

ECOGARANTIE® SPECIFICATIONS



PART III Washing products

*R*ules and standards for the certification
and verification of ecological products

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OCTOBER 2005



The vision of Ecogarantie®

Ecogarantie® is the Belgian trademark for ecological products. It serves as an instrument for the promotion and management of this kind of products.

Ecogarantie® verifies and guarantees the ecological quality of a given product. To develop its standards, Ecogarantie® takes into account social, ecological and economic aspects, while respecting both life cycle and sustainability throughout several generations.

The mission of Ecogarantie® includes

- 1. helping consumers and companies to identify ecological products easily and reliably. Thereby guaranteeing as much as possible transparency for consumers and companies by manner of clear rules and complete labelling of the product.*
- 2. verifying the use of the trademark Ecogarantie® on the ecological product. The ecological quality of the product is contained in the principle of obligatory means more so than in obligatory results. The presence of the mark aims at the ecological quality of the product in the field of durability, safety and minimal impact on the environment, low aquatic toxicity and good biodegradability and in the field of restriction of harmful minerals.*
- 3. anticipating –in a strive towards continual amelioration of the own specifications- the positive evolution of the legislation by defining standards for areas not yet covered by the European legislation.*

This can be accomplished through

- The specifications*
- A (good) management of the trademark*
- The independent system of certification and verification*

The products

Ingredients and methods of preparation are selected according to their ecological properties and origin.

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A. General purpose

1. The selection of the ingredients is based on the principles of sustainability and ecological responsibility. Agricultural ingredients come from organic farming, unless it can be proved that they are not available. If such is the case, it will be mentioned in the present specifications. Synthetic products, colouring agents and preservatives will not be used or used in a very restricted way. The positive list only mentions those substances which, because of their specific characteristics and their function in the product, cannot be replaced in the short run by a better and more ecological alternative. The use of genetically modified organisms (GMO's) or of GMO techniques in the production chain is forbidden.
2. The processes used in the production and processing may not be polluting and must respect both our health and the environment. This will be done by taking measures during the production process, as far as biodegradability, recycling of packages, waste products, ... are concerned. The commercialisation of these quality washing products takes into account the wellbeing of the consumer by setting up clear rules as well as by favouring communication and transparency in the chain.
3. End produce may not be tested on animals. Alternative methods will be used.
4. The products meet the environmental requirements of the present specifications. Because it aims at a harmonisation of the rules at a European level, Biogarantie vzw, when establishing the list of environmental criteria, used the orders of the European Commission¹ for the specification of the environmental criteria used to grant the European label ("ecolabel").

B. Field of application

All ingredients and methods of preparation must conform to the European legislation and meet the additional stipulations of the present specifications.

Washing and cleaning products are not covered by EEC Regulation 2092/91 concerning organically-grown products and do therefore not need to be certified.

However, the raw materials that would be organically-grown in the framework of the Ecogarantie® specifications, must meet the requirements of EEC Regulation 2092/91 and/or the Biogarantie® standards.

The name "**washing products**" involves the following product groups

The product group '**all-purpose cleaners and cleaners for sanitary facilities**' shall be composed of the following three subgroups:

a) all-purpose cleaners comprising detergent products intended for the routine cleaning of floors, walls, ceilings, windows and other fixed surfaces, and which are dissolved or diluted in water prior to use. All purpose cleaners must have water content $\leq 90\%$ (w/w).

b) window cleaners comprising specific all-purpose cleaners for the routine cleaning of windows, and which are either diluted in water prior to use or used without dilution. All window cleaners must have water content $\leq 95\%$ (w/w).

c) cleaners for sanitary facilities comprising detergent products intended for the routine removal, including by scouring, of dirt and/or deposits in sanitary facilities, such as laundry rooms, bathrooms, showers, toilets and kitchens. All cleaners for sanitary facilities must have water content $\leq 90\%$ (w/w). The subgroup specified in point (c) of the first paragraph shall not include the following:

¹ Order of the Commission of November 29th, 2002 for detergents used in dishwashers, of February 14th, 2003 for laundry detergents, of March 23rd, 2005 for hand dishwashing detergents, all-purpose cleaners and cleaners for sanitary facilities.

- a) products which are automatically used when a toilet is flushed, such as 'self-dosing-products', including toilet blocks;
- b) products for use in a toilet cistern;
- c) products, which have no cleaning effects other than the removal of calcium carbonate (scale);
- d) disinfectants.

The product group shall not cover products for more specific cleaning uses, such as oven cleaners, floor-strippers, polishes, drain cleaners, and so on.

The product group shall cover products for both private and professional use.

The product group '**hand dishwashing detergents**' shall comprise:

'all detergents intended to be used, to wash by hand, dishes, crockery, cutlery, pots, pans, kitchen utensils and so on'

The product group shall cover products for both private and professional use.

The product group '**detergents for dishwashers**' shall comprise all detergents intended for use exclusively in automatic domestic dishwashers and all detergents intended for use in automatic dishwashers operated by professional users but similar to automatic domestic dishwashers in terms of machine size and usage.

The product group '**laundry detergents**' shall comprise all laundry detergents, in powder, liquid or any other form, for the washing of textiles, and which are intended to be used principally in household machines, but not excluding the use in laundrettes and common laundries.

This list is not comprehensive. Other product groups can be added in the future if necessary.

C. Use of the trademark

The label may carry the Ecogarantie® logo if the final product meets the requirements of the present specifications and has therefore been submitted to the control of one of the certified control organisations.

Enzymes are authorised as long as they are not genetically modified or coming from genetically modified micro-organisms.

Reference to organic agriculture may be made in the list of ingredients for agricultural raw materials and semimanufactured products which conform to the following texts:

- EC Regulation 2092/91 and its modifications
- Royal Decree of April 17th, 1992 and its modifications
- Ministerial Decree of October 30th, 1998 and its modifications
- the Ecogarantie® specifications, namely for the conditions regarding the physical and chemical/microbiological processes

The indications referring to organic production methods make it clear that they relate to a method of agricultural production and are accompanied by a reference to the ingredients of agricultural origin concerned unless such reference is clearly given in the list of ingredients.

If percentages of organic ingredients are mentioned on the packaging, the operator will communicate the method used for the calculation to the attention of the control body and mention it on the packaging. E.g. the operator will mention if the percentage refers to the total of ingredients or only to the vegetable ingredients.

The labelling refers to the name of the inspection body to which the operator is subject.

D. Preparation

D. 1. RAW MATERIALS AND PHYSICAL PROCESSES USED IN PROCESSING

D.1.1. Vegetable products

Vegetable products are authorised based on the following criteria:

Organically-grown and/or harvested from wild plants according to EC Regulation 2092/91 and its modifications if available.

D.1.2. Animal products

Animal products are authorised based on the following criteria:

- not be part of the European and international list of protected species (see the Washington Convention or the Bern Convention)
- organically-grown if available
- are not used as main component

Positive list:

- ossengal for the production of soaps
- tallow in abrasives

D.1.3. Animal secretions

Authorised animal secretions are recorded in a positive list, based on the following criteria:

- organically-grown if available
- the exploitation of which has no detrimental effect on the ecological balance.

Positive list :

Authorised animal secretions
Butyris Lac
Butyrum
Caprae Lac (goat milk)
Cera alba
Cera flava
Lac (milk)
Lanolin
Lanolin cera
Mel
Ovum
Propolis Cera
Royal Jelly
Shellac

D.1.4. Minerals

Minerals are authorised based on the following criteria:

- Must be used for their intrinsic properties
- Their exploitation causes no pollution or damage to the landscape
- According to the purity criteria (see appendix A)
- Whole and unmodified
- No disinfection through gamma rays

It is the producer's duty to show the inspection body that he examined these elements while selecting his raw materials.

Examples of authorised products:

- alumina
- montmorillonite clay (bentonite)
- kaolin clay
- chalks
- sand
- talc
- drinkable water: spring water, reverse-osmose water, unmineralised water,...
- silicates
- ...

Negative list:

- petroleum and its derivatives
- borium and its compounds
- phosphorus, phosphates and their derivatives (phosphonates,...)
- silicone and its derivatives
- mineral acids (H_3PO_4 , HCl, H_2SO_4 ,... and their derivatives)
- mineral bases (with the exception of NaOH, $Ca(OH)_2$, $Mg(OH)_2$, KOH that are allowed if they do not exceed 0,05% in the preparation and if no other substance that causes irritation is mixed in)

D.1.5. Maritime products

Maritime products are authorised based on the following criteria:

For the vegetable maritime products: see criteria under point D.1.1

For the animal maritime products: see criteria under point D.1.2. and D.1.3.

For the mineral maritime products: see criteria under point D.1.4.

D.1.6. Gas

Authorised gasses are recorded in a positive list.

Positive list:

Authorised gasses
carbon dioxide
oxygen
nitrogen

D.1.7. Nature of the physical processes used

Raw materials may only be processed through very specific physical processes, which are recorded in a positive list based on the following criteria.

- processes that give good biodegradable molecules
- processes that respect the active substances
- processes that allow a good management of the waste and of the energy consumption

Positive list:

absorption (on an inert support ²)
decolouration, deodorisation (on an inert support ¹)
grinding
centrifugation (separating solid substance from liquids)
clearance
dehydration, drying (by means of (non) gradual evaporation or sun radiation)
freezing/individually quick frozen
deterpenation (if fractioned steam distillation)
distillation or extraction (steam)
squeezing, crushing
extraction by means of following solvents: water ethylalcohol vegetable glycerin honey sugar vinegar carbon dioxide
filtering and purification (ultra-filtering, dialysis, electrolysis)
lyophilisation
blending
percolation
cold pressure
warm pressure (to extract according to the fluidity of the fatty acids)
sterilisation by means of heat treatment (according to the temperatures respecting the active substances) and UV (only for water)
sifting
maceration
solar extraction (eg. flower remedies)
cold extraction
vacuum
decoction (hot or cold)
Infusion (hot or cold)
post extraction filtration, micro filter, depth filter (with non-bleached filtering papers) blending different batches of extracted herbs to achieve a specified level of markers/actives concentration by evaporation, vacuum distillation, spray drying clarifying/precipitating agents (permitted additives or processing aids: see appendix VI of EC reg. 2092/91) nitrogen flushing pasteurisation

² Inert support: substance that has no chemical reaction with the original substance.

Examples of forbidden processes:

irradiation (X-rays)
ionising treatments (gamma rays)
extraction by means of following solvents:
benzene
butylene glycol
hexane
mineral oils
petroleum-derived solvents
propylene glycol
extraction with ultrasound ³
post extraction
electron beaming
irradiation
post packaging sterilisation eg UV
rectification

³ Precautionary principle: is forbidden as long as no study has proved the method to be innocuous.

D.2. SEMIMANUFACTURED PRODUCTS OBTAINED THROUGH CHEMICAL/MICROBIOLOGICAL PROCESSES FROM RENEWABLE RAW MATERIALS OR MINERALS

D.2.1. Nature of the chemical processes used

In order to produce a semimanufactured product, the raw materials may only be treated by means of specific chemical processes that are recorded in a positive list based on the following criteria:

- processes that give good biodegradable molecules
- processes that respect the naturally active substances
- processes that allow a good management of the waste and of the energy consumption

Positive list:

Alkylation
Calcination of vegetable residue
Carbonisation (resins, vegetable oils)
Condensation / addition
Deterpenation by means of steam
Esterification and trans-esterification
Etherification
Ethoxylation restricted until 7 mol EO
Hydration
Hydrogenation
Hydrolysis
Neutralisation through bases
Neutralisation through acids
Oxidation/reduction
Production processes for amphoteres (amidification)
Quaternisation in the case of cationics meant for softeners
Saponification
Sulphatation
Roasting

Examples of forbidden processes:

Amidification in case of main components like the surfactants
Quaternisation in case of disinfection produce
Decolouration, deodorisation (on a support of animal origin)
Sulfonation (in main reaction)
Treatments with ethylene oxide if more than 8 mol EO (disinfection...)
Treatments with mercury (production of sodium and potassium hydroxide)
Propoxylation
Chlorine chemistry (chloric gasses, chlorine derivatives), with the exception of tap water

D.2.2. Nature of the microbiological/biotechnological processes used

Microbiological/biotechnological processes are allowed based on the following criteria:

- from vegetable or animal raw materials

Examples of authorised processes:

in vitro cultivation, wild or controlled fermentation by means of micro-organisms, production of enzymes as far as they are not obtained from GMO technology

Negative list

Cloning, cell culture and methods based on genetically modified organisms (GMO): organism the genetic material of which has been modified in a way that cannot be naturally achieved through reproduction and/or recombination.

D.2.3. Semimanufactured product of vegetable origin

Semimanufactured products of vegetable origin are authorised based on the following criteria:

Only the raw materials and processes abovementioned are authorised. Exception is made for the organic quality of the raw materials: if they are not available in their organic version, raw materials from conventional agriculture may be used to produce the semimanufactured product.

Examples of authorised semimanufactured products

Betaine

Peracetic acid

Produce obtained through fermentation like ethanol, citric acid, formic acid,...

Tocopherol

Salts like sodium citrate, zinc gluconate, zinc lactate, zinc ricinoleate, zinc stearate,...

D.2.4. Semimanufactured product of animal origin

Authorised semimanufactured products of animal origin are recorded in a positive list based, among others, on the following criteria:

Only the abovementioned raw materials and processes are authorised. Exception is made for the organic quality of the raw materials: if they are not available in their organic version, conventional raw materials may be used to produce the semimanufactured product.

Positive list

Authorised semimanufactured products of animal origin
Beeswax acid
Behenyl Beeswax
Behenyl / isostearyl Beeswax
Hydrolysed milk protein
Lactis Proteinum
Lanolin alcohol

D.2.5. Semimanufactured product of mineral origin

Authorised semimanufactured products of mineral origin are recorded in a positive list based on the following criteria:

- the only raw materials and processes to be authorised are those defined above
- according to the purity criteria (see appendix A)

Positive list

Authorised semimanufactured products of mineral origin
CI 77000 aluminium
CI 77007 lazzerite
CI 77163 bismuth oxychlorure
CI 77220 calcium carbonate
calcium sulphate
CI 77480 and CI 77491 iron oxides
CI 77492 iron hydroxide
CI 77499 iron oxides
iron sulphate
CI 77510 (bleu de Prusse)
CI 77711 magnesium oxide
CI 77820 silver
CI 77742 ammonium manganese diphosphate
CI 77891 titanium dioxide
CI 77947 zinc oxide
copper chlorophylle
cupric sulphate
hydrated silica
potassium carbonate
magnesium chloride
magnesium sulphate
manganese sulphate

potassium carbonate
potassium hydroxide
potassium sulphate
silver chloride
silver sulphate
Sodium aluminium silicate (NAS)
sodium bicarbonate
sodium carbonate
sodium percarbonate
sodium hydroxide
sodium silicate
sodium sulphate if < 5%
zinc gluconate
zinc lactate
zinc ricinoleate
zinc stearate
silicates
silicon dioxide
hydrogen peroxide

D.2.6. Semimanufactured product of maritime origin

Authorised semimanufactured products of maritime origin are recorded in a positive list based on the following criteria:

The only raw materials and processes to be authorised are those defined above. Exception is made for the organic quality of the raw materials: if they are not available in their organic version, conventional raw materials may be used to produce the semimanufactured product.

Positive list :

Authorised semimanufactured products of maritime origin
algin
carraghene
calcium alginate
chitosan
potassium alginate
xantophyll

D.2.7. Semimanufactured products of microbial origin

Authorised semimanufactured products of microbial origin are recorded in a positive list.

Positive list :

- xanthan
- enzymes (protease, amylase, lipase) as far as they are not obtained from GMO technology

Examples of forbidden semimanufactured products :

Enzymes produced by GMO

D.3. CHEMICALLY SYNTHESISED SEMIMANUFACTURED PRODUCTS

Definition: ingredients produced by chemical synthesis

NB: The total of chemical substance is the recommended dose in g/washing minus the proportion of water.

The authorised chemically synthesised semimanufactured products (additives and surfactants) are recorded in a positive list based on the following criteria:

The total amount of chemicals does not exceed:

- 22,5 g/washing for detergents for dishwashers
- 100 g/washing for laundry detergents
- for the other categories: under construction

The specific criteria regarding additives and surfactants are mentioned under D.3.1. and D.3.2.

Evaluation and inspection: the exact formula of the product must be submitted to the authorised body, together with the details of the calculations proving that this criterion has been met.

Examples of forbidden chemically synthesised semimanufactured products:

- chemically synthesised colouring agents
- chemically synthesised perfumes (phenol, cumolsulphonate,...) and auxiliary for perfumes (nitromusk connections,...)
- polycyclic musks
- chemically synthesised antioxidants
- chemically synthesised softeners
- chemically synthesised oils and fats
- silicones
- optical whitening agents
- chelant agents based on EDTA and its salts
- polycarboxylates
- polyacrylates
- substances containing iodine
- formaldehyde
- glutaraldehyde
- glycol
- isopropanol and other synthetic alcohols
- cellulose thinner
- white spirit
- chlorinated hydrocarbons
- benzene and derivatives
- cetone
- sulphamine acid and amidosulfonic acid
- TAED
- ...

D.3.1. Additives

The authorised additives (preservatives, antioxidants, ...) are mentioned in a positive list based on the following criteria :

- substances which, because of their specific characteristics and their function in the product, cannot be replaced in the short run by a better and more ecological alternative.

NB:

- the product may only contain biocides if these biocides are meant to guarantee the storage life of the product and used according to the right dose. This does not apply to substances active on the surface, which may have biocide properties.

Evaluation and control: For each preservative added to the product, an information sheet on its security will be submitted, together with detailed information on its concentration in the product. The manufacturer or supplier of the preservative will give detailed information on the dose that is necessary to ensure a good storage life of the product.

- one is not allowed to pretend or to suggest on the packaging or by any other means that the product has an antimicrobial action, unless this can be proved: e.g. disinfecting soap.

Evaluation and control: The text and layout used on each different kind of packaging and/or an example of each different kind of packaging will be submitted to the authorised bodies.

D.3.1.1. Preservatives in the ingredients

Positive list:

Authorised preservatives in the ingredients
acetic acid, its salts and esters
acid ascorbic, its salts and esters
benzoic acid, its salts and esters
benzyl alcohol
dehydroacetic acid
lactoperoxidase
salicylic acid and its salts
sorbic acid and its salts
silver chloride

D.3.1.2. Preservatives in the end product

Positive list

Authorised preservatives in the end product
acetic acid, its salts and esters
acid ascorbic, its salts and esters
benzoic acid, its salts and esters
benzylalcohol
dehydroacetic acid
lactoperoxidase
sorbic acid and its salts

D.3.1.3. Miscellaneous

Positive list

Polymers containing zinc

D.3.2. Surfactants

Authorised surfactants are mentioned in a positive list based on the following criteria:

- based as much as possible on the raw materials and processes as defined above
- petrochemical synthesis is ruled out of the manufacturing process. A few exceptions are tolerated when this kind of synthesis does not apply to a main component or when the substances concerned cannot be replaced in the short run by a better and more ecological alternative because of their specific properties and of their function in the product.

The producer must be able to prove through the slips of his suppliers that the product meets this requirement.

Positive list:

Authorised surfactants
Condensates of proteins/fatty acids
Fatty acid esters
Any kind of soap produced from vegetable fatty acids and anorganic bases (sodium and potassium salts): Palmates, Cocoates, Olivates, Oleates,... and their blends. Exception: soaps based on resin acids from coniferous trees because of their high level of toxicity in water
Fatty alcohol sulphates from fatty alcohol of vegetable origin
Alkylsulphates of vegetable base: Sodium Lauryl Sulphate, Sodium Coco Sulphate, Sodium Octyl Sulphate, Sodium Oleyl Sulphate.
Alkylglutamate of vegetable base
Lipoamines of vegetable base: Sodium Lauroyl Lipoamines
Alkylpolyglucosides of vegetable base: Decyl Glucoside, Lauryl Glucoside, Octyl Glucoside, Caprylyl/Capryl Glucoside
Alkylglucosides of vegetable base: Sucrose Cocoate, Sucrose laurate
Amphoterics of vegetable base: Oleo Ampho Polyglycinate, Alkyl Amido Ampho Polypeptide Carboxylate

Please note that this positive list is under construction and could be completed if necessary.

Examples of forbidden surfactants

Linear alkylbenzene sulfonate
Quats (quaternary ammonium connections)
Alkylphenol polyetheneglycoethers (EPEO) like nonylphenolenylethoxylaten
Alkylphenol ethoxylates (APEO) or other alkylphenol derivatives (APD's)
Amine ethoxylates
EO/PO polymers in bloc (EO=ethylene oxide, PO=propylene oxide)
Secondary alkane sulphonate (SAS)
Fatty alcohol ethoxylates > 8 EO
Toluolsulphonate

D.4. PRODUCTION OF WASHING PRODUCTS

Only the physical and/or chemical processes recorded in the positive lists under D.1.7. and D.2.1. are authorised in the processing of ingredients (raw materials and semimanufactured products see from D.1 to D.3) into a washing product.

End produce may not be tested on animals. The tests on the raw material are performed according to the legal rules and with respect of the animal well fair.

D.5. ENVIRONMENTAL CRITERIA

Please note that this section is under construction: it is not compulsory until further notice.

For the assessment of the environmental criteria, the washing produce are divided in four product groups:

- 1) all-purpose cleaners and cleaners for sanitary facilities
- 2) hand dishwashing detergents
- 3) detergents for dishwashers
- 4) laundry detergents

D.5.1. Purposes of the criteria:

These criteria are meant:

- to drive back the dumping of toxic or otherwise polluting substances in the aquatic environment
- to limit or to prevent the risks linked to the use of substances dangerous to the environment and to human health
- to limit as much as possible the quantity of packaging
- to save on transport and energy by improving the use of compact products
- to inform the consumer in such a way that he can efficiently use the product while reducing to a minimum its impact on the environment.

D.5.2. Requirements regarding evaluation and control

For each criterion, the present specifications mention the specific requirements regarding *evaluation and control*.

Besides the test methods mentioned for each criterion, other methods can be used as long as the authorised body, which has to judge the request, considers these methods as being equivalent to those mentioned in the present specifications.

If at all possible, the tests will be carried out by laboratories meeting the general requirements of EN ISO 17025 or any other equivalent requirements.

When no tests are mentioned, or mentioned for control, the authorised bodies will judge from the declarations and documents submitted by the applicant, and/or from independent controls.

The authorised bodies may request documentation and carry out independent controls.

According to the case, declarations, documents, reports of analyses or any other kind of data having to be submitted to prove that the criteria have been met can be drafted by the applicant, his suppliers, etc.

Appendix I provides the newly revised databank for the ingredients used in detergents (DID list), version of June 30th, 2004, hand dishwashing detergents, all-purpose cleaners and cleaners for sanitary facilities, where the most frequently used ingredients are listed. Appendix I' applies to detergents for dishwashers and to laundry detergents. Part A of the DID list is used to calculate the CDVtox and to evaluate the biodegradability of surface active substances.

The applicant can also use later versions of the DID list once they are available.

For ingredients not mentioned in Part A of the DID list, the applicant will resort, on his own responsibility, to the procedure mentioned in part B of Appendix I or I'.

For ingredients not mentioned in the DID list, the applicant can draft the required documentation about the anaerobic biodegradability via the procedure explained in Appendix II or I'C.

We recommend that the authorised bodies, while judging the requests and controlling in how far the criteria of this appendix have been met, take into account the implementation of certified ecological systems, such as EMAS or ISO 14001 (however, the implementation of such ecological systems is not obligatory.)

D.5.3. Functional unit

For **all-purpose cleaners**, the functional unit used in the criteria mentioned below is the dose of the product recommended by the manufacturer and expressed in grams for 1 l soap suds.

For **window cleaners** and **cleaners for sanitary facilities**, no functional unit has been defined (the criteria are being calculated per 100 g of product).

For **hand dishwashing detergents**: under construction

For **detergents for dishwashers**, the functional unit into which the different in- and outputs must be converted, equals the amount of product that is needed to wash twelve place settings with a standard degree of dirt (such as defined by DIN or ISO standards). The dose recommended by the manufacturer to the consumer to wash dishes with a normal degree of dirt and twelve place settings is considered to be the reference dose for standard use circumstances, such as defined under criterion D.5.13. Mentioned IKW test suitability for use on washing results.

For **laundry detergents**, the functional unit is expressed in g/washing (grams per washing). The dose is meant for 4.5 kg of laundry (dry textile products) in the case of laundry detergents for the whites, and for 2.5 kg of laundry (dry textile products) in the case of delicate textiles. The dose recommended by the manufacturer to the consumer for a water hardness of 2.5 mmol CaCO₃/l and for “normally dirty” laundry is used as reference dose for the calculations regarding the environmental criteria, as well as for the evaluation of the washing performances. If a water hardness of 2.5 mmol CaCO₃/l is not relevant for the member states where the detergent is being commercialised, the applicant will specify the dose to be used as reference.

D.5.4. Environmental criterion Toxicity for aquatic organisms

For **all-purpose cleaners**, the CDV_{tox} may not exceed 20,000 l/functional unit.

For **cleaners for sanitary facilities**, the CDV_{tox} may not exceed 100,000 l/100 g of product.

For **window cleaners**, the CDV_{tox} may not exceed 5,000 l/100 g of product.

For **hand dishwashing detergents**, the CDV_{tox} of the recommended dose per litre of soap suds may not exceed 4,200 l.

For each ingredient (i), the critical dilution volume for toxicity (CDV_{tox}) is calculated as follows:

$$CDV_{tox} (i) = \text{weight} (i) * DF (i) / TF_{chronic} (i) * 1000$$

where weight (i) = the weight of the ingredient (in grams) per functional unit (all-purpose cleaners) or per 100 g of product (cleaners for sanitary facilities) or in the recommended dose for 1 litre of soap suds (for dishwashing detergents), DF (i) = the degradation factor and TF chronic (i) = the toxicity factor of the ingredient (in milligrams/litre).

The values of DF and TF_{chronic} are expressed in part A of the DID list (appendix I). For ingredients not mentioned in the DID list, the applicant will fix the values according to the procedure of part B of the DID list (appendix I).

The CDV_{tox} of a product equals the sum of the CDV_{tox} values of all its ingredients.

$$CDV_{tox} = \Sigma CDV_{tox} (i)$$

For **detergents for dishwashers**, the CDV_{tox} may not exceed 200 l/washing.

For **laundry detergents**, the CDV_{tox} of the recommended dose may not exceed 4,500 l/washing.

For each ingredient (i), the critical dilution volume for toxicity (CDV_{tox}) is calculated as follows:

$$CDV_{tox} (i) = \text{weight} (i) * IF (i) / LTE (i) * 1000$$

where weight (i) is the weight of the ingredient per recommended dose, IF the impact factor and LTE the concentration of the ingredient causing a toxic effect in the long run.

The values of DF and TF_{chronic}, as well as those of IF and LTE, are mentioned in part A of the DID list (appendix I). For ingredients not mentioned in the DID list, the applicant will fix the values according to the procedure of part B of the DID list (appendix I).
The CDV_{tox} of a product equals the sum of the CDV_{tox} values of all its ingredients.

$$CDV_{tox} = \sum CDV_{tox} (i)$$

Evaluation and control: The exact formula of the product and the CDV_{tox} calculations proving that this criterion has been met must be submitted to the authorised body.

D.5.5. Environmental criterion. Aerobic biodegradability of all the organic substances present in the product

Each organic substance that is present in the product must be easily biodegradable.

Evaluation and control: The exact formula of the product, together with a description of the function of each ingredient, has to be submitted to the authorised body. Part A of the DID list (appendix I) indicates whether or not a specific surface active substance is aerobic biodegradable (surface active substances with a “R” in the column for aerobic biodegradability are easily biodegradable). For organic substances that are not listed in part A of the DID list, relevant data from literature or other sources as well as relevant test results proving that they are aerobic biodegradable will have to be submitted. The tests used to prove the easy biodegradability of a product must conform to EU Regulation # 648/2004 of the European Parliament and Council of March 31st, 2004 regarding detergents (1).

Organic substances are considered to be easily biodegradable when the biodegradability (mineralization) that is measured according to one of the following five tests, equals at least 60% after 28 days: CO₂-headspace test (OESO 310), CO₂-development test (modified Sturm-test) (OESO 301B; appendix V, method C.4-C, by Regulation 67/548/EEC of the Council (2)), closed bottle test (OESO 301D; appendix V, method C.4-E, by Regulation 67/548/EEC), manometric respirometry (OESO 301F; appendix V, method C.4-D, by Regulation 67/548/EEC), MITI-(I) test (OESO 301C; appendix V, method C.4-F, by Regulation 67/548/EEC) or the equivalent ISO tests. Depending on the physical characteristics of the organic substance, one of the following tests can be used, when the biodegradability equals at least 70% in 28 days, to confirm the easy biodegradability of the substance: levelling test for diluted organic carbon (DOC) (OESO 310A; appendix V, method C.4-A, by Regulation 67/548/EEC), modified OESO screening test for DOC levelling (OESO 310E; appendix V, method C.4-B, by Regulation 67/548/EEC) or the equivalent ISO tests. When a testing method based on DOC measures is being used, its appropriateness must be proved, since such a method can also measure elimination instead of biodegradability. No adaptation can be made before the tests on aerobic biodegradability. The principle of the ten days window is not applicable.

(1) PD L 104 of 8/4/2004, p. 13.

(2) Directive 67/548/EEC of the Council of June 27th, 1967 regarding the adaptation of the legal and administrative regulations concerning the classification, the packaging and the characterisation of dangerous substances (PD 196 of 16.8.1967, p. 1).

D.5.6. Environmental criterion. Anaerobic biodegradability of organic substances

Each organic substance that is present in the product must be biodegradable in anaerobic conditions.

Evaluation and control: The exact formula of the product, together with a description of the function of each ingredient, has to be submitted to the authorised body. Part A of the DID list (appendix I) indicates whether or not a specific surface active substance is anaerobic biodegradable (surface active substances with a “Y” in the column for anaerobic biodegradability are biodegradable in anaerobic conditions). For organic substances that are not listed in part A of the DID list, relevant data from literature or other sources, as well as relevant test results proving that they are anaerobic biodegradable, will have to be submitted. The reference tests for anaerobic biodegradability are OESO 311, ISO 11734, Ecetoc # 28 (June 1988) or any equivalent method showing that the ultimate biodegradability in anaerobic conditions is of at least 60%. In order to prove the anaerobic biodegradability of at least 60%, test methods may be used in which the conditions of a relevant anaerobic environment are being simulated (see appendix II).

D.5.7. Criterion Insoluble inorganic ingredients

The total quantity of insoluble inorganic ingredients per recommended dose must be inferior to 30 g/washing for the laundry detergents.

For the other categories: under construction

Evaluation and control: The exact formula of the product has to be submitted to the authorised body, together with the details of the calculations showing that this criterion has been met.

D.5.8. Environmental criterion Dangerous or toxic substances or preparations

The final product is not classified in one or more of the following risk categories according to Directive 67/548/EEC, as modified, or Directive 1999/45/EC of the European Parliament and Council (3), as modified.

Regarding human health

R	40	Carcinogenic effects are not to be ruled out
R	45	Can be a cause of cancer
R	46	Can be a cause of hereditary genetic damage
R	49	Can be a cause of cancer when breathed in
R	60	Can damage fertility
R	61	Can harm the foetus
R	62	Possible danger of diminished fertility
R	63	Possible danger of damage to the foetus
R	64	Can harm through breast-feeding
R	68	Irreparable effects are not to be ruled out

Regarding hypersensitivity

R	42	Can be a cause of hypersensitivity when breathed in
R	43	Can be a cause of hypersensitivity when in contact with the skin

Regarding the toxicity to water life and the environment:

R	50	Very toxic to organisms living in aquatic environments
R	51	Toxic to organisms living in aquatic environments
R	52	Harmful to organisms living in aquatic environments
R	53	Can have harmful effects in the long run on aquatic environments
R	54	Toxic for plants
R	55	Toxic for animals
R	56	Toxic for soil organisms
R	58	Can have harmful effects in the long run on the environment

Regarding the ozone layer

R	59	Dangerous for the ozone layer
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Abovementioned requirements apply to any ingredient (substance or preparation) that constitutes more than 0.01% (g/g) of the final product. This also concerns any ingredient of a preparation used in the formula, that constitutes more than 0.01% (g/g) of the final product.

Evaluation and control: An information sheet about its safety must be submitted for each ingredient (substance or preparation).

The applicant also has to submit a declaration from the producer of the ingredients, proving that this criterion has been met.

(3) Directive 1999/45/EC of the European Parliament and Council of May 31st, 1999, regarding the internal adaptation of the legal and administrative regulations of the member states concerning the classification, the packaging and the characterisation of dangerous preparations (PD L 200 of 30.7.1999, p. 1).

D.5.9. Environmental criterion Skin and mucosa friendly

The final product is not classified in one or more of the following risk categories according to Directive 67/548/EEC, as modified, or Directive 1999/45/EC of the European Parliament and Council (3), as modified.

Harmful (Xn):

R	20	Harmful when breathed in
R	21	Harmful when in contact with the skin
R	22	Harmful when taken in the mouth

Caustic (C):

R	34	Causes burns
R	35	Causes serious burns
Irritant (Xi):		
R	41	Can cause serious damage to the eyes

D.5.10. Environmental criterion Volatile organic substances

The product may contain at the most 10% (g/g) of volatile organic substances with a boiling point under 150° C.

Evaluation and control: For each organic solvent, the applicant will submit an information sheet on its safety, as well as the calculation of the total amount of volatile organic substances with a boiling point under 150° C.

Products for industrial applications: under construction

D.5.11 Criterion Enzyme purity

The final enzyme preparation may contain no enzyme producing micro-organisms.

Evaluation and control: A test report or a certificate from the producer of the enzyme will be submitted to the authorised body.

E. Packaging

(under construction: not compulsory until further notice)

E.1. THE PACKAGING / WATER CONTENT RATIO

The amount of packaging compared to the average usage dose of the detergent may not be too high. By limiting the water content (concentrated products), one also limits the amount of packaging per functional unit.

Criteria:

- a) The primary packaging will have a volumetric packaging coefficient (VPC) of 1.9 at the most. This criterion does not apply to primary packaging that is made of at least 50% of recycled material. The VPC is equal to the smallest rectangular body (a rectangular parallelepiped) that can be contained in the packaging, divided by the volume of the product in the packaging.
- b) If no refills are supplied, the weight of the total primary packaging may not exceed 3.7 g/washing for tablets and 1.7 g/washing for all other products.
- c) If refills are supplied, the weight of the total primary packaging may not exceed 7 g/washing, and the producer will have to supply refills. The weight of a refill may not exceed 1.7 g/washing.
- d) In the case of all-purpose cleaners, the percentage of water must be ≤ 90 % (g/g) (in order to reduce the amount of packaging material to a minimum).

E.2. AUTHORISED KINDS OF PACKAGING

Besides the conditions stipulated under Part I D, the following criteria have to be applied:

- The materials must be recyclable (cardboard, PE, PP, PET) or compostable (bio plastics).
- If cardboard is being used, it has to contain at least 80% of recycled fibres.
- If at all possible, reusable packaging will be supplied to the consumer.

- a) If the primary packaging is made of recycled material, reference must be made about it in accordance with ISO norm 14021 ("Environmental labelling and declarations – Own claims (type II environmental labelling)").
- b) The different parts of the primary packaging must be easy to separate in parts of one and the same material.
- c) Plastics must be marked in accordance with Directive 94/62/EC of the European Parliament and Council of December 20th, 1994, concerning packaging and packaging waste (1), or in accordance with DIN 6120, parts 1 and 2, in combination with DIN 7728, part 1.
- d) Primary plastic packaging must be marked in accordance with ISO 1043.
- e) Air sprays using propellants are not authorised.

Evaluation and control: The applicant will submit a sample of the packaging, as well as a declaration stating that each section of this criterion has been met. He will submit to the authorised body a calculation of the weight of the primary packaging together with a declaration about the percentage of recycled material contained in the packaging. The definition of Directive 94/62/EC of the European Parliament and Council of December 20th, 1994 regarding packaging and packaging waste (2) applies to primary packaging.

(2) PD L 365 of 31.12.1994, p. 10

E.3. MENTION ON THE PACKAGING

Following text is to be mentioned on the packaging:

Information about and labelling of the ingredients

The company will refer to the legal rules laid down in the regulation CE 648/2004 from the European Parliament and the Council of March the 31st, 2004 on detergents.

A complete ingredient declaration or slip with the INCI appellation must be mentioned on the label, regardless of the quantity involved, namely:

- enzymes: indication of the type (for example protease, lipase),
- preservatives: characterisation and labelling according to the IUPAC list,
- disinfectants: characterisation and labelling according to the IUPAC list.

If the product contains perfumes, this must be mentioned on the packaging.

(1) Official journal L 104, April the 8th, 2004 p 01-35.

Evaluation and control: The applicant will submit to the authorised body a sample of the packaging of the product, as well as a declaration stating that each section of this criterion has been met.

Following information can be added to the label if it is big enough, or be inserted in folders:

a) Prescriptions in terms of doses

The packaging of the product must mention the dosing instructions. For laundry detergents and detergents for dishwashers, the recommended doses must be given for “normally dirty” and “very dirty” goods, as well as for the relevant water hardness degrees in the different countries where the product will be commercialised. The instructions must indicate how best to use the product according to the degree of dirt. The recommended doses for water hardness 1 (soft water), “normally dirty” goods, and for the highest degree of water hardness 3 or 4, “very dirty” goods, may differ at the most by factor 2.

The packaging of all-purpose cleaners must give a recommendation for an exact dose by means of a pictogram (such as a bucket of 5 l and several caps with ml).

The packaging of concentrated cleaners for sanitary facilities must clearly indicate that, compared to normal (i.e. not concentrated) products, only a small quantity is required.

The packaging of hand dishwashing detergents must mention the following information:

- the text below (possibly with a pictogram) with information in a reasonable size and against a visible background:

Recommended dose for 5 litre soap suds:

Not very dirty: x ml (y teaspoons) detergent

Dirty: z ml (w teaspoons) detergent

X,y,z must be specified by the applicant and/or producer.

The text will use millilitres as unit. A second common unit, such as teaspoons (which are used in the above-mentioned pictogram), will be given between brackets. If the packaging has an easy and efficient dosing system, giving a reliable dosing, another unit (such as caps or jets) may be used.

- the number of uses the consumer should more or less be able to derive from one bottle.

This is calculated by dividing the quantity of product in one bottle by the recommended dose (mentioned in the pictogram) for 5 litre soap suds and dirty dishes.

The applicant will take the necessary measures to ensure that the consumer uses the recommended dose by giving, for instance, a dosing system (for powders or liquid products) and/or by at least mentioning in ml the recommended dose (for powders or liquid products). The packaging should also urge the consumer to inquire with the local water supplier or local authority about the degree of hardness of the mains water.

If the dosing instructions are given by means of a dosing device, the volume of the device (in ml) must also clearly show on the packaging.

The packaging must mention the following text (or a similar one):

“Do not use too much: in so doing, you will save money and cause less damage to the environment”.

b) Information on the packaging

Following text (or a similar one) must be mentioned on laundry detergents:

“AN ECOLOGICAL LAUNDRY IMPLIES:

- to sort the laundry (for example according to colour, degree of dirt, kind of fibre),
- to wash only when the washer is full,
- to choose washing programmes running on low temperatures.

You will help to diminish water pollution, to reduce the amount of waste and the consumption of energy by using this environmentally labelled product and by following the above-mentioned instructions.”

The packaging of hand dishwashing detergents must mention the following information:

- The text “Do not use running water but dip the dishes in the suds and use the recommended dose. In so doing, you will wash your dishes in the most efficient way, you will save water and energy and contribute to a clean environment. The best way to wash your dishes does not require a huge amount of lather” (or a similar text).

c) Information about the Ecogarantie label and the company

More information can be found on the Ecogarantie website of the professional association:

<http://www.probila-unitrab.be>.

Detailed information about the detergent must be given upon request. Therefore the packaging will mention the fact that, if the consumer wants to know more about the detergent, he/she can get in touch with the customer service of the company.

The following text will be added in a frame:

In the case of products carrying an Ecogarantie® label, the ingredients and methods of preparation are selected according to their origin and their ecological responsibility. Agricultural raw materials are preferably organically-grown. These products have been controlled by independent certification organisations.

The Ecogarantie® products:

- cause less damage to aquatic animals and plants
- help to reduce the use of resources
- help to reduce water pollution
- help to reduce the amount of packaging

d) Security advice

The product must mention the following security advice (or a similar text) (in the form of a written text as well as in the form of a matching pictogram):

„Keep away from children”

„Do not mix with other cleaning products”

„Do not breathe the spray of the product” (*NB*: only for products in a spray can).

F. Company

F.1. Traceability

The company must be able to prove that it meets the legal regulations in terms of washing products production and that it busies itself with a system such as HACCP and traceability.

Control plan

Following procedures must be set up:

- a file per product, containing all the guarantees from the suppliers (analyses and certificates as to the origin of the ingredients and of the production processes)
- a program of the risk analyses in order to supplement and verify the guarantees from the suppliers
- guarantees concerning the production of raw materials, which may not damage the environment
- a description of the conformity procedures on end products

F.2. Energy consumption

The electricity used for the production and packaging must come from renewable sources of energy (green electricity), insofar as they are available and economically justifiable (recommended).

F.3. Cleaning and disinfection of the company

The company must be cleaned with ecological products and methods.

Appendix A Purity criteria for raw materials and ingredients

Basic principle

Raw materials must remain authentic (not chemically processed) and devoid of any kind of contamination. Semimanufactured products may not be polluted through any form of contamination.

List of possible contaminations

Besides the forbidden substances mentioned in appendix II of Directive 76/768/EEC concerning cosmetic products, cosmetics have to be devoid of:

- mycotoxines
- PCB and PCDD/F
- residues of pesticides (insecticides, fungicides, herbicides, ...)

Establishing the maximal values

The maximal values in terms of contamination are those of the general regulation.
If no maximal value has been established by the general regulation, the detection level will be applied.