Nordic Ecolabelling of

Cleaning products

21 June 2012

Draft consultative document

Nordic Ecolabelling

In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Nordic Ecolabel.

These organisations/companies operate the Nordic ecolabelling system on behalf of their own country's government. For more information, see the websites.

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This document is a translation of an original in Norwegian. In case of dispute, the original document should be taken as authoritative.

Nordic Ecolabelling of cleaning products

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What are Nordic Ecolabelled cleaning products?

Nordic Ecolabelled cleaning products are amongst the least environmentally harmful products within their category, the substances they contain have the lowest impact on the environment possible, and strict requirements are imposed with regard to the chemicals used in the products.

The environmental requirements include strict requirements as to the content of environmentally harmful substances and substances not readily degradable in aquatic environments.

Account is also taken of health factors; for example the content of fragrance and other allergenic substances is restricted.

The products are discharged into water after use. Properties such as biodegradability, bioaccumuability and toxicity to aquatic organisms are accordingly key considerations with regard to all constituent components.

The effect of the products on the environment will also depend on the way in which they are used. Accordingly, the consumer must be provided with dosage information. The required performance testing must demonstrate that the specified dose of the product has a cleaning effect that is satisfactory.Furthermore, packaging requirements are imposed in order to reduce the quantity of packaging used and to increase recycling and re-use.

Nordic Ecolabelled cleaning products:

- Are among the best in class with regard to health and the environment.
- Offer excellent cleaning performance and are long lasting.
- Have smart packaging meaning less transport.

Why choose the Nordic Ecolabel?

- Manufacturers of laundry detergents and stain removers can use the Nordic Ecolabel trademark in their marketing. The Nordic Ecolabel enjoys considerable renown and credibility within the Nordic countries.
- The Nordic Ecolabel is a cost-effective and simple way of communicating the manufacturers' environmental work and commitment to customers and suppliers.
- Environmental issues are complex and it can take time to understand specific problems. The Nordic Ecolabelling process can be used to as an aid to understanding the issues.
- Nordic Ecolabelling is not only about environmental issues, but also about quality, since these two parameters cannot be separated. This means that a Nordic Ecolabelling licence can also be viewed as a mark of quality. What products are eligible for a Nordic Ecolabel?

Areas of use

The product group encompasses cleaning products intended for indoor, general and regular cleaning of the following areas:

- fixed surfaces (floors, walls, ceilings, doors, tiles and windows)
- kitchen equipment (for example tiles, work surfaces, kitchen machines, taps)
- sanitary installations (toilets, baths, showers, wash basins, taps)

The types of cleaning products to which the requirements apply

Professional products (products are considered professional if more than 80% of sales are to the professional market) and/or consumer products can be labelled. Product categories are listed below:

Product categories

Concentrated, professional: This category includes professional products that require dilution with water prior to use. It contains products for all the aforementioned surfaces, such as flooring, walls, ceilings, windows, kitchens, bathrooms, sanitary porcelain and showers. Tablets/capsules for lavatories are included in this category.

Ready-to-use, professional: Professional products that are pre-diluted and ready for use. This category includes products for kitchens, bathrooms and showers, but also large areas* such as floors.

Ready-to-use WC, professional: Professional toilet cleaners that are pre-diluted and ready for use straight from the package. This category only includes products for use on toilets and excludes cleaners for other sanitary porcelain and bathroom cleaners.

Ready-to-use window cleaner, consumer and professional: Professional window and glass cleaners that are pre-diluted and ready for use straight from the package.

Concentrated, consumer: Concentrated products that require dilution with water prior to use that are designed the consumer market. This category contains products for all the aforementioned surfaces in the home, such as flooring, walls, ceilings, windows, kitchens, bathrooms, sanitary porcelain and showers. Tablets/capsules for lavatories are included in this category.

Ready-to-use WC, consumer: Consumer toilet cleaners that are pre-diluted and ready for use straight from the package. This category only includes products for use on toilets and excludes cleaners for other sanitary porcelain and bathroom cleaners.

Ready-to-use, consumer (other): Pre-diluted consumer products that are ready to use without dilution. This category includes products for kitchens, bathrooms and showers, but also large areas* such as floors.

**The term large areas refers to areas such as floors and tiled bathroom walls. RTU products shall be intended for use on smaller surfaces and local cleaning.*

Method of use

Concentrated products that can be used **both** in a diluted state, such as diluted in a bucket of water, and in a more concentrated state, such as diluted with a small quantity of water for use in a spray bottle, must fulfil the requirements for **both** concentrated (diluted in bucket) and RTU (spray bottle) products.

Products that are sold on both professional and consumer markets must fulfil the requirements for professional products.

Products designed for several areas of use, such as toilet and tile cleaner (walls and floor) must fulfil the requirements of each applicable category.

Products that do not qualify for ecolabelling as cleaning products

Cleaning products intended for special cleaning purposes cannot be ecolabelled in accordance with these criteria. This includes products intended solely for the purpose of:

- calcium removal
- oven cleaners
- unblocking blockages, cleaning drains
- restricting or preventing biological growth (algae, fungus, bacteria)
- total or partial disinfection
- continuous cleaning, e.g. fragrance block for cleaning WCs
- cleaning products for refrigerated rooms

Wipes containing cleaning agents are not eligible for ecolabelling under the criteria for cleaning products or any other current Nordic Ecolabel criteria.In the event of dispute, Nordic Ecolabelling will determine which criteria a product may be ecolabelled under.

How to apply?

Each requirement is labelled with a letter R (requirement) and a number. To qualify for a licence, all requirements must be fulfilled.

Symbols used in the text

For each requirement, a description is provided of the way in which the requirement must be documented. The following symbol is used:

✉ Submit

☺ The requirement checked on site

Application

Applications must be submitted to the Nordic Ecolabelling organisation in the country in which the product is manufactured or will go on sale, see the address list on page 2. An application comprises an application form and documentation showing that the requirements have been met. The documentation required is specified in the requirements.

Further information and help with application is available on the website of the individual national organisations or by contacting the national Nordic Ecolabelling secretariats.

Sales in the Nordic countries

Product licenses issued for version 5 of the criteria for cleaning products are pan-Nordic. The licence certificate states the country(ies) in which a product is sold based on the information submitted in the application. The products are published on Nordic Ecolabelling's websites. The licensee must inform Nordic Ecolabelling if the countries of sale for a product change. If the product is to be sold in a Nordic country other than that/those first stated on the licence certificate, an application must be submitted to the Nordic Ecolabelling secretariat that issued the licence.

Registration requires the submission of the following documents:

- Documentation demonstrating fulfilment of any national legislation/special requirements (e.g. documentation that the quantity of phosphorous contained in the product and labelling are in compliance with the Norwegian Regulations).
- Copies of the label in all the applicable local languages.
- Documentation demonstrating compliance with national regulations, legislation and trade agreements regarding take-back systems for packaging.

Onsite checks

Before a licence is granted, Nordic Ecolabelling will conduct an onsite check to verify that the requirements have been met.

Nordic Ecolabelling will review the application and verify the underlying information at the licence applicant’s premises. During this check, the applicant must be able to present the material on which calculations have been based, the originals of submitted certificates, measurement protocols, purchasing statistics and the like in support of the requirements.

Costs

A fee is charged for licence applications. In addition, an annual fee is payable when the product has been awarded a Nordic Ecolabel, based on sales of the Nordic Ecolabelled cleaning products.

Questions

Any questions should be directed to Nordic Ecolabelling, see the address list on page 2.

What are the requirements of the Nordic Ecolabel?

To be awarded the Nordic Ecolabel:

- To be awarded a Nordic Ecolabel licence, all requirements must be fulfilled.
- For renewal, documentation in accordance with all requirements must be submitted in order to retain the licence.

1 Environmental requirements

Unless otherwise specified, the requirements in Chapter 1 apply to all ingoing substances.

Ingoing substances are all substances contained in the cleaning product, including additives in ingredients (e.g. preservatives and stabilisers), but not pollutants deriving from raw material production. Pollutants are traces of raw material production occurring in the cleaning product in concentrations of less than 0.01%. Substances added to a raw material deliberately or for a purpose are not counted as pollutants, irrespective of concentration. Impurities of over 1.0% concentration in the primary product are regarded as constituent substances. Substances/products known to be liberated by a constituent substance (e.g. formaldehyde and arylamine) are also themselves considered to be constituent substances.

The weight of tablets and capsules in grams per litre of in-use solution is used for calculations. For WC tablets, calculations are based on grams per litre of water, i.e. one tablet for one litre of water for the calculation of environmentally hazardous substances (R13), CDV (R14) and biodegradability (R15).

Microorganisms are considered enzymes regarding CDV (R14) and biodegradability (R15).

The chemical requirements make reference to the detergents ingredient database list (DID list), which is described in more detail in Appendix 2. The DID list contains the most commonly used ingredients in laundry, dishwasher and cleaning detergents. Guidelines are provided for substances not included in the DID-list (DID-list part B) as how to calculate or extrapolate relevant data. The DID-list can be found on the webpages of the Nordic Ecolabelling secretariats. The DID-list adopted in January 2007, or later version, shall be used for calculating environmental requirements.

Information on requirements pertinent to analysis laboratories can be found in Appendix 2.

1.1 Description of the product

R1 Description of the product

Detailed information must be supplied on the cleaning products for which a Nordic Ecolabel is sought. The following information must be submitted:

Description of the product regarding the need for dilution.

Description of the area of use of the product in accordance with "What products are eligible for a Nordic Ecolabel?".

Is the product designed for the professional or the consumer market?

✉ Product label and/or technical data sheet describing the area of use of the product and possible need for dilution (see also R23).

✉ Documentation specifying the market for which the product is designed. Marketing material, product information or similar for each country in which the product is sold.

R2 Information on formulation/recipe

Applicants must provide detailed information on the formulation of the hand dishwashing detergent and enclose a safety data sheet for each ingredient. Information on the formulation must include:

- Trade name
- Chemical name
- Proportion (dry and wet sample)
- CAS no. for each ingredient. If an ingredient comprises several substances, this must be stated.
- Function of each ingredient.
- DID number for substances included on the DID list.
- Health and environmental classification.

The DID number is the number assigned to the ingredient on the DID list, which is used for the evaluation of chemical requirements. The DID-list is available from Nordic Ecolabelling. See page 2 for addresses.

✉ Comprehensive recipe for the product as stipulated by the requirement.

✉ Safety data sheet for each ingredient in accordance with European legislation in force.

1.2 Prohibited or limited constituent substances and mixtures

R3 Classification of the product

Products must not be classified according to the European Dangerous Substances Directive 67/548/EEC with amendments and/or CLP Regulation (EC) No 1272/2008 with amendments, as specified in Table 1. Classification according to the EU Dangerous Substance Directive or the CLP Regulation may be used during the transition period, i.e. until 1 June 2015. Following the transition period, classification according to the CLP Regulation is to apply exclusively (see Table 1).

Table 1. Product classification

Classification	**Hazard symbol and risk phrase / Hazard class, category and statement**	
	CLP Regulation 1272/2008	Dangerous Substances Directive 67/548/EEC
Dangerous for the environment	Hazardous to the aquatic environment Category Acute 1 H400; Category Chronic 1 H410; Category Chronic 2 H411; Category Chronic 3 H412; Category Chronic 4 H413	N with R50 R50/53 or R51/53. R52 R53 or R52/53 without N
Very toxic	Acute toxicity, Category 1 or 2 with H330, H310 and/or H300, and/or Specific target organ toxicity – single exposure, Category 1 with H370	Tx (T+ in Norway) with R26, R27, R28 and/or R39
Toxic	Acute toxicity, Category 2 or 3 with H330, H331, H311 and/or H301, and/or Specific target organ toxicity – single exposure, Category 1 with H370, and/or Specific target organ toxicity – repeated exposure, Category 1 with H372	T with R23, R24, R25, R39 and/or R48
Harmful to health	Aspiration hazard, Hazard Category 1 with H304 and/or Specific target organ toxicity – single exposure, Category 2 with H371, and/or Specific target organ toxicity – repeated exposure, Category 2 with H373 Acute toxicity, Category 4 with H332, H312 or H302 Exceptions: Professional products may be classified as Acute toxicity, Category 4 with H332, H312, H302 if the packaging is so designed that the user does not come into contact with the product.	Xn with R20, R21, R22, R48, R65 and/or R68 Exceptions: Professional products may be classified as R20, R21 and/or R22 if the packaging is so designed that the user does not come into contact with the product.
Locally irritant	Spray products (consumer and professional): Xi with STOT SE with H335 Professional products: Eye Dam.1 with H318	Spray products (consumer and professional): Xi with R37 Professional products: Xi with R41
Sensitizing	Respiratory sensitisation, Category 1 with H334 or Skin sensitisation Category 1	Xn with R42 or Xi with R43

	with H317	
Corrosive	Skin Corr.1B with H314 and/or Sin Corr.1A with H314. Exceptions for professional products, and WC-products for consumers – if the classification is set because of pH.	C as R34 and R35 Exceptions for professional products, and WC-products for consumers – if the classification is set because of pH.
Carcinogenic	Carc 1A/1B/2 with H350, H350i and/or H351	T with R45 and/or R49 (Carc 1 or Carc 2) or Xn with R40 (Carc 3)
Mutagenic	Mut 1B/2 with H340 and/or H341	T with R46 (Mut 1 or Mut2) or Xn with R68m(Mut 3)
Reproductive toxic	Repr. 1A/1B/2 with H360, H361, H362	T with R60, R61, R64 an/or R33 (Repr1 or Repr 2) or Xn with R62,R63,R64 and/or R33 (Repr 3)

Classification according to EU Dangerous Substance Directive 67/548/EEC and EU Dangerous Preparation Directive 1999/45/EC with amendments.

Note that the producer is responsible for classification.

- ✉ Safety data sheet for the product in accordance with European legislation in force.
- ✉ Description of the design of the packaging of professional products classified as Xn with R20, R21 and/or R22 (H332, H312 and/or H302) demonstrating that the user does not come into contact with the product. Technical description and instructions demonstrating how the user avoids contact with the product.
- ✉ Documentation that demonstrates that the product (professional products and consumer WC products) is classified as corrosive due to its pH, permitting exemption for R34 and R35 classification (H314 skin corr. 1B and 1A).

R4 CMR substances

The cleaning product must not contain substances that are or may decompose into substances that are carcinogenic (Carc), mutagenic (Mut) or toxic to reproduction (Rep) with the following hazard categories or risk phrase, or combinations of these (see Table 2):

Table 2 Classification of constituent substances

Hazard class	**Hazard category and hazard statement (Regulation (EC) No 1272/2008[1])**	**Equivalent hazard category and risk phrase (Directive 67/548/EEC[2])**
Carcinogenic	Carc. 1A or 1B; H350 Carc. 1A or 1B; H350i Carc. 2; H351 *	Carc. cat. 1 or 2; R45 Carc. cat. 1 or 2; R49 Carc. cat. 3; R40*
Mutagenic	Muta. 1B; H340 Muta. 2; H341	Muta. cat. 2; R46 Muta. cat. 3; R68
Reproductive toxic	Repr. 1A or 1B; H360F Repr. 1A or 1B; H360D Repr. 2; H361f Repr. 2; H361d Lact, H362	Repr. cat. 1 or 2; R60 Repr. cat. 1 or 2; R61 Repr. cat. 3; R62 Repr. cat. 3; R63 R64

[1] *Applicable from Dec. 2010*

[2] *Applicable in transition period to Regulation (EC) no 1272/2008 from Dec. 2010 to June 2015*

*MGDA and GLDA complexing agents may contain NTA contaminants in concentrations below 1.0%, so long as the concentration of NTA in the cleaning product is lower than 0.1%.

✉ Duly completed and signed declaration of conformity with product requirements (Appendix 3 or equivalent) and ingredient requirements (Appendix 4 or equivalent).

R5 Sensitising substances

Ingredients must not be classified as sensitising/allergenic with the following risk phrases/hazard categories:

· R42 / H334

· R43 / H317

· Any combination of these risk phrases/hazard categories.

The following substances are exempt from the above requirements, except in spray products:

- Enzymes in liquid form or encapsulated as granules.
- Fragrances in the final product, see requirements R9 and R10 on fragrances.
- <0.1% by weight of preservatives classified as R42/H334 and/or R43/H317 if the product's pH is 3.0-10.0. See requirement R7 for further requirements on preservatives.

Spray products:

- Fragrances in the final product, see requirements R9 and R10 on fragrances.
- The product must not contain any sensitising preservatives.

✉ Duly completed and signed declaration that sensitising substances are not included in the product. Use Appendix 3 (manufacturer's declaration) or equivalent. Duly completed and signed declaration that ingredients do not contain sensitising substances. Use Appendix 4 (declaration by supplier of raw materials) or equivalent.

✉ If the product contains preservatives classified as sensitising, documentation of the pH of the product (cleaning agent) and the concentration of the preservatives.

✉ Safety data sheet or equivalent demonstrating that enzymes are liquid or dust-free granulate form.

R6 Substances that must not be present in the product

The following substances/groups are prohibited from use in the final product and must not be actively added to ingredients:

- alkylphenolethoxylates (APEOs) and APEO derivatives
- reactive chloro-compounds such as sodium hypochloride
- chloro-organic compounds
- quaternary ammonium compounds that are not readily degradable
- benzalconiumchloride
- EDTA* (ethylene diamine tetraacetate) and its salts
- DTPA
- phosphonates*
- nanomaterials/nanoparticles**
- perfluorinated substances and polyperfluorinated alkylated substances (PFAS)
- Methyldibromo Glutaronitrile (MG)
- Nitromusks and polycyclic musks
- Substances with potential for endocrine disruption of Category 1 or 2 in accordance with official EU lists. *The EU report on endocrine disrupters can be read in full at* http://ec.europa.eu/environment/endocrine/documents/final_report_2007.pdf (from Appendix L, page 238)
- Substances that have been evaluated in the EU to be PBT (Persistent, bioaccumulable and toxic) or vPvB (very persistent and very bioaccumulable) in accordance with Annex XIII of REACH.
- Substances of very high concern listed on the candidate list http://echa.europa.eu/chem_data/candidate_list_en.asp.

* Solid soap products (e.g. soap flakes) may as a total contain 0,06 % EDTA and phosphonates.

** Nanomaterials/particles: “A natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm-100 nm .” Examples include ZnO, TiO2, SiO2, AgZnO and Ag. Polymer emulsions are not considered nanomaterials.

Note the definition of constituent substance and impurity in Section 1 of the environmental requirements.

✉ Duly completed and signed declarations that the above substances cannot be found in the final product (Appendix 3 or equivalent) and are not actively added to ingredients (Appendix 4 or equivalent).

R7 Preservatives

a) Preservatives that can be found in the product or in ingredients must not be bioaccumulating. Preservatives are considered biodegradable if BCF < 500 or $\log K_{ow}$ < 4.0. If both BCF and $\log K_{ow}$ values are available, the highest recorded BCF value shall be used.

b) The concentration of preservatives shall be optimised to the volume of the product. A challenge test or equivalent shall be used to demonstrate this.

c) Preservatives are only permitted to preserve the product or an ingredient. Preservatives may not be added to produce a disinfecting or anti-bacterial effect.

✉ Documentation of BCF or $\log K_{ow}$.

✉ Test report of conducted challenge test or equivalent demonstrating that an optimal concentration of preservatives is used in the product. See Appendix 2 for requirements on test laboratories and information on challenge tests.

✉ Duly completed and signed declaration that preservatives are only added to preserve the product or ingredient (Appendix 3 or 4 or equivalent documentation).

R8 Colouring agents

Colouring agents that can be found in the product or in ingredients must not be bioaccumulating. A colouring agent is not considered bioaccumulating if BCF < 500 or $\log K_{ow}$ < 4.0. If both BCF and $\log K_{ow}$ values are available, the highest recorded BCF value shall be used. Colouring agents approved for foodstuffs may be accepted.

✉ Documentation of the colouring agent's BCF or $\log K_{ow}$ or specification of E-number (see Appendix 3 (manufacturer) and Appendix 4 (raw material supplier)

✉

R9 Fragrances in professional products

Fragrances are not permitted in professional products.

Professional products include products that are marketed for use in a professional context, such as institutional kitchens, catering kitchens, restaurants and public services.

If a product is sold on both professional and consumer markets, it is considered a professional product if more than 80% of sales are to the professional market. If there is doubt as to whether the product is for professional use or consumer use, Nordic Ecolabelling may request documentation supporting claims.

✉ Recipe as per requirement 2 that demonstrates the absence of fragrances.

R10 Fragrances

The requirement covers all fragrances, including fragrant plant extracts.

a) The constituent substances that are added to the final product as fragrances must be manufactured and/or handled in accordance with the guidelines of the International Fragrance Association (IFRA). The manufacturer must follow the requirements

stipulated by IFRA standards with respect to prohibited use, limited use and material purity.

b) Fragrances subject to declaration in accordance with Regulation (EC) No 648/2004 on detergents with amendments (see also Appendix 7) may not be present in concentrations greater than 100 ppm (>0.010%) per substance (n/a to spray products, see requirement d).

c) Fragrances that are classified as H317/R43 and/or H334/R42 must not be present at concentrations above 100 ppm (>0.010%) per substance (n/a to spray products, see requirement d).

d) Sprays: Fragrances subject to declaration in accordance with Regulation (EC) No 648/2004 on detergents with amendments (see also Appendix 7) and/or that are classified as H317/R43 and/or H334/H44 may not be present in concentrations greater than 50 ppm (>0.0050%) per substance.

*Refills for spray products may contain the aforementioned substances in concentrations up to 0.050% by weight (500 ppm) provided that the specified dilution means that the in-use solution has a concentration of 0.050% by weight (50 ppm) or lower.

✉ Duly completed and signed declaration from the manufacturer of the cleaning product that demonstrates that fragrances are handled and/or manufactured according to IFRA guidelines, as stipulated by requirement R10a. Appendix 3 and 4 can be used.

✉ Duly completed and signed declaration from the fragrance manufacturer as to the content of applicable fragrances (e.g. analysis certificate for the 26 allergens and information on substances classified as R42/H334 and/or R43/H317) and any plant extracts. Appendix 4 or equivalent may be used.

R11 Phosphorous

The final product may not contain phosphorous. Phosphorous may not be actively added to an ingredient. This requirement refers to the total quantity of phosphorous, calculated as P.

Note that products sold in Norway must also be labelled "Uten fosfat" (phosphate free). Note also that solid soap products (e.g. soap flakes) may contain a maximum combined total of 0.06% EDTA and phosphonates.

✉ Duly completed and signed declarations that phosphorous cannot be found in the final product (Appendix 3 or equivalent) and is not actively added to ingredients (Appendix 4 or equivalent).

✉ For products to be sold in Norway, documentation must also be submitted to demonstrate that "Uten fosfat" (phosphate free) is displayed on the label.

R12 Microorganisms

a) The only products containing microorganisms to be eligible for Nordic Ecolabelling are professional concentrated sanitary products for dilution in water.

b) Only microorganisms that fulfil the following requirements may be included in the cleaning product:

- The microorganisms are found in Risk group 1 in Directive 2000/54/CE.
- The microorganisms' DNA is identified according to the strain identification protocol (using the 16S ribosomal DNA sequencing, FAME or equivalent method).
- Are not resistant to antibiotics (aminoglycosides, macrolides, beta lactam, tetracyclines and fluoroquinolones) according to the Beckman Dickinson BBL antimicrobial susceptibility disc method or equivalent method.
- Microorganisms must not be GMO.
- Microorganisms must not contain any of the following pathogen species when screened using the following or equivalent test methods:
    - E. Coli, test method ISO 16649-3:2005
    - Streptococcus (Enterococcus), test method ISO 21528-1:2004
    - Staphylococcus aureus, test method ISO 6888-1
    - Bacillus cereus, test method ISO 7932:2004 or ISO 21871
    - Salmonella, test method ISO6579:2002 or ISO 19250

c) Colony forming units (CFU) > 1,0 x 10^4 microorganisms per ml in-use solution.

d) The product must clearly display that it contains microorganisms through its label/product sheet or other marketing material.

e) Products containing microorganisms shall display superior cleaning performance beyond the general cleaning requirements of R17 and R18. It must be demonstrated that the cleaning product causes degradation of the following:

- Protein - degradation of solid or liquid medium or equivalent scientifically acknowledged method.
- Starch - degradation of solid or liquid medium or equivalent scientifically acknowledged method.

- Fat and/or vegetable oil - degradation of solid or liquid medium or equivalent scientifically acknowledged method.

Analysis shall be performed by a laboratory fulfilling the requirements of Appendix 2.

✉ Documentation demonstrating that the microorganisms are classified as Risk Group 1.

✉ Documented DNA identification.

✉ Test results demonstrating that the microorganisms are not resistant to antibiotics, do not include the aforementioned pathogenic strains and are not GMO.

✉ Documentation of colony forming units per ml in-use solution.

✉ Performance test demonstrating the ability to dissolve protein, start, fat and oil.

✉ Product label and marketing material showing that that product is designed for professional use as a sanitary cleaner. The label/marketing material must clearly state that the product contains microorganisms.

R13 Long-term environmental effects

Substances that are classified as environmentally hazardous are only permitted in limited quantities in the product, as specified below.

The inclusion of substances that are toxic to the aquatic environment and that are not readily biodegradable in the aquatic environment, i.e. substances assigned the risk phrases R50/53 (H410), R51/53 (H411) and R52/53 (H412), is limited as follows:

Requirement: FV = 100 *$C_{R50/53}$ + 10* $C_{R51/53}$ + $C_{R52/53}$ in gram / litre in-use solution

or

Requirement: FV (factor value) = 100 *C_{H410} + 10* C_{H411} + C_{H412} in gram / litre in-use solution

The threshold value must be within the limit values for each category:

Table 3 Environmentally hazardous substances

Market	Category	Maximum values (g/l in-use solution)
Consumer	Concentrated products	0,020
Consumer	Ready-To-Use -produkter - WC	0,50
Consumer	Ready-To-Use –products – other areas	0,30
Consumer and Professional	Ready-To-Use –products - windows	0,30
Professional	Concentrated products	0,0020
Professional	Ready-To-Use –products, WC	0,10
Professional	Ready-To-Use –products, other areas	0,10

Where:

FV = Factor value

$C_{R50/53\ /\ H410}$ = concentration of substances classified as R50/53 or H410 in gram/litre in-use solution

$C_{R51/53/\ H411}$ = concentration of substances classified as R51/53 or H411 in gram/litre in-use solution

$C_{R52/53/\ H412}$ = concentration of substances classified as R52/53 or H412 in gram/litre in-use solution

If no details of a substance's environmental properties are available it is considered a "worst case" environmental hazard with classification R50/53 (H410).

✉ Summary of the product's content in percentage by weight of substances classified as R50/53 (H410), R51/53 (H411) and R52/53 (H412). Appendix 3 for the product and Appendix 4 for ingredients, or equivalent, can be used to document the content of the specified substances.

✉ Calculations according to the specified formula demonstrating the fulfilment of the requirement.

✉ Safety data sheet for each constituent ingredient specifying its environmental hazard (acute aquatic toxicity, biodegradability and/or bioaccumulating characteristics) as for R2.

R14 The critical dilution volume (CDV)

The critical dilution volume (CDVchronic) shall be calculated for all chemicals contained in the hand dishwashing agent. CDV is a theoretical value that takes into regard each substance's toxicity and biodegradability.

The product's critical dilution volume is calculated at the recommended dosage that is stated on the packaging.

The product's CDV must not exceed the following limit values for $CDV_{chronic}$:

Table 4: Threshold values CDVchromnic.

Category	CDVchronic
Concentatrated, consumer	10500
RTU WC, consumer*	600000
RTU other, consumer	700000
RTU fönster, consumer and professional	75000
Concentrated professional	9500
RTU WC, professional*	700000
RTU, professional	450000

*The water in the toilet is not included as a part of the in-use solution.

CDV is calculated using the formulas shown below. CDV must be calculated for all substances in the product:

$CDV_{acute} = \sum CDVi = \sum (dosei \times DFi \times 1000 / TF_{acute})$, or

$CDV_{chronic} = \sum CDVi = \sum (dosei \times DFi \times 1000 / TF_{chronic})$

dosei = the ingoing quantity of the individual substance i (gram / liter in-use solution)

DFi = degradation factor for substance i as shown on the DID-list

TF_{acute} = acute toxicity factor as shown in the DID-list

$TF_{chronic}$ = chronic toxicity factor as shown in the DID-list

✉ Calculation of $CDV_{chronic}$ for the product.

✉ Reference to the DID-list, dated 2007 or later. If the substance is not contained in the DID-list, the parameters must be calculated using the guidelines contained in part B of the DID-list and the associated documentation must be enclosed.

R15 Content of aerobic and/or anaerobic non-biodegradable organic material

The product's total content of aerobic (aNBO) and/or anaerobic (anNBO) non-biodegradable organic materials must not exceed the limits stated below per litre of in-use solution.

aNBO and anNBO values are calculated for all organic substances in the detergent.

Note that all surfactants must degrade either aerobically or anaerobically in accordance with R16.

Table 5. Threshold values for aNBO and anNBO

	aNBO (g/litre in-use solution)	anNBO (g/liter in-use solution)
Concentrated, consumer	0,100	0,100
RTU WC, consumer*	2,10	6,00
RTU other, consumer	2,00	2,00
RTU window, consumer and professional	2,00	2,00
Concentrated professional	0,045	0,250
RTU WC, professional*	2,25	30,0
RTU, professional	0,70	0,70

Note that the following exceptions apply:

- Cumensulphonate (DID 139) – the data on the DID list does not agree with that published under the HERA project. The following data on cumensulphonates can be used for application: aNBO = R and DF = 0.05. Since BCF = 1.41 and logKow = -2.7, cumensulphonates can in accordance with Appendix 2 be exempted from the calculation of anNBO.
- Iminodisuccinate (DID 148) can be excluded from the calculation of anNBO.

✉ Calculation of aNBO and anNBO for the product.

✉ Reference to the DID-list, dated 2007 or later. If the substance is not contained in the DID-list, the parameters must be calculated using the guidelines contained in part B of the DID-list and the associated documentation must be enclosed.

R16 Surfactants

a) All surfactants must be readily aerobically biodegradable.

b) All surfactants must be anaerobically biodegradable

✉ Reference to the DID list dated 2007 or later. If the DID list does not contain relevant data, data can be taken from the safety data sheets provided that the data are reliable and that test methods comply with Appendix 2. Section B of the DID list shows how the various factors are calculated. It is also permitted to refer to analogous arguments as long as these are carried out by a competent third party. It is also permitted to refer to relevant literature that has been scientifically evaluated.

2 Effectiveness

This requirement stipulates that the product must equal or better the performance of a reference product. Professional products can be tested using a laboratory test (R17) or user test (R18). Consumer products must be tested by a laboratory.

R17 Performance test – Laboratory test

a) The product must through laboratory testing demonstrate equal or superior cleaning performance to a reference product within the same product category. The product must also clean better than water alone.

If the product is marketed for both professional and consumer use it shall be tested against a professional product.

The test shall demonstrate the ability to remove soil in accordance with the method described in Appendix 6.

The test shall be performed by a laboratory complying with Appendix 2 (item 1B).

b) If the product is tested in accordance with the EU Ecolabel's test for all-purpose cleaners and sanitary cleaners (Commission decision of 28 June 2011 or later version), this laboratory test can be used.

✉ Alternative a: Test report containing data on dosage, selection of reference product, description of the test method, description of the soil and soil preparation, selection of surfaces, calculation of EFF (performance index) in accordance with Appendix 6. The report shall demonstrate that the product is equal to or better than the reference product and better than water.

✉ Alternative a: Documentation on the test laboratory demonstrating compliance with Appendix 2 (item 1B).

✉ Alternative b: Description of how the EU Ecolabel test has been performed and complete results from the test.

R18 Performance test – User test (professional products only)

a) The product must demonstrate cleaning performance that is equal to or better than a reference product within the same product category in 80% of tests.

The performance of the product shall be judged in three areas:

- Ability to remove soil in comparison to the reference product.
- Abrasion to the cleaned surface in comparison to the reference product.
- Effectiveness in comparison to the reference product.

The tests shall be performed by at least five users. All users/testers shall complete Appendix 5 (a, b or c, depending on the product category). The applicant shall collate the results according to Appendix 5d.

b) If the product is tested in accordance with the EU Ecolabel's test for all-purpose cleaners and sanitary cleaners (Commission decision of 28 June 2011 or later version), this user test can be used.

✉ Description of how the test is performed.

✉ All fully completed questionnaires (Appendix 5a, b or c) and a summary of responses (Appendix 5d).

✉ Description of how the EU Ecolabel test has been performed and complete results from the test.

3 Packaging

R19 Packaging - plastic

Packaging (including labels) containing PVC or plastic based on other types of chlorinated materials must not be used.

✉ Product safety data sheets or confirmation from the applicant of the type of plastic used in the packaging (Appendix 3 or or equivalent).

R20 DIN labelling

To facilitate identification for recycling, plastic bottles that are used as packaging must be marked in accordance with DIN 6120, section 2, ISO 11469:2000 or equivalent standard. Stoppers, bottle caps and pumps are exempt from this requirement.

✉ Documentation of primary packaging demonstrating that marking complies with DIN 6120 or equivalent marking regulations. Images of the product marking or data sheet specifying the marking. Marking may also be specified on the submitted label.

R21 Weight-utility ratio (WUR)

WUR is a measure of the amount of packaging that is used to deliver a quantity of the product with a predetermined benefit.

The weight utility ratio (gram packaging/litre solution) of the primary packaging is as follows:

$WUR_{RTU} = \sum ((Wi + Ui) / (Di * t)) \leq 200{,}0$ gram packaging / litre in-use solution

$WUR_{CONCENTRATED} = \sum ((Wi + Ui) / (Di * t)) \leq 1{,}20$ gram packaging / litre in-use solution

W_i = Weight of the primary packaging component (i) in grams including cap, dispenser or similar.

N_i = weight (g) of non-recycled (virgin) material in packaging component (i) in gram.

If the proportion of recycled material in the packaging component is 0%, $N_i = W_i$.

Packaging is considered postconsumer recycled if the raw materials are recovered from distribution and/or following use by consumers. If the raw material is industrial waste from the material or packaging manufacturer's own production, the material is not considered postconsumer recycled.

Di = Number of doses in the primary packaging component (i), For ready to use products, Di = product volume (in litres).

ti = Reuse factor. I.e. the number of times that the packaging component (i) is reused.

t = 1 if the packaging is not reused for the same function (disposable packaging).

t > 1 may only be used if supported by documentation demonstrating that the packaging is reused for the same function.

The limit value applies to the total of the original packaging and any refill packaging.

✉ Declaration/documentation from the packaging manufacturer regarding material type and mass of packaging components (e.g. lid, spray nozzle, bottle and label).

✉ Calculation of the weight-to-benefit ratio (WBR) and documentation regarding reuse of the packaging, if applicable.

✉ Declaration from the packaging manufacture regarding the content of recycled materials (if recycled materials are used).

✉ If t > 1 : documentation demonstrating how many times the packaging is reused for the same function (sales statistics or equal documentation).

R22 Take-back system

Pertinent national regulations, legislation and/or agreements within the sector regarding the recycling systems for products and packaging shall be met in the Nordic countries in which the company markets its hand dishwashing detergent (such as PYR, REPA, Grön Punkt).

✉ Copies of agreements from the applicant demonstrating adherence to existing recycling/take-back agreements for each Nordic country where the product is to be sold. Appendix 3 or equivalent declaration may be used.

R23 Information text and use instruction

The information text on the packaging must comply with the regulation 648/2004/EC and 907/2006/EC on detergents.

Clear user instruction as to use of the product.

Clear instruction regarding area of application

If the product requires dilution before use, the recommended dose at a normal level of soiling/normal use must be stated clearly on the packaging.

In the case of consumer products, for example, the dose may be shown as x number of ml equivalent to y capsful per z number litres of water.

In the case of products intended for use by professional users, the dose may be specified as, for example, x number of ml equivalent to y strokes of the pump or number of lines on the dosing equipment per z litres of water.

For products to be sold in Norway, documentation must also be submitted to demonstrate that “Uten fosfat” (phosphate free) is displayed on the label.

✉ Label, draft of the label or copy of the information (information text and user instructions) on the primary packaging and/or technical product data sheet. The information on the label and/or product data sheet shall be provided in the local language.

4 Quality regulatory and requirements

To ensure that Nordic Ecolabelling requirements are fulfilled, the following procedures must be implemented.

If the producer's environmental management system is certified to ISO 14 001 or EMAS, according to which the following procedures are applied, it is sufficient if the accredited auditor certifies that the requirements are implemented.

R24 Laws and regulations

The licence holder must ensure that the applicable provisions governing safety, the working environment, environmental legislation and plant-specific conditions/licences are observed at all plants producing the Nordic Ecolabelled products and for all Nordic Ecolabelled products.

No documentation is required, but Nordic Ecolabelling may revoke the licence if the requirement is not fulfilled.

R25 Responsibility for the Nordic Ecolabel requirements

There must be one person at the business with responsibility for ensuring compliance with the Nordic Ecolabel requirements and one contact person with responsibility for liaison with Nordic Ecolabelling.

✉ Organisational chart showing the above responsibilities.

R26 Documentation

The licence holder must be able to submit a copy of the application form and the information and material (including test reports, documents from subcontractors and the like) underlying the documentation submitted in connection with the application.

The licence holder must be able to submit a copy of the application form and the information and calculation material (including test reports, documents from subcontractors and the like) for the documentation submitted in connection with the application.

Checked on site.

R27 The quality of the cleaning products

The licence holder must guarantee that the quality of the Nordic Ecolabelled product will not deteriorate during the period in which the licence is in force.

✉ Procedures for recording and, if necessary, processing, complaints/refunds concerning the quality of the Nordic Ecolabelled products.

R28 Planned changes and nforeseen deviations

Planned changes and unforeseen deviations that impact on the Nordic Ecolabel requirements must be reported in writing to Nordic Ecolabelling and approved by Nordic Ecolabelling.

✉ Procedures showing how planned changes are processed.

✉ Procedures showing how unforeseen deviations are processed.

R29 Traceability

The licence holder must be capable of tracing the Nordic Ecolabelled products through the production process.

✉ Descriptions/procedures for complying with the requirement.

5 Marketing

R30 Marketing

Nordic Ecolabelled cleaning products must be marked in accordance with the ”Rules on the Nordic Ecolabelling”, version 22 June 2011 or later. Products may not be marked for other areas of use then covered by the criteria document when applying.

✉ Completed and signed Appendix 1.

The Nordic Ecolabel is a very well-known and well-reputed trademark in the Nordic region. A Nordic Ecolabelled cleaning product may be marketed using the Nordic Ecolabel as long as the associated licence is valid.

The label must be positioned so that there is no doubt as to what the label refers and so that it is clear that the cleaning product is ecolabelled.

The design of the Nordic Ecolabel

The design of the Nordic Ecolabel is as follows:



Licence number

Each licence is allotted a unique licence number which must be displayed together with the label.

Further information on the design of the ecolabel can be found in ”Rules on the Nordic Ecolabelling of products”, version 22 June 2011 or later.

Follow-up inspections

Nordic Ecolabelling may check that the product continues to comply with the Nordic Ecolabel requirements after a licence has been granted. This might, for example, take the form of a visit to the site or random sampling.

If the licence proves not to comply with the requirements, the licence may be withdrawn.

Random samples may also be taken from retail outlets and these may be analysed by an impartial laboratory. If the requirements are not fulfilled, Nordic Ecolabelling may require the licence holder to pay the cost of analysis.

The duration of the licence

The ecolabelling licence will remain in force for as long as the criteria continue to be fulfilled, and until the criteria cease to apply. The criteria may be extended or adjusted in which case the licence will be extended automatically and the licence holder will be notified.

One year (at the latest) before the criteria cease to apply, notice will be given of the criteria that will apply after the final date of validity of the current criteria. The licence holder will then be given the opportunity to renew the licence.

Appendix 1

The marketing of Nordic Ecolabelled cleaning products

This is to certify that we are familiar with the regulations governing the use of the Nordic ecolabel as provided for in "Rules on the Nordic Ecolabelling", version of 22 June 2011 or later, and we hereby undertake that all marketing of the Nordic Ecolabelled product will follow these rules.

This is also to certify that we are familiar with the contents of the criteria for the Nordic Ecolabelling of cleaning products.

We undertake to ensure that the persons within our company with responsibility for marketing the Nordic Ecolabelled products will receive information on the criteria governing the Nordic Ecolabelling of cleaning products and on "Rules on the Nordic ecolabelling" of 22 June 2011 or later versions.

_____	_____
Place and date	Company
_____	_____
Contact person	Telephone
_____	_____
Marketing manager	Telephone

In the event of personnel changes, a new declaration must be submitted to Nordic Ecolabelling.

Appendix 2 Analyses, test methods and calculations

1A Requirements on the analysis laboratory

The following stipulations apply regarding ecotoxic effects, microorganisms and challenge tests. The analysis laboratory must be competent and impartial as specified below.

The analysis laboratory used shall fulfil the general requirements of standard EN ISO 17025 or have official GLP status.

For Challanger tests, the applicant's own analysis laboratory/test procedure may be approved for analysis and testing if:

- The manufacturer has a quality management system encompassing sampling and analysis and has been certified to ISO 9000.
- The test method for performance test is part of the quality system.
- Nordic Ecolabelling shall have access to all raw data from performance testing.

1B Requirements on the analysis laboratory for performance testing

The analysis laboratory used shall fulfil the general requirements of standard EN ISO 17025 or have official GLP status.

The applicant's own analysis laboratory/test procedure may be approved for analysis and testing if:

- The manufacturer has a quality management system encompassing sampling and analysis and has been certified to ISO 9000.
- The test method for performance test is part of the quality system.
- Nordic Ecolabelling shall have access to all raw data from performance testing.

2 Ecotoxicological test methods

International test methods (OECD Guidelines for the Testing of Chemicals, ISBN 92-64-1222144) or similar methods must be used. If equivalent methods are used, these must be evaluated by an independent body to ensure that the test results are equivalent. The test methods to be used are specified below.

3 Acute aquatic toxicity

Acute aquatic toxicity is tested with the aid of test methods Nos. 201, 202 and 203 in OECD guidelines for testing of chemicals (ISBN 92-64-1222144) or equivalent test methods.

4 Bioaccumulation

A substance is considered bioaccumulating if tested for bioaccumulation on fish according to method OECD 305 A-E and its bioconcentration factor (BCF) is *>500*. If no BCF value has been determined, a substance is considered bioaccumulating if its $\log K_{ow}$ value ≥ 4.0 according to method 107, 117 or 123 in the OECD Guidelines for the Testing of Chemicals (ISBN 92-64-1222144) or equivalent method, unless proven otherwise. If the maximum measured BCF ≤ 500, the substance is not considered bioaccumulating even if $\log K_{ow}$ ≥ 4.0.

OECDs test method 107 cannot be used for surface-active substances, which are both fat and water soluble. Based on current knowledge, for such substances it must be shown to a high degree of certainty that the substance itself and its decomposition products do not pose a long-term hazard to aquatic organisms

Data models (such as BIOWIN) are permitted but if the results of an approximation are close to the set limit values or if Nordic Ecolabelling holds contradictory information, more reliable information is required.

5 Aerobic biodegradability

Test methods 301 (A to F) or 310 in the OECD Guidelines for the Testing of Chemicals (ISBN 92-64-1222144) should be used to test aerobic biodegradability.

Other scientifically accepted test methods may also be used. The test results of such equivalent methods must be evaluated by an independent body.

6 Anaerobic biodegradability,

Anaerobic degradability can be tested in accordance with ISO 11734, ECETOC No 28 (June 1988) or some other scientifically approved method. In order for a substance to be regarded as anaerobically degradable in the ISO test, a minimum of 60% degradability under anaerobic conditions is required.

Substances that are not surfactants and are not found on the DID-list, may be exempted from the anaerobic degradability requirements if they are:

- readily degradable aerobically and have low adsorption (A<25 %) or
- readily degradable aerobically and have high desorption (D>25 %) or
- readily degradable aerobically and are not potentially bioaccumuable

Adsorption/desorption is determined using method 106 in OECD Guidelines or ISO CD 18749 "Water quality – Adsorption of substances on activated sludge”

7 DID list

The DID list is common to the European ecolabel and Nordic Ecolabelling. The list has been established in collaboration with stakeholders from industry and consumer and environmental organisations. The list contains information on the toxicity and

biodegradability of substances that may be used in chemical/technical products. The DID list does not show which substances can be used in ecolabelled products.

The DID list cannot be used to document the toxicity of individual substances for classification purposes. For this purpose, MSDS, pertinent literature and information from the primary producer shall be used.

The DID list is available from the ecolabelling body or via the relevant national Nordic Ecolabelling website (see page 2 for addresses). The list can also be found at:

http://ec.europa.eu/environment/ecolabel/ecolabelled_products/categories/did_list_en.htm

If an ingredient is not found on the DID list, the factors shall be set as described in part B of the DID list:

http://ec.europa.eu/environment/ecolabel/ecolabelled_products/categories/pdf/did_list/didlist_part_b_en.pdf

Valid to these criteria is the DID list dated January 2007 or later.

To calculated CDV in R13, a worksheet is available from Nordic Ecolabelling and can be downloaded from the Swedish and Danish Web site

http://www.svanen.se/Foretag/Kriterier/kriterie/?productGroupID=20001

http://www.ecolabel.dk/producenter/kriterier/kriterieliste/kriteriedetaljer?maerke=Svanen&produktgruppe=25

If no data for chronic toxicity are available, acute data and the associated safety factor can be used to estimate the chronic toxicity factor.

8 Challenge test

To avoid the unnecessary use of preservatives and to ensure that the quantity of preservatives is sufficient, a requirement is set regarding the quantity of preservatives in relation to the volume of the product. This is documented using a challenge test or equivalent and shall be performed during the development of the product.

Challenge test designates a group of tests used to determine the correct/necessary concentration of preservatives in products. Test samples are prepared with different concentrations of preservatives as well as a control without preservatives. A mixture of bacteria, yeasts and moulds are added to the samples which are tested for growth after seven days. This continues for a minimum of 28 days (some tests require a minimum of six weeks). The sample with the lowest concentration of preservatives that does not exhibit microbial growth has the correct/optimum concentration of preservatives. Different manufacturers and suppliers of preservatives use different challenge tests/methods to determine the correct concentration of preservative. Examples include: Koko Test (Test Method SM 021), USP Challenge Test (US Pharmacopoeia) and CTFA Challenge Test (Cosmetics Toiletries and Fragrance Association).

Appendix 3 Declaration by the manufacturer of the cleaning product

For use in applications for the Nordic Ecolabel licence for hand dishwashing detergent. To be able to complete the following declaration requires completed declarations for all ingredients (Appendix 4 or equivalent).

This declaration is based on best knowledge at the time of application, based on the test and/or declarations from the manufacturer of raw materials. With reservations for developments and new scientific findings. If such new knowledge should be made available, the undersigned is required to submit an updated declaration to Nordic Ecolabelling.

Product name: _____

☐ Consumer/retail product

☐ Professional product

**Products are considered professional if more than 80% of sales are to the professional market.*

The term constituent substance refers to all substances in the product, including additives in the ingredients (such as preservatives and stabilisers), with the exception of impurities from primary production. Impurities are defined as residual products from primary production that can be found in the product in concentrations below 0.010% (100 ppm). Substances that are actively added to an ingredient or product for a particular purpose are not considered to be impurities, irrespective of quantity. Impurities of over 1.0% concentration in the primary product are regarded as constituent substances. Substances/products known to be liberated by a constituent substance (e.g. formaldehyde and arylamine) are also themselves considered to be constituent substances.

	Yes	No
R4: Does the product contain any substances that are or that can liberate substance that are classified as carcinogenic (Carc), mutagenic (Muta), reproductive toxic (Repr) or harmful to breast-fed children (Lact.) according to Table 2?	☐	☐
R5: Does the product contain substances classified as sensitizing/allergenic with H334/R42 and/or H317/R43? (See also the specific requirements on fragrances i R9 + R10)	☐	☐
R5 If the product contains stabilising preservative, specify the pH value of the product:	☐	☐
R6: Does the product contain:		
Alkylphenolethoxylates (APEO) and/or its derivatives?	☐	☐
Alkylphenol derivatives (APD)?	☐	☐
Reactive chloro-compounds such as sodium hypochloride	☐	☐
Chloro-organic compounds?	☐	☐

Quaternary ammonium compounds that are not readily degradable	☐	☐
Benzalconiumchloride	☐	☐
EDTA* (ethylene diamine tetraacetate) and its salts	☐	☐
DTPA?	☐	☐
Phosphonates*	☐	☐
Nanomaterials/particles: (A natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm-100 nm . Examples include ZnO, TiO2, SiO2, AgZnO and Ag. Polymer emulsions are not considered nanomaterials)	☐	☐
Perfluorinated substances and polyperfluorinated alkylated substances (PFAS)	☐	☐
Methyldibromo Glutaronitrile (MG)	☐	☐
Nitromusks and polycyclic musks	☐	☐
Substances with potential for endocrine disruption of Category 1 or 2 in accordance with official EU lists. The EU report on endocrine disrupters can be read in full at http://ec.europa.eu/environment/endocrine/documents/final_report_2007.pdf (from Appendix L, page 238)	☐	☐
Substances that have been evaluated in the EU to be PBT (Persistent, bioaccumulable and toxic) or vPvB (very persistent and very bioaccumulable) in accordance with Annex XIII of REACH.	☐	☐
Substances of very high concern listed on the candidate list http://echa.europa.eu/chem_data/candidate_list_en.asp.	☐	☐
R7: Does the product contain preservatives? If yes, specify the logK_{ow} or BCF:_____	☐	☐
R8: Does the product contain colourants? If yes, specify the logK_{ow} , BCF or E-number: _____	☐	☐
R10: Does the product contain fragrances, including fragrant plant extracts	☐	☐
10a) If yes, is the fragrance handled in accordance with the guidelines of the International Fragrance Association (IFRA).	☐	☐
R11 Does the product contain phosphorous (P)	☐	☐
R12 Does the product contain microorganisms	☐	☐
R11: Does the product contain substances carrying any of the following hazard statements/risk phrases?		

H410 / R50/53?	☐	☐
H411 / R51/53?	☐	☐
H412 / R52/53?	☐	☐
Packaging (R19, R22)		
R19: Does the packaging (including label) contain PVC or other chlorine-based plastic?	☐	☐
R22: Are pertinent national regulations, legislation and/or agreements within the sector regarding recycling systems for products and packaging met in the Nordic countries in which the Nordic Ecolabelled product is/will be marketed?		
Finland (e.g. PYR)	☐	☐
Sweden (REPA)	☐	☐
Norway (Grønt Punkt)	☐	☐

If the answer is yes to any of the above questions (excluding R19 and R22), specify the name, CAS number, concentration and purpose of adding each substance in question:

_____

_____

_____

_____

If the composition of the product is altered, a new declaration on the fulfilment of the requirements shall be sent to Nordic Ecolabelling.

Location and date:	Company name/stamp
Responsible member of staff:	Responsible (signature):

Appendix 4 Declaration from the manufacturer of the rawmaterial

For use in applications for the Nordic Ecolabel licence for hand dishwashing detergent.

This declaration is based on best knowledge at the time of application. With reservations for developments and new scientific findings. If such new knowledge should be made available, the undersigned is required to submit an updated declaration to Nordic Ecolabelling.

Ingredient name: _____

The term constituent substance refers to all substances in the product, including additives in the ingredients (such as preservatives and stabilisers), with the exception of impurities from primary production. Impurities are defined as residual products from primary production that can be found in the product in concentrations below 0.010% (100 ppm). Substances that are actively added to an ingredient or product for a particular purpose are not considered to be impurities, irrespective of quantity. Impurities of over 1.0% concentration in the primary product are regarded as constituent substances. Substances/products known to be liberated by a constituent substance (e.g. formaldehyde and arylamine) are also themselves considered to be constituent substances.

It must be stated in this declaration whether any of the substances below are part of the raw material, regardless of whether they are pollutants or not, and regardless of amount. This must then be explained in more detail on page 2 of this declaration.

	Yes	No
R4: Does the product contain any substances that are or that can liberate substance that are classified as carcinogenic (Carc), mutagenic (Muta), reproductive toxic (Repr) or harmful to breast-fed children (Lact.) according to Table 2?	☐	☐
R5: Does the product contain substances classified as sensitizing/allergenic with H334/R42 and/or H317/R43? (See also the specific requirements on fragrances i R9 + R10)	☐	☐
R6: Does the product contain:		
Alkylphenolethoxylates (APEO) and/or its derivatives?	☐	☐
Alkylphenol derivatives (APD)?	☐	☐
Reactive chloro-compounds such as sodium hypochloride	☐	☐
Chloro-organic compounds?	☐	☐
Quaternary ammonium compounds that are not readily degradable	☐	☐
Benzalconiumchloride	☐	☐
EDTA (ethylene diamine tetraacetate) and its salts	☐	☐
DTPA?	☐	☐

Phosphonates	☐	☐
Nanomaterials/particles: (A natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm-100 nm . Examples include ZnO, TiO2, SiO2, AgZnO and Ag. Polymer emulsions are not considered nanomaterials)	☐	☐
Perfluorinated substances and polyperfluorinated alkylated substances (PFAS)	☐	☐
Methyldibromo Glutaronitrile (MG)	☐	☐
Nitromusks and polycyclic musks	☐	☐
Substances with potential for endocrine disruption of Category 1 or 2 in accordance with official EU lists. The EU report on endocrine disrupters can be read in full at http://ec.europa.eu/environment/endocrine/documents/final_report_2007.pdf (from Appendix L, page 238)	☐	☐
Substances that have been evaluated in the EU to be PBT (Persistent, bioaccumulable and toxic) or vPvB (very persistent and very bioaccumulable) in accordance with Annex XIII of REACH.	☐	☐
Substances of very high concern listed on the candidate list http://echa.europa.eu/chem_data/candidate_list_en.asp.	☐	☐
R7: Does the product contain preservatives? If yes, specify the logK_{ow} or BCF:_____	☐	☐
R8: Does the product contain colourants? If yes, specify the logK_{ow} , BCF or E-number: _____	☐	☐
R10: Does the product contain fragrances, including fragrant plant extracts	☐	☐
10a) If yes, is the fragrance handled in accordance with the guidelines of the International Fragrance Association (IFRA).	☐	☐
R11 Does the product contain phosphorous (P)	☐	☐
R12 Does the product contain microorganisms	☐	☐
R11: Does the product contain substances carrying any of the following hazard statements/risk phrases?		
H410 / R50/53?	☐	☐
H411 / R51/53?	☐	☐
H412 / R52/53?	☐	☐

If the answer is yes to any of the above questions, specify the name, CAS number, concentration and purpose of adding each substance in question:

_____

_____

_____

_____

If the composition of the product is altered, a new declaration on the fulfilment of the requirements shall be sent to Nordic Ecolabelling.

Location and date:	Company name/stamp
Responsible member of staff:	Responsible (signature):

Appendix 5 User test

This appendix describes the way in which a professional product test is to be performed. The purpose of the test is to demonstrate whether or not the test product for which a Nordic Ecolabel licence is sought is as good as or better than a comparative product. The test must also demonstrate whether the test product harms the surfaces that it is marketed for use on.

Quality requirements

At least 80 % of the test persons must assess the product to be as good as or better than the reference product in order to fulfil the performance test.

Test individuals

Test individuals must be professional users* of the cleaning product. At least five professional users shall test the product. The five individuals shall be randomly chosen and shall come from five different companies/organisations/institutions.

**Consumer products are subject to laboratory testing.*

The comparative product:

The test product must be compared with the product normally used by the user.

The comparative product must not be the same as the test product. The test product and the comparative products may be produced by the same manufacturer.

Performance of the test:

The test must be performed on the type(s) of surface relevance in relation to the recommendations on the product label.

The dosage used must be the minimum dosage specified on the label for normal soil. I.e. if the normal dosage of the label is specified as an interval, the lowest quantity in this interval must be used. Likewise, the dosage of the comparative reference product must be the lowest recommended dosage for normal soil.

The duration of the test period must be sufficient for the test product to be used at least five times by the test user on the same place.

Performance questionnaire

There are three questionnaires for the user test:

- All-purpose cleaner and kitchen products (Appendix 5a)
- Sanitary cleaner (Appendix 5b)
- Window and glass cleaner (Appendix 5c)

Each test individual must complete all questions on the questionnaire. One questionnaire shall be completed per product.

Responses shall be tabulated, see Tables 1-3 in Appendix 5d, indicating the number of responses and number of each answer. The applicant must also document which individuals have answered the questionnaire and the percentage of answers.

It must be demonstrated that the recipe of the test product at the time of the performance test is the same as that submitted on application to Nordic Ecolabelling

Documentation requirements:

The following documentation must be submitted to Nordic Ecolabelling:

- A description of the way in which the test users were selected
- All reply forms received from the test users (please remember that all questions must be answered)
- The overall result/all replies received on the wash effectiveness of the user test specified in a table/a form (see table 1-3 in Appendix 5d)

The formulation of the test product must be attached to the overall result of the user test

Appendix 5a - Wash effectiveness –for all-purpose cleaners and kitchen products

The following questionnaire shall be answered (all questions) by each test individual.

Information about the test:

Name of test product (= the new product):_____

Dosing of test product:_____

Name of comparative product (= the product that is normally used):_____

_____

Dosing of comparative product:_____

Types of surface on which the test product is used, specify material . Specify the material, e.g. stone, tiles, linoleum, wood, painted surface or stainless steel.

□ Floors: _____

□ Tables: _____

□ Fixtures/furnishings: _____

□ Walls: _____

□ Ceilings: _____ _____

□ Other: _____

Test period? Start date: _____ end date: _____

How many times was the test product used on the same surface during the specified test period? _____

How long have you been using the comparative product?_____

How frequently (approximately) do you use the comparative product?_____

Use

How has the product been used (floor machine, mop, etc.)?_____

_____

Where has the product been used? In which areas of use has the test been performed (kitchen, bathroom, school, office, restaurant, hotel)?

_____

_____

Which type of soil has been most problematic in this area?

_____

Assessment of the product:

On completion of the tests, the test product shall be compared to the reference product and assessed using the following table.

	Poorer	**As good as**	**Better**
How effective do you consider the test product's ability to remove soil compared to the reference product?'			
How do you consider the test product's gentleness to the cleaned surface compared to the reference product?'			
How effective do you consider the test product in comparison to the reference product?			

Comments: _____

_____

_____

_____

Information on the user site:

The cleaning test and the associated assessment were performed by:
Company name (for professional products) or the users name:

Name of enterprise: _____

Address: _____

Further description of the site at which the cleaning test was performed:_____

Contact person: _____

Telephone No._____

If questions regarding the test arise, Nordic Ecolabelling will first contact the producer of the cleaning product but may also contact test individuals.

Appendix 5b - Wash effectiveness –for sanitary cleaners

The following questionnaire shall be answered (all questions) by each test individual.

Information about the test:

Name of test product (= the new product):_____

Dosing of test product:_____

Name of comparative product (= the product that is normally used):_____

_____

Dosing of comparative product:_____

Types of surface on which the test product is used, specify material .

□ Wash basin: _____

□ Taps: _____

□ Tiles: _____

□ WC:_____

□ Floors-state type: stone, tile, terazzo, linoleum, other _____

□ Other

Test period

Start date: _____ end date: _____

How many times was the test product used on the same surface during the specified test period? _____

How long have you been using the comparative product?_____

How frequently (approximately) do you use the comparative product?_____

Use

How has the product been used (floor machine, mop, etc.)?_____

_____

Where has the product been used? In which areas of use has the test been performed (kitchen, bathroom, school, office, restaurant, hotel)?

_____

_____

Which type of soil has been most problematic in this area?

_____

Assessment of the product:

On completion of the tests, the test product shall be compared to the reference product and assessed using the following table.

	Poorer	**As good as**	**Better**
How effective do you consider the test product's ability to remove soil compared to the reference product?'			
In the case of **acid products**: The ability of the test product to remove calcium deposits is:			
In the case of **alkalic products**: The ability of the test product to prevent calcium deposits is:			
How do you consider the test product's gentleness to the cleaned surface compared to the reference product?'			
How effective do you consider the test product in comparison to the reference product?			

Comments: _____

_____

_____

_____

Information on the user site:

The cleaning test and the associated assessment were performed by:
Company name (for professional products) or the users name:

Name of enterprise: _____

Address: _____

Further description of the site at which the cleaning test was performed:_____

Contact person: _____

Telephone No._____

If questions regarding the test arise, Nordic Ecolabelling will first contact the producer of the cleaning product but may also contact test individuals.

Appendix 5c - Wash effectiveness –for glass and window cleaners

The following questionnaire shall be answered (all questions) by each test individual.

Information about the test:

Name of test product (= the new product):_____

Dosing of test product:_____

Name of comparative product (= the product that is normally used):_____

_____

Dosing of comparative product:_____

Types of surface on which the test product is used, specify material .

□ Windows

□ Mirrors

□ Other glass surfaces:

_____

□ Other

Test period

Start date: _____ end date: _____

How many times was the test product used on the same surface during the specified test period? _____

How long have you been using the comparative product?_____

How frequently (approximately) do you use the comparative product?_____

Use

How has the product been used (floor machine, mop, etc.)?_____

_____

Where has the product been used? In which areas of use has the test been performed (kitchen, bathroom, school, office, restaurant, hotel)?

_____

_____

Which type of soil has been most problematic in this area?

_____

Assessment of the product:

On completion of the tests, the test product shall be compared to the reference product and assessed using the following table.

	Poorer	**As good as**	**Better**
How effective do you consider the test product's ability to remove soil compared to the reference product?'			
How do you consider the test product's gentleness to the cleaned surface compared to the reference product?'			
How effective do you consider the test product in comparison to the reference product?			

Comments: _____

_____

_____

_____

Information on the user site:

The cleaning test and the associated assessment were performed by:
Company name (for professional products) or the users name:

Name of enterprise: _____

Address: _____

Further description of the site at which the cleaning test was performed:_____

Contact person: _____

Telephone No._____

If questions regarding the test arise, Nordic Ecolabelling will first contact the producer of the cleaning product but may also contact test individuals.

Appendix 5d – Summary of results

To be completed by the applicant for a Nordic Ecolabel licence.

Date:_____

Name of test product: _____

Description of the selection of test individuals:

_____

_____

_____

_____

How many questionnaires were sent out?_____

How may responses were received?_____

Table for the collation of answers:

The results from the questionnaires shall be collated in the appropriate table below:

Results are given in % of the total number of responses.

Table 1 All-purpose cleaners and kitchen products

	Poorer (%)	**As good as (%)**	**Better (%)**
How effective do you consider the test product's ability to remove soil compared to the reference product?'			
How do you consider the test product's gentleness to the cleaned surface compared to the reference product?'			
How effective do you consider the test product in comparison to the reference product?			

Table 2 Sanitary cleaners

	Poorer (%)	**As good as (%)**	**Better** (%)
How effective do you consider the test product's ability to remove soil compared to the reference product?'			

In the case of acid products: The ability of the test product to remove calcium deposits is:			
In the case of acid products: In the case of alkalic products: The ability of the test product to prevent calcium deposits is:			
How do you consider the test product's gentleness to the cleaned surface compared to the reference product?'			
How effective do you consider the test product in comparison to the reference product?			

Table 3 glass and window cleaners

	Poorer	**As good as**	**Better**
How effective do you consider the test product's ability to remove soil compared to the reference product?'			
How do you consider the test product's gentleness to the cleaned surface compared to the reference product?'			
How effective do you consider the test product in comparison to the reference product?			

Comments_____

Date _____ Signature_____

Appendix 6 Laboratory test

This appendix describes a proposal for a laboratory test. Other well-described and well-documented tests may also be used. If some other test than the test described below is used, the test must be approved in advance by Nordic Ecolabelling.

The purpose of the laboratory test is to determine whether the test product produces a result that is better than or as good as a reference product*, and that the test product does harm the surfaces that it is marketed for use on.

**Reference product refers to an equivalent product within the same category and designed for the same area of use. For example, a professional WC cleaner shall be tested against another WC cleaner and a consumer kitchen cleaner tested against a second consumer kitchen cleaner.*

Proposal for a laboratory test

The test institute must fulfil these framework requirements so that the test provides a reliable result. Questions 1 and 2 shall be answered by the applicant.

Reference product

The test product and comparative reference product shall be tested in the same way. Both products shall belong to the same category (professional/consumer and RTU/concentrated) and designed for the same area of use (WC, kitchen, sanitary, all-purpose, glass, etc.). Refer to the section “What products are eligible for a Nordic Ecolabel”.

Dosage

The lowest specified dosage for normal soil of the test product and the reference product respectively shall be used for the performance test.

Water test

A water test shall be performed using the same quantity of water as in the other tests. Data from the water test shall be collated together the other test data. The test and reference product must both perform better than water alone.

Soil

The soiling used for each test must be relevant to the product’s intended area of use.

The fat-removing and de-scaling performance of sanitary and WC cleaners shall be tested.

The fat-removing performance of all-purpose cleaner and kitchen cleaner shall be tested.

The performance of glass and window cleaner shall be tested regarding fat removal (fingerprints) and particulate matter.

Requirements for test laboratories

The requirements stipulated for test laboratories are presented in Appendix 2.

Requirements

1. Dose

The dose that must be used is the lowest recommended dose for the product and the recommended dose for the comparative product for normal soils/normal use.

☒ State the dose of the product and of the comparative product.

2. The comparative product

The comparative product must be recently purchased and must be a product intended for the same area of use (kitchen, sanitary, window) and belong to the same product category (professional, consument, RTU) as the product.

☒ Answer the following:

a) How long has the comparative product been on the market?

b) What areas of application do the product and the comparative product have in common?

c) Why was this product in particular chosen as the comparative product?

3. Surfaces

The surfaces on which the products are tested must be relevant to the area of use in respect of which the product is marketed.

☒ a) What type of surface was used in the test?

b) Why is this surface relevant?

c) Is the product gentle on this type of surface?

4. Soil

The soil mixture must be relevant to the product's intended area of use according to the following table. The soil mixture must be as follows: relevant to the area of use of the product – homogenous – based on well-described and internationally available substances.

Table 1

Product/Area of use	**Soil(s)**
Sanitary cleaner and WC cleaner	Fat/lime soap and limescale
All-purpose cleaner and kitchen cleaner	Fat
Window and glass cleaner	Fat (fingerprints) and particulate matter (dust and/or soot).

✉ a) State the formula for the soil

✉ b) State why the composition of the soil is relevant to the area of use of the product.

5. Method of cleaning

The method of cleaning shall be relevant to the product type. The test shall be performed for the soil types specified in Table 1 that are relevant to the product's area of use.

De-scaling performance can be determined by gravimetric analysis. Fat-removing performance is determined by reflectance The removal of particulate can be determined by gravimetric analysis or reflectance.

✉ Describe the method of cleaning and how this method is relevant.

6. Description of the test

The same number of repetitions shall be performed for the test product, reference product and water (>10 per product). One batch of soil that is sufficient to all tests shall be used. The soil shall be applied to at least 30 test pieces of a relevant material. Refer to item 3 “Surfaces”. Following this, the tests shall be performed using the test product, reference product and water.

The test shall be performed using a random selection of soiled test pieces, i.e. at least 10 pieces shall be chosen at random for the test product, the same number for the reference product and the same number for the water test.

The reflectance of all plates must be measured before the soil is applied, after the soil has been applied and after washing. Effectiveness, EFF, is calculated separately for each plate and recorded in a table.

✉ Describe how soiling, washing and measurement/detection were performed.

7. Calculation of the wash effectiveness index (EFF)

The wash effectiveness index is calculated using the following formula:

EFF = (Rc - Rb) / (Ra - Rb)

Ra = Reflectance before soiling

Rb = Reflectance after soiling

Rc = Reflectance after washing

This is performed for each individual parallel of the product and the reference product. The following must also be calculated:

EFFp = Average EFF value for the product undergoing testing

EFFs = Average EFF value for the reference product

EFFs = Average EFF value for water

Requirement level

For sanitary cleaning products, both calcium and fat-removing effects must be documented. Fat and calcium-removing effects must comply with the following requirements (7.1 a or 7.1.b)

In the case of all-purpose cleaners and cleaning products for kitchens, it will only be necessary to determine the fat-removing effect. (7.1 a or 7.1.b)

Window and glass cleaner's ability to remove grease and particulate shall fulfil one of two requirements (7.1a or 7.1b).

All product tests shall also demonstrate that the results are better than water alone, see 7.2.

7.1a

It must be shown with a 95% unilateral confidence interval that the test product has a wash effectiveness that is greater than or equal to that of the reference product, account being taken of uncertainty. The following formula must be used for this purpose:

$$EFFp - EFFs + 1{,}73 * \sqrt{(9 * Sp^2 + 9 * Ss^2)/18} > 0$$

where $1{,}73 * \sqrt{(9 * Sp^2 + 9 * Ss^2)/18}$ is the measurement uncertainty (95% unilateral confidence interval), Sp is the standard deviation for EFFp and Ss is the standard deviation for EFFs. The formula is based on 10 parallels of the product and 10 of the reference product.

or

7.1.b

EFFp ≥ EFFs

7.2. Wash effectiveness better than water

Irrespective of the method of evaluation (7.1a or 7.1b), the following shall be fulfilled:

EFFp > EFFv

- ✉ a) All raw data from all tests shall be submitted.
- ✉ b) Wash effectiveness EFF, stated to two significant figures, is calculated separately for each plate. An average is then calculated for the test product, reference product and water respectively.
- ✉ c) Calculations according to 7.1a or 7.1b demonstrating that the requirement is fulfilled.

☒ d) The cleaning performance of the test product in comparison to water shall be specified (7.2).

The report shall contain:

- The formulation number providing linkage to the product name and the version of the recipe that is specified in the licence application.
- The results of requirements 1-7 of this appendix, including all raw data.
- Information about the laboratory demonstrating that the laboratory fulfils the requirements of Appendix 2.

Appendix 7 Fragrances on the "26 list" (Regulation (EC) no. 648/2004 on detergents)

Amyl cinnamal	122-40-7	Amylcinnamyl alcohol	101-85-9
Anisyl alcohol	105-13-5	Benzyl alkhol	100-51-6
Benzyl benzoate	120-51-4	Benzyl cinnamate	103-41-3
Benzyl salicylat	118-58-1	Cinnamal	104-55-2
Cinnamyl alkohol	104-54-1	Citral	5392-40-5
Citronellol	106-22-9	Coumarin	91-64-5
d-limonen	5989-27-5	Eugenol	97-53-0
Farnesol	4602-84-0	Gerianol	106-24-1
Hexyl cinnamal-dehyd	101-86-0	Hydroxycitronella	107-75-5
Hydroxymethyl-phentyl cyclohex-enecarboxaldehyd (= Lyral)	31906-04-4	Isoeuenol	97-54-1
		Linalool	78-70-6
Methyl heptine carbonat	111-12-6	Gamma-methylionon	127-51-5
Egemos ekstrakt	90028-68-5	Træmos ekstrakt	90028-67-4