

TECHNICAL SPECIFICATIONS FOR ORGANIC AND NATURAL DETERGENTS

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PREMESSA

The consumer society has a strong impact on the environment. The extent of this impact depends on the choices that each of us consumers does to satisfy our needs.

A choice that can be decisive is to buy products as much as possible with a high level of environmental sustainability.

The consumer demand for environmentally friendly products is a powerful incentive for companies, so they can reflect on how to make more environmentally friendly their products, increase their efforts in the field of environment and improve performance throughout the cycle of life of their products and services.

To choose products with less environmental impact, consumers must have access to information that is accessible, understandable, relevant and credible on environmental quality of the products themselves. Another important issue is that of the safety and health of products that, in many cases, creates important indirect social costs.

This specification is the result of a discussion and sharing between all parties involved: producers, consumers, authoritative representatives of the academic and scientific world and control body (ICEA).

1. Scope of the document

1.1 This specification is intended to define the characteristics and requirements of detergents and other products falling within the scope of paragraph 3 of these Regulations that may exhibit a label indicating " ICEA Organic Detergents " or " ICEA Natural Detergents " and for which it is allowed to use the special mark.

The objectives of this specification are listed below.

- Promote, in the field of home and community detergency, the use of products obtained from raw materials, manufacturing processes and packaging with a low environmental impact
- Obtain products that respect the consumer's health and do not have allergenic and irritant effects.
- Promote the use of natural raw materials, organically grown, non-GMO and that are not subject to ionizing radiation.

2. Normative References

- law 136 of 26/04/83
- law 8 of 07/86
- Regulation CEE 45/99 and its Italian implementation Law 65/2003
- D.P.R. February 6th 2009, n.21
- Regulation CE 1980/2000 Decision of the Commission regarding the calculation of VCDtox (Critical Dilution Volume Method)
- Regulation CE 834/07 and Regulation CE 889/08 and consecutive modifications and additions.

3. Field of application

The following products are covered in the scope of this specification:

All detergents used to wash by hand and in the dishwasher as dishes, cooking utensils and other equipment; simple products, natural substances **that can be used during the lifetime of the detergency or that could fall in the formulation of detergents in order to confer to the same special features (fragrances, softeners, brighteners, sequestrants, buffers for stabilizing the pH, etc.).**

Detergent products intended for cleaning of floors, walls, ceilings, and other hard surfaces like counter tops, furniture, equipment and installations, cars, self-propelled vehicles, etc.; simple products, natural substances **that can be used during the lifetime of the detergency or that could fall in the formulation of detergents in order to confer to the same special features (fragrances, softeners, brighteners, sequestrants, buffers for stabilizing the pH, etc.).**

Laundry detergents in powder, liquid, or other form for washing fabrics by hand or in a washing machine; simple products, natural substances **that can be used during the lifetime of the detergency or that could fall in the formulation of detergents in order to confer to the same special features (fragrances, softeners, brighteners, sequestrants, buffers for stabilizing the pH, etc.).**

Detergent products intended for cleaning and removal of dirt in the artisan, industrial and agricultural factories, canteens, communities, offices, factories, hotels, agriturisms, sheds and stables, etc.. and every closed space intended for the production, presence and permanence of human activities; simple products, natural substances **that can be used during the lifetime of the detergency or that could fall in the formulation of detergents in order to confer to the same special features (fragrances, softeners, brighteners, sequestrants, buffers for stabilizing the pH, etc.).**

Room air fresheners, adjuvants, ingredients, raw materials, **chemical auxiliaries**, simple natural substances or of inorganic origin or products authorized by EC Regulation 834/07, **which can be used during the lifetime of detergency, even for medical surgical devices or which may fall within the formulation of detergents in order to confer to the same special functionality (softeners, brighteners, sequestrants, buffers for stabilizing the pH, etc.).**

4. Raw Materials

ICEA organic detergent products may include among its components the following raw materials:

1. Products of vegetable origin
2. Products of animal origin
3. Products of inorganic origin
4. Products derived from chemical processes of synthesis
5. Water

Each group of raw materials must respect the characteristics below mentioned and to respect the percentages of composition listed at the point 6 of the hereby specifications.

4.1. Raw material of vegetable origin

The products bearing the indication "Organic Detergents" are obtained by using vegetable raw materials from organic cultivation or spontaneous harvesting certified under EC 834/07 Regulation (or other international reference standards: eg. NOP, JAS, COR , etc.).

In the case of products bearing the indication "Natural Detergents" is allowed to use products from conventional agriculture as long as non-GMO or GMO derived products (in the case of products "at risk", which are in the market in the form GMO such as corn, soybeans, rape, etc.. a voluntary product certification issued by an accredited third party institution is required).

In all cases products derived from plants at risk of extinction are not allowed.

4.2 Raw materials of animal origin

In order to safeguard animal welfare must come from organic farms for both product categories. Raw materials of animal origin involving elimination cannot be used.

The labeling of formulations, where it is demonstrated the use of non-animal products, you may bear on the label the following sentence: "It does not contain animal products."

4.3. Raw materials of inorganic origin

In the case of raw materials of mineral origin, shall be assessed the content of metals of recognized toxicity (As, Pb, Cd, Ni, Cu, Zn, Cr VI, Sb) in order to ensure that there is no contamination and that they are present only as traces. During the first year of application of this regulation the level of these impurities in the raw materials will be monitored in order to define maximum tolerable thresholds.

It is allowed the use of acidic and basic reagents commonly used in the synthesis of raw materials (hydrochloric acid, sulphuric, phosphoric, nitric, soda, potash, etc.)

4.4. Raw materials derived from chemical processes of synthesis

a) Surfactants

For the purpose of applying paragraph 6.5, documentation proving the vegetable origin of alkyl chain used for synthesis processes is requested.

b) Other Products

Products listed in Annex 1 are allowed, for which there are no valid alternatives of proven natural origin available in the market and from which the impact characteristics on the environment and the on the skin are assessed positively. The Scientific Committee reserves the right to approve the use of any other products on the basis of the criteria adopted for those admitted.

4.5. Water

It can be used drinking water or demineralised water or osmosised water.

5. Processes that can be applied to raw materials

5.1 In the extraction and purification phase, physical processes are preferred. It is forbidden irradiation with gamma rays or x-rays for conservative purposes.

5.2 For raw materials derived from processes that employ metal catalysts whether in homogeneous phase whether in heterogeneous phase, Analytical Reports will be submitted relating to the presence of heavy metals in order to assess the environmental impact of these production processes.

The formulator company must demonstrate the proper declaration concerning disposal of processing solid residues (n° CER classification – European Waste Cadastre) products in synthesis process, compliance with tables A or C of MERLI law for discharging waste water, the authorisation to emissions in the atmosphere.

6. Formulations of products

6.1 For each product the exact formulation must be indicated and, in particular, the exact chemical description of ingredients (identified as by IUPAC DCI, CAS NUMBER, STRUCTURAL FORMULA nomenclatures), purity degree, type and percentage of impurities present, reported on safety data sheets, all drafted in order to provide adequate assessment tools for certification.

6.2 The load of environmental impact (aquatic toxicity) of the finished product will be evaluated with the CDVTOX value, critical dilution volume, which will be calculated with the following formula (based on CEE Ecolabel regulation last "Commission Decision of February 14th, 2003 establishing the updated ecological criteria for the assignment of the community mark of organic quality to laundry detergents and amending Decision 1999/476/EC").

$$\text{VCD}_{\text{TOX}} (\text{ingredient } i) = \frac{\text{weight/wash-up } (i) \times \text{loading factors}(i)}{\text{long-term effect } (i)} \times 1000$$

for the following categories of detergents the obtained value must not be superior to:

Dishes washed by hand	3.500
Hard surfaces (floors, worktops, etc.)	5.000
Powder and liquid detergents for hand washing and washing machine	200.000
Dishwasher powder	20.000
Liquids for dishwasher	20.000
Glass	1.500
Toilet products and other ready for use	10.000
Fabric Softener	20.000

In the calculation of total VCD_{tox} is not taken into account used essential organic oils. These values will be updated in a more restrictive sense as a result of the new options of formulation given by the scientific or technological progress.

6.3 No formulated product may contain ingredients present in a percentage higher than 0.01 of weight characterized by risk phrases such as: R40-R45-R46-R47-R49-R50-53-R51-53-R59-R60-R61-R62-R63-R64-R68.

6.4 Also, the ingredients should not be classified as R 42 (may cause sensitisation by inhalation). Substances classified as R 43 (may cause sensitisation by skin contact) should not be present in a percentage higher than 0.3%. Substances that are potentially bio-accumulative are not allowed. A substance should be considered bio-accumulative if it possesses a Bioconcentration Factor (BCF) > 100 or if its Partition Coefficient octanol/water ($\log K_{ow}$) > 3. Biodegradability of organic raw materials used must be demonstrated (Test OECD serie 302 / serie 301).

6.5 Without prejudice to the derogations under points 4.1 and 4.2, the finished product must contain at least 95%, by weight, of the ingredients of vegetable origin and/or animal origin from organic or spontaneous collection (including the water that constitutes them). For surfactants or other products obtained from chemical syntheses it will be necessary to check the natural origin of the raw materials that provide the chain of carbon atoms that characterizes such molecules

The organic carbon that is used in the synthesis of surfactants present in the finished product must be of proven vegetable origin.

7. Treatment of the finished product

7.1 The finished product cannot be radiated nor suffer other non-physical processes.

7.2. It is not possible to carry out tests on animals for products subject to certification

8. Packaging

8.1 Recyclable, inert containers, which do not release dangerous monomers for health and environment are solely admitted.

8.2 It is forbidden the use of PVC.

8.3. It is recommended to reduce and, if possible, avoid the use of secondary packaging

8.4 In its communication to the consumer to reuse container for refills, where provided, to be marketed in conjunction with the product itself must be emphasized.

8.5 The container must be focused on the use of spray devices or single-material dispensers.

In the case of products which provide in the container, the spray pump or multi-material dosing pump (e.g. containing metallic elements) is required:

- commercialize this article also in the "recharge" version
- ask the consumer, by means of visible wordings on the label, to use the pump as much as possible. The presence of metal, in fact, prevents proper recycling.

9. Tests and obligatory analysis

9.1 All products, excluding those listed under section 3 and), must overcome the washing performance test according to methodology derived from those official tests or specially developed by a qualified laboratory, capable of demonstrating their effectiveness compared to similar products having leadership position in the market

The guidelines are published at the ICEA website.

9.2 Products that are for use, continuous and stable contact with the skin (detergents for washing dishes by hand and for hand cloth washing) must be tested using Patch Test.

9.3 For simple products, semi-finished products, raw materials - see point 3 e) - performance tests and other tests will be prescribed from time to time specifically by the Evaluation Committee of the certification body in a reasoned preliminary assessment.

The results of these tests must be indicated on the label or in technical sheets to make available to the public.

The methods will be made public.

10. Labelling

10.1 The label shall contain in addition to the prescribed by law:

- a) instructions on dosage and product functionality
- b) information on the ingredients,
- c) the declaration of ingredients in descending order according to its proportion by weight, and a summary explanation to the consumer.

The labelling of formulations, which proves the non-use of animal product, may bear the following sentence "contains no animal products".

10.2. The control and certification body will make public, by at least the website, each certified product with the composition in order to put the consumer in knowledge of better understanding and more conscious consumption.

10.4 It is reported the certification mark (together with the control codes) set by ICEA for the specific product category-Organic Detergents and Natural Detergents-in several official graphic versions (to request at ICEA offices), respecting the provisions of the " ICEA REGULATION and USE OF ICEA LOGO AND ADVERTISING OF THE CERTIFICATION" (Appendix 2 M.O.). Here two examples:



XXX DP XXX



XXX EC XXX

The label "Organic and Natural Detergents" shall be granted to products which satisfy the requirements of this specification and are part of a line of certified products.

If the company produces also uncertified detergents, the line of "Organic and Natural Detergents" must have a trademark and a graphic design distinct from non-certified products, so that consumers can distinguish immediately certified products than uncertified ones.

Nonetheless, in the case of companies where the trade mark corresponds to the name of the manufacturer in order not to create disadvantage, it is allowed the maintenance of the same trade mark, provided that the certified line is instantly recognizable by consumers than non-certified products

ANNEX 1 - OTHER ADMITTED PRODUCTS (point 4.4. b)

Preservatives

benzoic acid and its derivatives
phenoxyethanol
sorbic acid and its derivatives
sodium dehydroacetate

Special Preservatives for environments with a Ph above 9:

dichlorobenzyl alcohol
feniletilico alcohol
Thymol

Other substances:

TAED only for powders
urea
Maleic acid
Malic acid