowed and the compliance with the requirements of the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES) is mandatory; only the species belonging to appendix II and III are admitted, taking into account the relevant limitations detailed at the link <http://checklist.cites.org/#/en>

5.4 Raw materials of inorganic origin

The raw materials of mineral origin allowed are detailed in Annex 1.

5.5 Raw materials from synthesis chemical processes

a) Surfactants

For surfactants, it is mandatory to submit documents proving the vegetable origin of the alkyl chains used for synthesis processes in order to prove the natural origin of the raw materials by providing the carbon atom chain characterizing such molecules.

b) Other products

Products listed in the Substances Archive available in CVDtox file, for which valid alternatives of proved natural origin are not available on the market, and whose impact on environment and skin has been positively assessed, are allowed. ICEA reserves the right to approve the use of other products based on the criteria for use adopted for the products allowed.

5.6 Water

Drinkable, demineralized or osmosised water can be used.

5.7 Enzymes, raw materials from bacterial fermentation

Enzymes, also from genetically modified organisms, are permitted upon condition to be properly secured.

5.8 Ingredients derived from palm oil

From 1 August 2019 the new ECO and ECO ORGANIC CLEANING certified products must be formulated using certified palm oil derived ingredients from Certified Sustainable Palm Oil (CSPO).

The minimum required certification level will be the Roundtable Sustainable Palm Oil (RSPO) Mass Balance standard. Will then be accepted palm oil and/or palm seed oil certified according the Segregated Certified Model or Identity Preserved (IP) model.

The following ingredients used in certified products and ingredients must be of certified sustainable origin (CSPO), using at least the mass supply chain model:

- Palm oil (Note, must be organic for COSMOS Organic products, see Appendix VI)

- Palm kernel oil
- Glycerin, cocamidopropyl betaine and coco betaine
- Fatty acids: stearic acid, palmitic acid, myristic acid, lauric acid
- Fatty alcohols: cetyl alcohol, cetearyl alcohol, stearyl alcohol, lauryl alcohol
- Esters made from fatty acids or fatty alcohols: cetyl palmitate, cetyl phosphate, myristyl myristate, glyceryl (mono-) stearate and glyceryl oleate
- Triglycerides: C8-C10 caprylic/capric triglyceride and C10-C18 triglycerides.

When a Commercial Reference/blend contains all ingredients that are from the list above, they have to be from CSPO (eg. a product containing stearic acid and palmitic acid, these have to be from CSPO.) If a commercial reference/blend contains some of the ingredients from the above list plus other ingredients not from the list (e.g. an extract), none of the ingredients have to be from CSPO), although it is encouraged where possible. If an ingredient from the list has water added to it, then it still has to be from CSPO.

6 PRODUCTS

6.1 Composition

- Finished product shall contain at least 95% by weight of ingredients of natural origin, considering the proportion of natural content from chemical synthesis products for which the natural origin of the raw materials supplying the Carbon atoms characterizing such molecules is proved.
Powder formulations are excluded from this requirement.
- This Standard includes two levels:

ECO ORGANIC CLEANING

To obtain the ECO ORGANIC CLEANING certification level, at least 20% of the total product shall be organic, exclusively considering ingredients' active substances.

The calculation of the organic content of a product is given by the ratio between the sum of the ingredients from organic farming and raw materials made with organic ingredients compared to the total of ingredients, without considering water. The organic ingredient is certified according to EC Regulation no. 834/2007 or an equivalent national or international standard by a duly established certification authority or body. For raw materials made with organic ingredients, the actual percentage of organic matter is taken into account, in other words, the part of a certified ingredient according to EC Regulation n. 834/2007 or an equivalent national or international standard.

$$\% \text{ organic content} = \frac{\sum (\% \text{ organic ingredients}) + \sum (\% \text{ organic content for raw materials made with organic ingredients})}{\sum (\text{all ingredients} - \text{water})}$$

Such limitation does not contemplate powder products, if used to complete a line, for which any organic level is accepted.

Products with such certification level can report the following logo:



XXX DP XXX

ECO CLEANING

To obtain the ECO CLEANING certification level the minimum amount of organic ingredients is not required; it is sufficient to comply with the other requirements. It is possible to use organic ingredients that can be included in the ingredients list.

Products with such certification level can report the following logo:



XXX EC XXX

6.2 Formulation

For each product the exact formulation and in particular the chemical description of the ingredients shall be provided (each formulation shall be identified with the name IUPAC, CAS NUMBER).

6.3 Evaluation of the product's environmental impact

The finished product's environmental impact (aquatic toxicity) is assessed through VCD_{TOX} , dilution critical value, and calculated using the following formula (taken from EEC Ecolabel regulation, last "Commission's Decision of 14 February 2003, defining the updated ecologic criteria to grant the ecologic quality community trademark to laundry detergents and decision amendment of

EC1999/476/").

$$\text{VCD}_{\text{TOX}} (\text{ingredient } i) = \frac{\text{weight/wash } (i) \times \text{loading factors } (i)}{\text{Long term effects } (i)} \times 1000$$

For the following categories of cleaners and detergents, the value obtained shall not be higher than:

Washing up liquid	3.500
Hard surfaces (floors, working surfaces, products for WC etc.)	5.000
Laundry liquid and powder detergents for hand and machine washing	200.000
Powder dishwasher detergent	20.000
Liquid dishwasher detergent	20.000
Glasses	1.500
'ready to use' detergents	10.000
Softeners	20.000

Such values may be updated in the most restrictive way following the new formulation possibilities allowed by scientific and technological advancement.

The VCDtox value shall be calculated according to:

- a) "standard values" listed in the Substances Archive (DID list) or
- b) "actual values" determined through eco-toxicological tests on aquatic organisms (OECD Guideline 201, 202 and 203) and biodegradability test (OECD Guideline series 301). In case actual values are used, provide a copy of the testing results.

The VCDtox calculation can be made for the single ingredients, complex formulations of finished products.

7 FINISHED PRODUCTS MANAGEMENT SYSTEM

- a) For certified products and raw materials from organic farming, the storage areas shall be clearly indicated with labels in order to avoid any confusion or risk for products integrity.
- b) The company shall ensure that manufacturing processes are carried out in compliance with procedures to avoid contamination of organic or natural ingredients with separate production in time and space.
- c) The company is required to implement a management system and appropriate records to ensure the traceability of ingredients, semi-finished products and finished products at all stages of the production process. The documentation to be collected and stored includes reports of the tests on the ingredients and products and filing of documentation for analysis, production and storage.
- d) Certified products shall not be tested on animals, unless required by the law.

8 PACKAGING

a. Only recyclable and inert containers are permitted and PVC is prohibited. The materials allowed are:

- PE, PET, PP, PETG, HDPE, LDPE,
- paper
- glass

b. With the aim of reducing environmental impact due to packaging, small, environmentally friendly packaging should be used.

c. For products where the recharge format is provided, the communication should encourage the consumers to re-use rechargeable containers.

d. In case of products involving the use of spraying or dosing devices, such devices shall be made of a single material.

The use of a spraying pump or multipurpose dispenser (e.g. containing metal elements) is permitted upon company request and only if a proven technical justification is provided by the same company. In such cases, it is mandatory:

- market this article also in the "recharge" version
- encourage the consumer, by means of visible labelling, to the repeated of the spaying pump. The presence of metal, in fact, prevents proper recycling.

9 COMPULSORY TESTS AND ANALYSIS

a. All products, except those mentioned in 4 D, shall pass the wash performance tests according to official methods or specific methods developed by a qualified laboratory, certifying their effectiveness with respect to similar products, including non-certified products, having a market leader position.

For professional products, ICEA, following a preliminary motivation assessment, may grant the possibility of equalise user test with the performance test.

b. Products that continuously and constantly come in contact with the skin (hand dishwashing, hand laundry washing, etc.) shall pass the Patch Test or their use wearing gloves shall be indicated in the label.

c. Any specific functional properties attributed to the product shall be demonstrated. The results of such tests shall be reported on the label or on the technical sheets and be available for consumers.

10 LABELLING

a) The label for certified products, in addition to the other indication provided for by the laws

enforced in the Country of distribution, shall report:

- The list of all the ingredients present in the formula indicated with INCI nomenclature in decreasing order of percentage by weight
 - The natural content of the product according to VCDtox the spread sheet
 - The organic content of the product for the ECO BIO DETERGENZA certification
 - Indication of raw materials from organic farming in the list of ingredients with the words "from organic farming" or "made with organic ingredients"
- b) If it is possible to demonstrate that products of animal origin are not used, the formulation label shall report the following sentence "It does not contain product of animal origin".
- c) The certification marks, together with the control codes assigned to the company, shall be reported on the products according to the provisions of the "REGULATION FOR THE USE OF ICEA LOGOS AND CERTIFICATION DECLARATION" (Annex 2 M.O.). The certifying body shall expressly require any possible modification.
- d) In the company produces also non-certified detergents, the "Eco Organic and Eco Cleaning" line shall report a trademark and a graphics clearly different from non certified products so that the user can immediately distinguish between certified and non-certified products.
- e) In case of companies where the trademark corresponds to the producer's name, in order to avoid a disadvantage, it is permitted to maintain the same trademark upon condition that the certified line can be clearly and immediately identified by the consumers and not confused with the non- certified line.

ANNEX 1

Raw materials of inorganic origin

DIDlist	Chemical name of the ingredient
133	Zeolite (insoluble inorganic substance)
137	Clay (insoluble inorganic substance)
137	Carbonates
140	Silicates
141	Sodium percarbonate
147	Sodium sulphate and magnesium
148	Calcium and sodium chloride
150	Silicon dioxide, quartz (insoluble inorganic ingredients)
151	Na-/Mg-/KOH
154	Dyeing, if not otherwise specified (**)
186	Sodium disilicate
193	Bentonite