

Nordic Ecolabelling for  
**Hand dishwashing detergents**



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

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## Contact information

In 1989, the Nordic Council of Ministers decided to introduce a voluntary official ecolabel, the Nordic Swan Ecolabel. These organisations/companies operate the Nordic Ecolabelling system on behalf of their own country's government. For more information, see the websites:

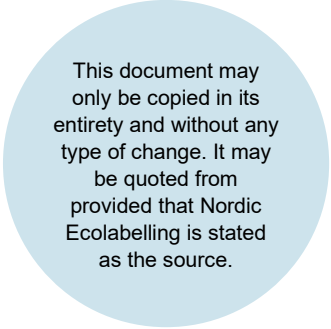
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## What is a Nordic Swan Ecolabelled hand dishwashing detergent?

A Nordic Swan Ecolabelled hand dishwashing detergent takes account of the environment and the user's health, while at the same time being at least as effective as other hand dishwashing detergents. A Nordic Swan Ecolabelled hand dishwashing detergent is among the best hand dishwashing detergents in terms of environmental profile. The choice of chemicals and the packaging are environmentally aware, and the use stage and raw material extraction are also taken into account in the requirements.

The environmental requirements include strict requirements as to the content of environmentally harmful substances and substances not readily degradable in aquatic environments. The environmental impact of hand dishwashing detergents affects the aquatic environment since the products are released into the water after use. Properties such as biodegradability, bioaccumulation and toxicity for aquatic organisms are therefore important parameters for the constituent substances.

The chemical content of the products is also subject to requirements in areas such as fragrance, preservatives and allergenic substances.

The effect of the products on the environment also depends on the way in which they are used. There is therefore a requirement for dosing instructions and a requirement for performance testing to show that the product is effective at the recommended dose.

Packaging requirements limit the use of packaging materials, as well as contributing to resource efficiency and a circular economy.

Sustainable extraction of raw materials is a vital global issue with a major environmental impact. We raise awareness of this issue via information and policy requirements and the requirement for sustainably produced palm oil helps us contribute to the production of more sustainable raw materials.

Nordic Swan Ecolabelled hand dishwashing detergents:

- Meet strict requirements concerning environmentally hazardous chemicals, including requirements on ecotoxicity and biodegradability
- Meet strict requirements concerning chemicals that are harmful to health, including a ban on the preservative MI and other sensitising substances
- Are used sparingly to conserve the planet's resources.
- Packaging requirements contribute to a circular economy, for example by addressing packaging design and material choices.

## Why choose the Nordic Swan Ecolabel?

- Licence holder may use the Nordic Swan Ecolabel trademark for marketing. The Nordic Swan Ecolabel is a very well-known and well-reputed trademark in the Nordic region.
- The Nordic Swan Ecolabel is a simple way of communicating environmental work and commitment to customers.
- The Nordic Swan Ecolabel clarifies the most important environmental impacts and thus shows how a company can cut emissions, resource consumption and waste management.
- Environmentally suitable operations prepare the product for future environmental legislation.
- Nordic Ecolabelling can be seen as providing a business with guidance on the work of environmental improvements.
- The Nordic Swan Ecolabel not only covers environmental issues but also quality requirements, since the environment and quality often go hand in hand. This means that a Nordic Swan Ecolabel licence can also be seen as a mark of quality.

## What can carry the Nordic Swan Ecolabel?

Liquid hand dishwashing detergents for consumer use or for professional use are eligible for the Nordic Swan Ecolabel along with hand dishwashing tablets that are diluted at least 10 times by the user to form the finished product. (The diluted solution is mainly used directly onto dishes.)

The main function of the product must be as a hand dishwashing detergent. Ready-to-use products, pre-soaks or products that are intended to disinfect or prevent the growth of microorganisms (e.g. bacteria) are not covered by the product group.

Products count as products for the professional market if > 80% of sales are to the professional market.

## How to apply

### **Application and costs**

For information about the application process and fees for this product group, please refer to the respective national web site. For contact information see the beginning of this document.

### **What is required?**

The application must consist of an application form/web form and documentation showing that the requirements are fulfilled.

Each requirement is marked with the letter O (obligatory requirement) and a number. All requirements must be fulfilled to be awarded a licence.

The text describes how the applicant shall demonstrate fulfilment of each requirement. There are also icons in the text to make this clearer. These icons are:

- ☒ Enclose
- 📍 Requirement checked on site

All information submitted to Nordic Ecolabelling is treated confidentially. Suppliers can send documentation directly to Nordic Ecolabelling, and this will also be treated confidentially.

### **License validity**

The Nordic Swan Ecolabel licence is valid providing the criteria are fulfilled and until the criteria expire. The validity period of the criteria may be extended or adjusted, in which case the licence is automatically extended, and the licensee informed.

Revised criteria shall be published at least one year prior to the expiry of the present criteria. The licensee is then offered the opportunity to renew their licence.

### **On-site inspection**

In connection with handling of the application, Nordic Ecolabelling normally performs an on-site inspection to ensure adherence to the requirements. For such an inspection, data used for calculations, original copies of submitted certificates, test records, purchase statistics, and similar documents that support the application must be available for examination.

### **Queries**

Please contact Nordic Ecolabelling if you have any queries or require further information. See the beginning of this document for contact information. Further information and assistance (such as calculation sheets or electronic application help) may be available. Visit the relevant national website for further information.

## **1 General requirements**

The definition of constituent substances is included to explain what is meant by constituent substances and impurities. The requirement has been changed compared with the previous generation of the criteria. The aim has been to make the criteria easier to understand.

Definition:

The requirements in the criteria document and accompanying appendices apply to all ingoing substances in the Nordic Swan Ecolabelled product. Impurities are not regarded as ingoing substances and are exempt from the requirements.

Ingoing substances and impurities are defined below, unless stated otherwise in the requirements

- Ingoing substances: all substances in the Nordic Swan Ecolabelled product, including additives (e.g. preservatives and stabilisers) in the raw materials. Substances known to be released from ingoing substances (e.g. formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
- Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials that remain in the raw material/ingredient and/or in the in the Nordic Swan Ecolabelled product in concentrations less than  $\leq 100,0$  ppm ( $\leq 0,01000$  weight percent  $\leq 100,0$  mg/kg) in the Nordic Swan Ecolabelled product.
- Impurities in the raw materials exceeding concentrations of  $\geq 10000$  ppm ( $\geq 1,000$  weight percent,  $\geq 10000$  mg/kg) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.

Examples of impurities are residues of the following: residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.

## O1 Description of the product

The applicant must give detailed information on the hand dishwashing detergent to which the application relates. The following information is required:

- Description of the product
- The product must carry information on the recommended dosing on the primary packaging.
  - The recommended dosing for a normal degree of soiling must be clearly and simply stated on the label/packaging.
  - For consumer products, the dosing must be stated as X number of millilitres to Y litres of water or as Z teaspoons\* to Y litres of water.
  - For products intended for professional use, the dosing may, for example, be stated as X ml or an equivalent Y pumps or similar per Z litre of water.
  - For hand dishwashing tablets intended to use as sprays, dosage must be given both for washing a single item (e.g. dish, pan etc.) as well for preparing a full kitchen-sink of hand dishwashing solution.  
*\* 1 teaspoon equals 5 ml*
- A complete formulation for the product. The formulation must for each ingoing raw material include:
  - Trade name
  - Chemical name for the main component, and, if relevant, additives (eg. colorants, preservatives, and stabilizers)
  - Amount (both with and without solvents, e.g. water)
  - CAS no. / EC no.
  - Function
  - DID no. for substances that can be placed in the DID list
- A safety data sheet for each ingoing raw material

*The DID number is an ingredient's number on the DID list, which is used in calculating chemical requirements. The DID list can be obtained from Nordic*

*Ecolabelling's websites, see contact information in the beginning of this document.*

- ☒ Description of the product, e.g. label and product data sheet (if available) that includes dosing instructions. The information on labels and/or product data sheets must be in the languages in which the product is marketed.
- ☒ A complete declaration of the composition of the product with information as set out in the requirement. Nordic Ecolabelling's calculation sheet can be used and can be obtained from Nordic Ecolabelling's websites.
- ☒ Safety data sheets for each raw material in line with prevailing European legislation (Annex II to REACH Regulation, 1907/2006/E2EC).

## O2 Classification of the product

The product must not be classified as shown in table O2:

Table O2 Classification of the product

<b>CLP Regulation 1272/2008</b>		
<b>Classification</b>	<b>Hazard Class and Category Code</b>	<b>Hazard statement</b>
Hazardous to the aquatic environment	Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 2 Aquatic Chronic 3 Aquatic Chronic 4	H400 H410 H411 H412 H413
Hazardous to the ozone layer	Ozone	H420
Carcinogenicity*	Carc. 1A or 1B Carc. 2	H350 H351
Germ cell mutagenicity*	Muta. 1A or 1B Muta. 2	H340 H341
Reproductive toxicity*	Repr. 1A or 1B Repr. 2 Lact.	H360 H361 H362
Acute toxicity	Acute Tox 1 or 2 Acute Tox 1 or 2 Acute Tox 1 or 2 Acute Tox 3 Acute Tox 3 Acute Tox 3 Acute Tox 3 Acute Tox 4 Acute Tox 4 Acute Tox 4	H300 H310 H330 H301 H311 H331 H302 H312 H332
Specific target organ toxicity, single or repeated exposure	STOT SE 1 STOT SE 2 STOT RE 1 STOT RE 2	H370 H371 H372 H373
Skin corrosion/irritation	Skin Corr. 1A, 1B or 1C	H314
Aspiration hazard	Asp. Tox. 1	H304
Respiratory or skin sensitisation**	Resp. Sens. 1, 1A or 1B Skin Sens. 1, 1A or 1B	H334 H317

\* *The classifications concern all classification variants. For example, H350 also covers classification H350i.*

\*\* *Products labelled with EUH208: "Contains (name of sensitising substance). May cause an allergic reaction." cannot be Nordic Swan Ecolabelled.*

*Please note that the producer /supplier is responsible for the classification.*



- Safety data sheets for the product in line with prevailing European legislation (Annex II to REACH Regulation, 1907/2006/E2EC).

## 2 Sustainable raw materials

### 03 Sustainable raw materials

1. The licence holder must document that they are working to increase their purchasing of sustainable and renewable raw materials or that they require their manufacturer to work on increasing their purchasing of sustainable renewable raw materials in the Nordic Swan Ecolabelled hand dishwashing detergent. This can for example be done by promoting certified raw materials, by avoiding problematic raw materials or by changing from fossil based raw materials to sustainable raw materials. The targets must be quantitative and time-based, and they must be set by the company's management.
2. The following data is required for each organic raw material/ingredient in the Nordic Swan Ecolabelled hand dishwashing detergent:

- a) The proportion of the raw material/constituent part of the raw material/ingredient that comprises renewable raw material or originates from renewable raw material, calculated on an annual basis.

*The calculation of the proportion of the renewable material can be done using the following formula:*

*Used amount renewable material / (used amount renewable material + used amount non-renewable material) x 100%*

*Amounts in kg, molar weight or carbon atoms can be used in the calculation. Average carbon chain lengths can be used.*

- b) What does the renewable raw material consist of or from what renewable material is it derived from (e.g. palm oil, coconut oil, grape seed oil, beeswax)?
- c) Does the renewable raw material have any sustainability certification? If yes, state which and at what level of traceability (No Traceability, Identity Preserved, Segregated, Mass Balance, Book & Claim)?

- 1. Policy or equivalent documentation of the licence holders work for renewable and sustainable materials in Nordic Swan Ecolabelled products, including quantitative, time-based targets.

- 2. Appendix 3 from the raw material supplier.

### 04 Certified raw materials from oil palms

Palm oil, palm kernel oil and palm oil derivatives must be certified according to RSPO. Mass balance, Segregated or Identity Preserved are accepted as traceability systems.

The requirement does not include raw materials < 1% in the final product.

- Information from råvaruproducenten whether palm oil, palm kernel oil or palm oil or palm kernel oil derivatives are included in the raw material, Appendix 3 can be used.

- A valid RSPO CoC certificate

- The producer of raw materials or the producer of the Nordic Swan Ecolabelled product must show by means of a balance calculation and/or invoices/delivery notes that the proportion of certified raw material corresponds to the amount of

certified palm oil raw materials. Alternatively, a declaration from the producer of raw materials that all purchased palm oil raw materials are certified

### 3 Requirements for ingoing substances

#### O5 Classification of ingoing substances

Ingoing substances in the product must not be classified as shown in table O5:

**Table O5 Classification of ingoing substances**

CLP Regulation 1272/2008:		
Classification	Hazard Class and Category Code	Hazard statement
Carcinogenic*	Carc. 1A or 1B Carc. 2	H350 H351
Mutagenic*	Muta. 1A or 1B Muta. 2	H340 H341
Toxic for reproduction*	Repr. 1A or 1B Repr. 2 -	H360 H361 H362
Respiratory or skin sensitisation**	Resp. Sens. 1 Skin Sens. 1	H334 H317

\* The classifications concern all classification variants. For example, H350 also covers classification H350i.

\*\*The following substances are exempt:

- Fragrance in consumer products (See O7).
- Enzymes (including stabilisers and preservatives in the enzyme raw material) can be included if they are in liquid form or granulate capsules.

Safety data sheet for each raw material in line with European legislation (Annex II to REACH, Regulation (EC) No 1907/2006).

Appendix 2 and 3 or equivalent certification completed and signed.

#### O6 Prohibited substances

The following substances are excluded from use in the product:

- Alkylphenol ethoxylates (APEO) and/or alkylphenol derivatives (APD)
- EDTA (Ethylene diamine tetraacetate and its salts) and DTPA (Diethylenetriamine pentaacetate)
- Quarternary ammonium salts that are not readily degradable
- Organic chlorine compounds and hypochlorites
- Methylidibromo glutaronitrile (MG, CAS 35691-65-7)
- Nitro musks and polycyclic musk compounds
- Per- and polyfluorinated compounds (PFC)
- Phosphate, phosphonate, phosphonic acid and phosphoric acid
- BHT (butylated hydroxytoluene, CAS 128-37-0)

*There is an exemption for BHT in fragrances in quantities of  $\leq 100$  ppm, on condition that the amount in the hand dishwash detergent does not exceed 1 ppm.*

- Microplastics  
*Microplastic means particles with a size of below 5 mm of insoluble macromolecular plastic, obtained through one of the following processes:*
  - (a) a polymerisation process such as polyaddition or polycondensation or a similar process using monomers or other starting substances;
  - (b) chemical modification of natural or synthetic macromolecules;
  - (c) microbial fermentation.
- Substances that are considered to be potential endocrine disruptors in category 1 or 2, according to official lists within the EU. The EU's report on endocrine disruptors can be read in full at [http://ec.europa.eu/environment/chemicals/endocrine/pdf/final\\_report\\_2007.pdf](http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf) (Appendix L, page 238 onwards)
- Substances evaluated by the EU to be PBT (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative), in accordance with the criteria in Annex XIII of REACH and substances that have not yet been investigated, but which meet these criteria.
- Substances judged to be “Substances of very high concern”, which are included on the Candidate List: <https://echa.europa.eu/candidate-list-table>.
- Nanomaterials/particles  
*Nanomaterials/particles are defined in accordance with the European Commission's definition of nanomaterials dated 18 October 2011: “A natural, incidental or purposely manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for at least 50% of the particles in the number size distribution, one or more external dimensions are in the size range of 1-100 nm.” Examples are ZnO, TiO<sub>2</sub>, SiO<sub>2</sub>, Ag and laponite with particles of nanosize in concentrations exceeding 50%. Polymer emulsions are not considered to be nanomaterial.*

☒ A duly completed and signed declaration of compliance with the requirement, Appendix 2 or similar documentation for the product, Appendix 3 or similar signed documentation for the raw materials.

## 07 Fragrances

The requirement also includes fragrances in plant extracts:

- a) Fragrances must be added in line with IFRA's guidelines.  
The guidelines of IFRA (International Fragrance Association) can be found at [www.ifraorg.org/](http://www.ifraorg.org/)
- b) Fragrances must not be present in professional products.  
*Products for professional use are defined here as products that are marketed for use in professional contexts such as institutions, catering kitchens, restaurants and within the public sector.*  
*Where products are sold to both professionals and consumers, the product is considered a professional product if the proportion sold to professionals is 80% or higher. Where there is any confusion about whether a product is for professionals or consumers, Nordic Ecolabelling may require documentation explaining where the product is intended to be sold. The requirement also includes fragrances in plant extracts.*
- c) A fragrance substance which is judged to be sensitising with the hazard statement H317 and/or H334, or which is subject to declaration, may be present at a maximum of 0.0100% (100 ppm) in the consumer product.

- d) The fragrance substances in table O7 may be present in products at a maximum of 0.0100% (100 ppm) per substance in consumer products:

**Table O7 Other fragrance substances that may be present to a maximum of 100 ppm**

INCI name (eller om en inte finns, parfymering namn i enlighet med CosIng)	CAS nummer
Cananga Odorata och Ylang-ylang oil	83863-30-3; 8006-81-3
Eugenia Caryophyllus Leaf / Flower oil	8000-34-8
Jasminum Grandiflorum / Officinale	84776-64-7; 90045-94-6; 8022-96-6
Myroxylon Pereirae	8007-00-9;
Santalum Album	84787-70-2; 8006-87-9
Turpentine oil	8006-64-2; 9005-90-7; 8052-14-0
Verbena absolute	8024-12-02
Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.	8007-80-5/84649-98-9

- e) HICC, chloroatranol and atranol are not permitted in the product.

- Appendix 2 and 3 or equivalent certification completed and signed plus fragrance specifications.
- Calculation of the amount of the 26 allergens, substances classified as H334 and/or H317 and substances listed in table O7 present in the end product.

## O8 Preservatives

Preservatives included in the product or constituent substances must not be bioaccumulative. Preservatives are judged not to be bioaccumulative if  $BCF < 500$  or  $\log K_{ow} < 4$ . If both values are available, the value for the highest measured BCF is to be used, see appendix 1.

- Documentation of BCF or  $\log K_{ow}$ , Appendix 2 and 3 or safety data sheet for the preservative.

## 4 Dosing, ecotoxicity and biodegradability

### O9 Maximum dosing

The dosing is calculated as the recommended dose in grams per litre of water. The recommended dose must not exceed **1.0 grams per litre of water**.

*For density calculations, density at room temperature shall be used. If the dose is specified as an interval, the highest figure in the interval must be used in the dosing calculation for this requirement, and in the WUR requirement (O16).*

*For hand dishwashing tablets: Tablets are dissolved following the manufacturer's instructions. The dosage is calculated for in-use solution when the detergent is used for a full kitchen-sink.*

- Calculation of dose per litre of water and a product label or draft label with the specified dose.

## O10 Long-term environmental effects

The use of constituent substances which are classified with any of the hazard statements H410, H411 or H412 is limited as follows:

$$FV=100*CH_{410} + 10*CH_{411} + CH_{412} \leq 0,010 \text{ grams/litre in-use solution}$$

where

CH<sub>410</sub> = concentration of substances with H410 in grams/litre in-use solution\*

CH<sub>411</sub> = concentration of substances with H411 in grams/litre in-use solution\*

CH<sub>412</sub> = concentration of substances with H412 in grams/litre in-use solution\*

\* *The amount of ingoing substances with respective classification in the product at a dose of 0.60 grams / litre in-use solution, if the indicated dose on the label is less than or equal to 0.6 g / l. For products with dosage above 0.60g / litre in-use solution, the indicated dosage is used.*

Exemptions:

- Protease/Subtilisin classified as Aquatic Chronic 2 (H411) is exempt from the requirement, see also the requirement concerning enzymes in O5.
- Surfactants classified as H411 and H412 are exempted from the requirement, on condition that they are readily biodegradable\*\* and anaerobically biodegradable\*\*\*.

\*\* *In accordance with the DID list, version 2016 or later. If the substance is not on the DID list, or data on the DID list is lacking, the substance is documented in accordance with test method no. 301 A–F or no. 310 in the OECD guidelines for testing of chemicals, or other equivalent test methods evaluated by an independent body and controlled by Nordic Ecolabelling.*

\*\*\* *In accordance with the DID list, version 2016 or later. If the substance is not on the DID list, or data on the DID list is lacking, the substance is documented in accordance with ISO 11734, ECETOC no. 28 (June 1988) or OECD 311 or other equivalent test methods evaluated by an independent body and controlled by Nordic Ecolabelling.*

If information about the substance being hazardous to the environment (in the form of data concerning toxicity and biodegradability, or toxicity and bioaccumulability) is not available, the substance is treated as a worst case, i.e. as environmentally hazardous, H410.

- Calculation according to the above formula showing that the requirement is fulfilled. Nordic Ecolabelling's calculation sheet can be used and can be obtained from Nordic Ecolabelling's websites.
- Appendices 2 (product) and 3 (raw material) signed and completed, or alternatively equivalent signed information.
- Report on surfactants that are to be exempted from the requirement (quantity, classification, biodegradability).

## O11 Critical dilution volume (CDV)

The critical dilution volume (CDV) is calculated for all constituent substances included in the hand dishwash detergent. CDV is a theoretical value that takes account of each substance's toxicity and biodegradability in the environment.

A product's critical dilution volume is calculated at a dose of 0.60 g/l of working solution, if the stated dose is less than or equal to 0.60 g/l. If the recommended dose exceeds 0.60 g/l, the recommended dose itself is used in the calculations. The recommended dose, however, cannot exceed 1,0 g/l (see O9).

The product's critical dilution volume (CDV) may not exceed the following limit value for  $CDV_{\text{chronic}}$

$CDV_{\text{chronic}} \leq 1500$  litres

CDV is calculated using the following formula for all substances in the product:

$$CDV_{\text{chronic}} = \sum CDV_i = \sum (\text{dose}_i \times DF_i \times 1000 / TF_i \text{ chronic})$$

$\text{dose}_i$  = the constituent volume of each individual substance "i", in g/l in-use solution

$DF_i$  = degradation factor for substance "i", in accordance with the DID list

$TF_i \text{ chronic}$  = chronic toxicity factor for substance "i", in accordance with the DID list.

If

$TF_i \text{ chronic}$  is lacking,  $TF_i \text{ acute}$  can be used.

- ☒ Calculation of  $CDV_{\text{chronic}}$  for the hand dishwash detergent. Nordic Ecolabelling's calculation sheet can be used and can be obtained from Nordic Ecolabelling's websites

Reference to the DID list, version 2016 or later. If substances are not on the DID list, or data on the DID list is lacking, the parameters must be calculated based on the guidance in part B of the DID list, and the related documentation must be submitted.

## O12 Surfactants – aerobically and anaerobically biodegradable

- a) All surfactants must be easily biodegradable according to test method no. 301 A–F in the OECD guidelines for testing of chemicals or other equivalent testing methods evaluated by an independent body and controlled by Nordic Ecolabelling.
- b) All surfactants must be anaerobically biodegradable in accordance with ISO 11734, ECETOC no. 28, OECD 311 or equivalent testing methods evaluated by an independent body and controlled by Nordic Ecolabelling.

- ☒ Reference to the DID list dated 2016 or later versions.

If the DID list, dated 2016 or later, lacks the relevant data for surfactants, data may be taken from the safety data sheet on condition that the data is reliable and that the test methods are in agreement with Appendix 1. Section B of the DID list shows how to make the calculations of the various factors. It is also permitted to refer to analogous observations, as long as they are carried out by a competent, independent third party, and refer to relevant data from literature that has been subject to scientific scrutiny.

## 5 Performance

Under the requirement, a product must be at least as good as or better than the product with which it is being compared (the reference product).

### O13 Performance test

Performance is measured as the product's cleaning ability (ability to remove soiling/make dishes clean), and its cleaning capacity (how long the product lasts), and it is compared with a reference product.

The product must be as good as or better than the reference. This entails that at least 80% of the testing rounds (e.g. 4 out of 5) must yield a positive result for the test product (as good as or better than the reference product) in order for the test product to be considered in compliance with the performance requirement. Alternatively, the applicant may use statistical methods and, with a one-sided 95% confidence interval, show that the test product is as good as or better than the reference product in at least 80% of the testing rounds.

The performance must be tested in a laboratory test (see test laboratory requirements in Appendix 1) within the parameters described in Appendix 5. The results are to be presented in the report, as set out in Appendix 5. The test must be performed by a laboratory that meets the requirements concerning test laboratories in Appendix 1.

- The reference product is tested at the lowest recommended dose, as stated on the packaging. If there are no dosing instructions for the reference, the dose is set at the same as for the test product.
- The test product is tested at the lowest recommended dose. Hand dishwashing tablets should be tested as in-use solution, when the detergent is used for a full kitchen-sink, following the instructions.
- The reference product is defined as a product that at the time is one of the most well-established/market-leading hand dishwashing detergents in a Nordic country or in the countries in which the product will be sold.
- The reference product must be a product other than the product that is set to be ecolabelled. The reference product must be made by a manufacturer other than the one that produces the applicant product.
- The reference product must be purchased specifically for the test. Products for the professional market are to be tested against another professional product, and similarly a consumer product must be compared against another consumer product. If the product is marketed to both the professional and consumer markets, the test is performed against a professional product.

Test report showing that the product is as good as or better than the reference product, in accordance with Appendix 5.

Documentation on the test laboratory, in accordance with Appendix 1.

## 6 Packaging

Nordic Ecolabelling have set requirements on packaging to increase the possibility to recycle the material to make the materials be reused and there contribute to circular economy. Requirements O14-O16 are requirements on the primary packaging such as bottles, containers, pouches, cardboard boxes etc. The requirement regarding recycling design has been divided into two requirements, one for pouches (O15) and one for other types of packaging (O14).

Hand dishwashing tablets must be diluted at least 10 times by the user to the finished product with a certain amount of water. If they are sold with a refill bottle, both the tablet packaging and the refill bottle must meet the packaging requirements. If spray bottles are used, they must have a permanent aerosol reducing foaming nozzle.

#### O14 A - Recycling design of packaging (except pouches)

Plastic packaging should have a design that enables material recovery. This means that:

- The plastic packaging and closure must be made from Polyethylene (PE), Polypropylene (PP) or Polyethylene terephthalate (PET).
- Exemption is made for spray devices which may contain the following plastics in small technical details: polyoxymethylene (POM), expanded polyethylene (EPE), ethylene-butyl acrylate copolymer (EBA), synthetic rubber copolymer of acrylonitrile and butadiene (NBR), and up to 6% Ethylene vinyl acetate (EVA).
- PS (polystyrene) and PVC (polyvinyl chloride) or plastics based on other types of halogenated plastics must not be present in the closure.
- Packaging should be white or uncoloured. Exemption: packaging containing recycled plastic (postconsumer recycled) may be coloured/tinted. The colouration may not include carbon black. Exemption is made for small amounts of carbon black used in other colours than black. It must then be documented that the NIR sensor reads and sorts the box/bottle/container or the closure to the correct plastic fraction.
- Carbon black pigments cannot be added to the closures. Exemption is made for small amounts of carbon black used in other colours than black. It must then be documented that the NIR sensor reads and sorts the box/bottle/container or the closure to the correct plastic fraction.
- Fillers (such as CaCO<sub>3</sub>) can not be included in PE or PP packaging and closures at a level that the density of the plastic exceeds 0.995g / cm<sup>3</sup>.
- Metal parts must not be part of packaging or closure.  
Exemption is made for small metal parts in pumps.
- Packaging and closures must be compatible with each other, in accordance with the following:

- PET: Closures must have a density of less than 1 g / cm<sup>3</sup>.

- Silicon closures are not allowed

Exemption is made for PET-Squeeze bottles: Closures may include a membrane composed of floating silicon with a density of less than 0.95 g/cm<sup>3</sup> (containing less than 1000 ppm of D4, D5, and D6). The packaging must be certified as fully recyclable according to RecyClass guidelines. Additionally, the packaging must attain a minimum recyclability score of B, as verified by a recyclability rate certificate by RecyClass.

- PP and PE:

- Silicon closures are not allowed

- PE: PP/OPP closures are not allowed unless the following test or similar is stated on the packaging: Take the cap/closure off prior to recycling to improve recycling.



*Packaging includes bottles, containers and similar. Closures includes caps/lids, dosage equipment and pumps mounted on the packaging.*

Hand dishwashing tablets that are diluted in spray bottles: all spray products must have a permanent aerosol reducing foaming nozzle.

- Packaging specifications (including bottle, labels and closures) or certificate showing the plastic used and what colours the packaging and closure has.
- Appendix 4 declaration from the manufacturer of the packaging.
- A signed declaration of compliance with the stated material composition for the packaging, including bottle, the closure, filler, colourant where applicable, Appendix 4 or an equivalent declaration may be used.
- Declaration/documentation from the manufacturer of the spray trigger, stating that it has a permanent foaming nozzle.
- A calculation showing that the density measurement is not exceeded.
- Information of label size compared to the surface of the packaging.
- Label showing text regarding instruction to remove the cap before recycling, where applicable.

#### O14 B - Labels for rigid plastic packaging: Design for recycling of packaging

- For containers in polyethylene (PE) and polypropene (PP): The following label materials are permitted:
  - Polyolefin plastic labels (PE and PP) as well as PET or PET-G labels with density > 1.0 g/cm<sup>3</sup>. For labels of different material than the packaging, the suitability must be substantiated in accordance with Recyclclass' Washing quick test procedure. For film labels applied on HDPE & PP containers, version 1.0<sup>1</sup>.
  - Paper labels without fibre loss. The suitability must be substantiated in accordance with Recyclclass' Washing quick test procedure: For paper labels applied on HDPE & PP containers, standard laboratory practice, version 1.0<sup>2</sup>.
- Containers in polyethylene terephthalate (PET) must have a label of a different plastic material, with a density < 1.0 g/cm<sup>3</sup>, or a paper label without fibre loss.
  - Paper labels without fibre loss: The suitability must be substantiated in accordance with Recyclclass' Washing quick test procedure: For paper labels applied on HDPE & PP containers, standard laboratory practice, version 1.0<sup>3</sup>

*Note: PET-G is not allowed in labels on PET containers. For the time being, cPET labels are also not permitted. Nordic Ecolabelling will consider allowing cPET-labels with the appropriate specifications, if cPET labels become endorsed by EPBP (The European PET Bottle Platform) for PET bottles and/or by RecyClass ([www.recyclass.eu](http://www.recyclass.eu)).*

<sup>1</sup> [https://recyclass.eu/wp-content/uploads/2021/10/RecyClass-Washing-QT-Procedure-for-Film-Labels-applied-on-HDPE-and-PP-Containers\\_FINAL.pdf](https://recyclass.eu/wp-content/uploads/2021/10/RecyClass-Washing-QT-Procedure-for-Film-Labels-applied-on-HDPE-and-PP-Containers_FINAL.pdf) (Accessed on 2021-11-19)

<sup>2</sup> [https://recyclass.eu/wp-content/uploads/2021/10/RecyClass-Washing-QT-Procedure-for-Paper-Labels-applied-on-HDPE-and-PP-Containers\\_FINAL.pdf](https://recyclass.eu/wp-content/uploads/2021/10/RecyClass-Washing-QT-Procedure-for-Paper-Labels-applied-on-HDPE-and-PP-Containers_FINAL.pdf) (Accessed on 2021-11-19)

<sup>3</sup> [https://recyclass.eu/wp-content/uploads/2021/10/RecyClass-Washing-QT-Procedure-for-Paper-Labels-applied-on-HDPE-and-PP-Containers\\_FINAL.pdf](https://recyclass.eu/wp-content/uploads/2021/10/RecyClass-Washing-QT-Procedure-for-Paper-Labels-applied-on-HDPE-and-PP-Containers_FINAL.pdf) (Accessed on 2021-11-19)

- Polystyrene (PS), polyvinyl chloride (PVC) and other halogenated plastics must not be used in labels.
- Metallized labels/shrink film labels are not permitted.

*Exemption for lightly metallized labels by vacuum deposition techniques containing an aluminium layer below 5 micrometres, if the packaging is proven to be as recyclable as a packaging with a label without metal, according to a sorting test carried out at a sorting facility. Recyclclass sorting test or other equivalent test methods can be used.*

- For labels of different material than the packaging:  
Labels must not cover more than 60% of the container. The calculation of the percentage shall be based on the two-dimensional profile of the container i.e., the area of the top and bottom of the packaging and the sides of a box/ container/bottle/can shall not be included in the calculation. If the label on the front of pack and back of pack are of different size, the maximum percentage of 60% shall be fulfilled for each side separately. For a cylindrical bottle, the calculation can also be based on the three-dimensional profile exclusive bottom and top of the bottle.
- Direct print on the container is not permitted except for date codes, batch codes and UFI (Unique Formula Identifier).

*Label means "traditional label", shrink film label/sleeve, direct print etc.*

*Please note: Nordic Ecolabelling conducted a project on labels in 2020 and concluded that requirements on labels should be included in the criteria. This requirement is introduced with a transition period until 2024-12-31. More information can be found in the background document under section "Labels" under the argumentation regarding requirement O14 B.*

- Label specifications showing the material used and density. Appendix 4 Declaration from the manufacturer(s) of the packaging can be used as part of the documentation.
- If plastic labels of different material than the container is used on PE or PP containers. Test report from a laboratory fulfilling the conditions in Appendix 1, showing that the label is approved.
- If paper labels are used: Test report from a laboratory fulfilling the conditions in Appendix 1, showing that the label is approved.
- Declarations that PS, PVC and other halogenated plastics, aluminium and other metals have not been used. Appendix 4 can be used.
- For labels of different material than the packaging: Calculation of label size compared to the surface of the container.
- Declaration from the applicant that direct print is not used except for date codes, batch codes and UFI. Appendix 2 can be used.

## O15 Recycling design of pouches

- The plastic packaging and closure must be made from Polyethylene (PE), Polypropylene (PP) or Polyethylene terephthalate (PET).
- The packaging should be made of monomaterial, i.e. not laminates with layers of different materials.

- Silicone, PS and PVC or plastics based on other types of halogenated plastics must not be present in the closure or label.
- Carbon black pigments can not be added to the pouch.

Exemption is made for text and pictograms.

Exemption is also made for small amounts of carbon black used in other colours than black. It must then be documented that the NIR sensor reads and sorts the pouch to the correct plastic fraction.

- Carbon black pigments can not be added to the closures. Exemption is made for small amounts of carbon black used in other colours than black. It must then be documented that the NIR sensor reads and sorts the closure to the correct plastic fraction.
- Fillers (such as CaCO<sub>3</sub>) can not be included in PE or PP packaging and closures at a level that the density of the plastic exceeds 0.995g / cm<sup>3</sup>.
- Barrier coatings can only be made out of EVOH (Ethylene vinyl alcohol) in maximum amounts of 5% related to the total weight.

*Closures includes caps and lids. The packaging includes pouches or other plastic "bags".*

- Packaging specifications (including pouch, labels, and closures) or certificate showing the plastic used and what colours the packaging and closure has.
- Appendix 4 declaration from the manufacturer of the packaging.
- A signed declaration of compliance with the stated material composition and barrier coatings, for the packaging including pouch, closure, filler, colourant where applicable, Appendix 4 or an equivalent declaration may be used.
- A calculation showing that the density measurement is not exceeded.

## O16 Weight-Utility Ratio (WUR)

WUR is a measure of the amount of packaging used to deliver an amount of product with a certain benefit.

The exemptions from WUR calculation are:

- Packaging made from more than 80% postconsumer recycled (PCR)\* raw material is exempted from the requirement.
- Products that are supplied in packaging that is part of a take-back system\*\* for a product.

*\* Post-consumer/commercial recycled material is defined in the requirement according to ISO 14021:2016:*

*"Post-consumer/commercial" is defined as material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.*

*\*\* Take-back system refers to packaging that are taken back, washed and refilled. Packaging that is a part of a recycling system where the packaging is recycled into new plastic is not part of what here is called a take-back system.*

The calculation of WUR (grams of packaging/litre of in-use solution) is performed as follows:

$$WUR = \Sigma [(2 \cdot V_i - 2.5 \cdot R_i) / (D_i \cdot t_i)] \leq \text{limit value}$$

Limit value:

Liquid hand dishwashing detergents: 0,1 gram packaging / litre in-use solution

Hand dishwashing tablets: 30 gram packaging / litre in-use solution

$V_i$  = Weight of primary packaging in grams, including closure, fitted dosing devices and similar + any refills (that are sold per original bottle) in grams including closures.

$R_i$  = Weight (g) of recycled material (postconsumer) in the packaging component (i) in grams.

*Packaging is considered postconsumer recycled if the raw materials are recovered following use by consumers. If the raw material is industrial waste from the material or packaging producer's own production, the material is not considered to be recycled.*

$D_i$  = No. of functional doses in the primary packaging component (i). For products that are sold pre-diluted,  $D$  = product volume (in no. of litres). If the primary packaging is sold packaged together with a refill,  $D$  is calculated as the sum of the functional doses in both packs (just as  $V$  is the sum of the weight of both packs (see description of  $V$ )).

*Hand dishwashing tablets: in-use solution, is here defined as the tab diluted in the bottle following the manufacturer's instruction.*

- Declaration/documentation from the packaging manufacturer stating the type of material in the packaging components (e.g. closure (cap, spray nozzle etc.), bottle and labels). Appendix 4 can be used.
- Calculation of weight-utility ratio (WUR) and required documentation on reuse of the packaging component. Nordic Ecolabelling's calculation sheet can be used and can be obtained from Nordic Ecolabelling's websites
- Declaration from the packaging manufacturer about the proportion of recycled material, if recovered/recycled material is used. Appendix 4 can be used.
- If the exemption is used:
  - Documentation that shows that packaging made of more than 80% postconsumer recycled (PCR) material (Appendix 4 can be used).
  - or
  - Documentation that shows is part of a take-back system for a product.

## 7 Quality and regulatory requirements

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

### O17 Responsible person and organisation

The company shall appoint individuals who are responsible for ensuring the fulfilment of the Nordic Ecolabelling requirements, for marketing and for

finance, as well as a contact person for communications with Nordic Ecolabelling.

- Organisational chart showing who is responsible for the above.

### O18 Documentation

The licensee must archive the documentation that is sent in with the application, or in a similar way maintain information in the Nordic Ecolabelling data system.

- Checked on site as necessary.

### O19 Quality of hand dishwash detergent

The licensee must guarantee that the quality of the Nordic Swan Ecolabelled product does not deteriorate during the validity period of the licence.

- The claims archive is checked on site.

### O20 Planned changes

Written notice must be given to Nordic Ecolabelling of planned changes in products and markets that have a bearing on Nordic Ecolabelling requirements.

- Procedures detailing how planned changes in products and markets are handled.

### O21 Unplanned nonconformities

Unplanned nonconformities that have a bearing on Nordic Ecolabelling requirements must be reported to Nordic Ecolabelling in writing and journalled.

- Procedures detailing how unplanned nonconformities are handled.

### O22 Traceability

The licensee must be able to trace the Nordic Swan Ecolabelled product in the production. A manufactured / sold product should be able to trace back to the date (time and date) and the location (specific factory), as well as the relevant machine / production line where it was produced. In addition, it should be possible to link the product with the actual raw material.

- Description / routines of how the requirement is met.

### O23 Legislation and regulations

The licensee shall ensure compliance with all applicable local laws and provisions at all production facilities for the Nordic Swan Ecolabelled product, e.g. with regard to safety, working environment, environmental legislation and site-specific terms/permits.

- Duly signed application form.

- The requirement is checked on site. The applicant must be able to describe on on-site inspection to which regulatory authorities they are subject to, as well as the authorities' site-specific conditions and environmental concessions.

## Regulations for the Nordic Ecolabelling of products

When the Nordic Swan Ecolabel is used on products the licence number shall be included.

More information on graphical guidelines, regulations and fees can be found at [www.nordic-swan-ecolabel.org/regulations/](http://www.nordic-swan-ecolabel.org/regulations/)

## Follow-up inspections

Nordic Ecolabelling may decide to check whether the product fulfils Nordic Ecolabelling requirements during the licence period. This may involve a site visit, random sampling or similar test.

The licence may be revoked if it is evident that hand dishwash detergent does not meet the requirements.

Random samples may also be taken in-store and analysed by an independent laboratory. If the requirements are not met, Nordic Ecolabelling may charge the analysis costs to the licensee.

## History of the criteria

Nordic Ecolabelling adopted version 6.0 of the criteria for hand dishwashing detergents on 14 March 2018. The criteria are valid until 31 October 2022.

On the 14 May 2019 Nordic Ecolabelling decided to adjust requirement O14 by allowing metal parts in pumps for hand dishwashing bottles. The new version is called 6.1.

On the 21 January 2020 Nordic Ecolabelling decided to adjust requirements O14-O16 to harmonise them with same requirements in criteria for laundry detergents and stain removers. The new version is called 6.2.

Nordic Ecolabelling decided on 23 February 2021 to prolong the criteria for with 12 months to the 31 October 2023. The new version is called 6.3.

On the 16 November 2021 Nordic Ecolabelling decided to expand the product group to also include hand dishwashing tablets that are diluted at least 10 times by the user to the finished product. On the 30 November 2021 it was decided to prolong the validity of the criteria until 31 December 2024.

Further, as notified in O14 on publishing, Nordic Ecolabelling has conducted a label project to investigate how requirements for labels could be implemented in the criteria. The new label requirement called "O14 – B Labels for rigid plastic packaging: Design for recycling of packaging" is now included in the criteria, with a transition period until 2023-12-31. The new version is called 6.4.

On the 29 March 2022 Nordic Ecolabelling decided to adjust requirement O10 by also exempting H411 classified surfactants from the requirement. The new version is called 6.5.

On 18 October 2022, Nordic Ecolabelling decided to change the allowed amount of EVOH in recycling flexible plastic pouches (O15) from 2% to 5%. On 29 November 2022, Nordic Ecolabelling further decided to prolong the validity of the criteria with 12 months to 31 December 2025. The new version is called 6.6.

On 31 January 2023, Nordic Ecolabelling decided to exempt lightly metallized labels by vacuum deposition techniques containing an aluminium layer below 5 micrometres from requirement O14B, if the packaging is proven to be as recyclable as a packaging with a label without metal. The new version is called 6.7.

On 07 November 2023 Nordic Ecolabelling decided to change the transition period of the requirement O14B Labels for rigid plastic packaging until 2024-12-31. The new version is called 6.8.

On 28 May 2024 Nordic Ecolabelling decided to exempt closures with membrane composed of floating silicon for PET squeeze bottles from the silicon prohibition in requirement O14A. The new version is called 6.9.

## Appendix 1            Analyses, test methods and calculations

### 1A Requirements on the analysis laboratory

The following stipulations apply regarding performance and ecotoxic effects. 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.

### 1B Requirements on the analysis laboratory for performance

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

The applicant's own laboratory, and external testing institutes that do not meet EN ISO 17025 or have official GLP status, may be approved to carry out performance tests. In this case, the following conditions must be met:

- The organisation must be ISO 9001 certified.
- The test laboratory must be covered by the certification, and the performance test must be included in the quality management system.
- Nordic Ecolabelling is to be given access to all the raw data from the performance test.

The applicant's own laboratory may be approved to carry out performance tests even if the test laboratory and the performance test are not covered by ISO 9001 certification. The following conditions must be met:

- The organisation must have a quality assurance system, an ISO 9001 certification. The laboratory and the performance test do not have to be within the certification, but it needs to be described in that system.
- Nordic Ecolabelling is to be given access to all the raw data from the performance test.
- The laboratory must document that the test method used is aimed at differentiating between different hand dishwashing detergents, and that the results achieved are reproducible.
- It must be possible for Nordic Ecolabelling to come and observe the performance of a test.

### 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 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



For chronic aquatic toxicity test methods nos. 210\*, 211, 215\* and 229\* in the OECD Guideline for the Testing of Chemicals (ISBN 92-64-1222144) or equivalent test methods are used. OECD 201 can be used as chronic test if chronic endpoints are chosen.

#### **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 logK<sub>ow</sub> value  $\geq 4.0$  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  $\leq 500$ , the substance is not considered bioaccumulating even if logK<sub>ow</sub>  $\geq 4.0$ .

OECD's 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), OECD 311 or some other scientifically approved method. In order for a substance to be regarded as anaerobically degradable, a minimum of 60% mineralisation is required after maximum 60 days (equates to > 60% ThOD / ThCO<sub>2</sub> or > 70% DOC reduction).

Substances that are not surfactants and are not found on the DID-list, may be exempted from the anaerobic degradability requirements if they are aerobically degradable and not toxic to aquatic organisms

(NOEC/EC<sub>x</sub> > 0.1 mg/l or LC<sub>50</sub>/EC<sub>50</sub>/IC<sub>50</sub> > 10 mg/l), and if any of the following criteria are fulfilled:

- 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 bioaccumulable

Adsorption/desorption is determined using method 106 in OECD Guidelines or ISO CD 18749 "Water quality – Adsorption of substances on activated sludge", mineralisation in the test (> 70% BOD/ DOC/COD reduction) after 28 days.

## 7 (Potential) endocrine disruptors

A (potential) endocrine disruptor is an exogenous substance or mixture of substances that changes the function(s) of the hormonal system and thus causes serious health effects in an unaffected organism, its offspring or populations.

Nordic Ecolabelling counts all substances that in the EU are considered to be (potential) endocrine disruptors (categories 1, 2 and 3b: “Category 1 - evidence of endocrine disrupting activity in at least one species using intact animals”; “Category 2 - at least some in vitro evidence of biological activity related to endocrine disruption”). Where changes are made to the EU's list, it is the latest updated reports that apply.

The most recent reports can be obtained from

[http://ec.europa.eu/environment/chemicals/endocrine/pdf/final\\_report\\_2007.pdf](http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf)

and an Access database in which all evaluated substances listed can be downloaded at

[http://ec.europa.eu/environment/chemicals/endocrine/strategy/index\\_en.htm](http://ec.europa.eu/environment/chemicals/endocrine/strategy/index_en.htm).

## 8 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 via the relevant national Nordic Ecolabelling website (see beginning of this document for contact information).

For these criteria, the DID list dated 2016 or later versions apply.

To calculate CDV in R11, a worksheet is available from Nordic Ecolabelling Web sites, see the beginning of this criteria document.

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

## Appendix 2 Declaration from the producer of the hand dishwash detergent

To be used in conjunction with an application for a licence for the Nordic Swan Ecolabelling of hand dishwash detergents. To complete the following declaration, you will need declarations for all raw materials (Appendix 3 or equivalent declaration).

This declaration is based on the knowledge we have at the time of the application, based on tests and/or declarations from raw material manufacturers, with reservations for new advances and new knowledge. Should such new knowledge arise, the undersigned is obliged to submit an updated declaration to Nordic Ecolabelling.

Product name: \_\_\_\_\_

Professional product

*Products for professional use are defined here as products that are marketed for use in professional contexts such as institutions, catering kitchens, restaurants and within the public sector.*

*Where products are sold to both professionals and consumers, the product is considered a professional product if the proportion sold to professionals is 80% or higher. Where there is any confusion about whether a product is for professionals or consumers, Nordic Ecolabelling may require documentation explaining where the product is intended to be sold.*

Consumer/retail product

Ingoing substances and impurities are defined below, unless stated otherwise in the requirements

- Ingoing substances: all substances in the Nordic Swan Ecolabelled product, including additives (e.g. preservatives and stabilisers) in the raw materials. Substances known to be released from ingoing substances (e.g. formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
- Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials that remain in the raw material/ingredient and/or in the in the Nordic Swan Ecolabelled product in concentrations less than 100,0 ppm (0,01000 weight percent, 100,0 mg/kg) in the Nordic Swan Ecolabelled product.
- Impurities in the raw materials exceeding concentrations of  $\geq 10000$  ppm ( $\geq 1,000$  weight percent,  $\geq 10000$  mg/kg) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product.

Examples of impurities are residues of the following: residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.

<b>O5: Does the product contain substances classified with any of the hazard phrases below?</b>			
Incl. all classification variants. For example, H350 also covers classification H350i.			
H350 – Carc 1A eller 1B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H351 – Carc 2	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H340 – Muta 1A eller 1B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H341 – Muta 2	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H360 – Repr 1A och 1B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H361 – Repr 2	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H362 – Lact.	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H334 – Resp Sens. 1/1A/B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H317 – Skin Sens. 1/1A/B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
<b>O6: Does the product contain any of the following substances?</b>			
Alkylphenoethoxylates (APEO) and/or alkylphenol derivatives (APD)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
EDTA (Ethylenediaminetetraacetic acid) and its salts and/or DTPA (diethylene triamine pentaacetic acid, CAS 67-43-6)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Quaternary ammonium salts that are not readily biodegradable	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Organochloride compounds and hypochlorite	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Methyldibromoglutaronitrile ((MG, CAS 35691-65-7)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Nitro musks and polycyclic musk compounds	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Perfluorinated and polyfluorinated substances (PCF)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Phosphate, phosphonate, phosphonic acid and phosphoric acid	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
BHT (butylated hydroxytoluene, cas 128-37-0) <i>An exception is made for BHT in perfumes in the amount of ≤100 ppm provided that the amount in the cosmetic products does not exceed 1 ppm.</i>	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Microplastics <i>Microplastic means particles with a size of below 5 mm of insoluble macromolecular plastic, obtained through one of the following processes: (a) a polymerisation process such as polyaddition or polycondensation or a similar process using monomers or other starting substances; (b) chemical modification of natural or synthetic macromolecules; (c) microbial fermentation.</i>	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Substances considered to be (potential) category 1 or 2 endocrine disruptors accordance with the European Union's reports concerning endocrine disruptors The EU's reports on potential endocrine disruptors can be read in their entirety at <a href="http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf">http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf</a> , see appendix page 238 onwards)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Substances that have been judged in the EU to be PBT (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative), in accordance with the criteria in Annex XIII of REACH and substances that have not yet been investigated but which meet these criteria.	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Substances on the Candidate List (SVHC), se ECHA webpage: <a href="http://echa.europa.eu/sv/candidate-list-table">http://echa.europa.eu/sv/candidate-list-table</a>	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Nanomaterials/-particles <i>The definition of a nanomaterial follows the European Commission's definition of nanomaterials from 18 October 2011, "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, TiO<sub>2</sub>, SiO<sub>2</sub> and Ag. Polymer emulsions are not considered nanomaterials</i>	Yes	<input type="checkbox"/>	No <input type="checkbox"/>

<b>O7: Does the product contain fragrances (incl. plant extracts)?</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>														
If yes, have fragrances been added in line with IFRA guidelines? (IFRA, International Fragrance Association, <a href="http://www.ifraorg.org/">www.ifraorg.org/</a> )	Yes <input type="checkbox"/> No <input type="checkbox"/>														
If yes, does the product contain fragrance substances that are judged to be sensitising with the hazard statement H317 and/or H334, or which is subject to declaration? If yes, please send in perfume specifications.	Yes <input type="checkbox"/> No <input type="checkbox"/>														
If yes, does the product contain following:	Yes <input type="checkbox"/> No <input type="checkbox"/>														
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Verbena absolute Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.	8024-12-02 8007-80- 5/84649-98-9														
If yes, please send in perfume specifications.															
If yes, does the product contain HICC, chloroatranol and atranol?	Yes <input type="checkbox"/> No <input type="checkbox"/>														
<b>O8: Does the product contain preservatives?</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>														
If yes, please state name and log w/BCF															
<b>O10: Does the product contain substances classified as environmentally hazardous with H410, H411 and H412, incl. selfclassification in ECHA's database?</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>														
If yes, please state the amount (% by weight) per classification:  _____															
<b>O14: Are all parts of packaging compatible in regards of O14-O15?</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>														
<b>O14B: Is there any direct print on the container except for date codes, batch codes and UFI (Unique Formula Identifier)?</b>	Yes <input type="checkbox"/> No <input type="checkbox"/>														

If the answer to any of the above questions is Yes, state the CAS no. (where possible), chemical name and level (in ppm, % by weight or mg/kg). Also state whether the substance is contained in the form of an impurity or an added substance.

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In the event of any change to the composition of the product, a new declaration of fulfilment of the requirements is to be submitted to Nordic Ecolabelling.

Place and date	Company name or stamp
Responsible person	Signature of responsible person (electronic signature is accepted)
Telephone	Email

## Appendix 3 Declaration from the manufacturer of the raw material / ingredient

To be used in conjunction with an application for a licence for the Nordic Ecolabelling of hand dishwash detergents.

This declaration is based on the knowledge we have at the time of the application, based on tests and/or declarations from raw material manufacturers, with reservations for new advances and new knowledge. Should such new knowledge arise, the undersigned is obliged to submit an updated declaration to Nordic Ecolabelling.

Trade name of the raw material/ingredient:

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Ingoing substances in the raw material/ingredient (chemical name, CAS-number, amount in weight-%):

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Function of the raw material/ingredient(s), including all ingoing substances:

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Please note that substances that are defined as surfactants according to Detergent Regulation (EC) No 648/2004, must always be reported with the function "surfactant".

Suggested DID-numbers for the raw material/ingredient(s), including all declared ingoing substances (The DID list can be obtained from <http://www.nordic-ecolabel.org/product-groups/group/?productGroupCode=025>):

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*Please note that the information in this declaration is internally shared with certification personnel in Nordic Ecolabelling to be used in evaluation of applications of chemical technical products.*

Ingoing substances and impurities are defined below, unless stated otherwise in the requirements

- Ingoing substances: all substances in the Nordic Swan Ecolabelled product, including additives (e.g. preservatives and stabilisers) in the raw materials. Substances known to be released from ingoing substances (e.g. formaldehyde, arylamine, in situ-generated preservatives) are also regarded as ingoing substances.
- Impurities: residuals, pollutants, contaminants etc. from production, incl. production of raw materials that remain in the raw material/ingredient and/or in the in the Nordic Swan Ecolabelled product in concentrations less than 100 ppm (0,0100 weight percent, 100 mg/kg) in the Nordic Swan Ecolabelled product.
- Impurities in the raw materials exceeding concentrations of  $\geq 10000$  ppm ( $\geq 1,000$  weight percent,  $\geq 10000$  mg/kg) are always regarded as ingoing substances, regardless of the concentration in the Nordic Swan Ecolabelled product

Examples of impurities are residues of the following: residues or reagents incl. residues of monomers, catalysts, by-products, scavengers, and detergents for production equipment and carry-over from other or previous production lines.

Please note! If the raw material contains contaminants listed in this appendix, write the amount at the end of the appendix. The manufacturer of the Nordic Swan Ecolabelled product is responsible for calculating compliance with the requirements of the criteria.



<b>Part 1 – General requirements (applies to all raw materials)</b>			
<b>O5: Does the raw material/ingredient contain substances classified with any of the hazard phrases below?</b>			
Incl. all classification variants. For example, H350 also covers classification H350i.			
H350 – Carc 1A eller 1B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H351 – Carc 2	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H340 – Muta 1A eller 1B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H341 – Muta 2	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H360 – Repr 1A och 1B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H361 – Repr 2	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H362 – Lact.	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H334 – Resp Sens. 1/1A/B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
H317 – Skin Sens. 1/1A/B	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
<b>O6: Does the raw material/ingredient contain any of the following substances?</b>			
Alkylphenoethoxylates (APEO) and/or alkylphenol derivatives (APD)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
EDTA (Ethylenediaminetetraacetic acid) and its salts and/or DTPA (diethylene triamine pentaacetic acid, CAS 67-43-6)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Quaternary ammonium salts that are not readily biodegradable	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Organochloride compounds and hypochlorite	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Methyldibromoglutaronitrile ((MG, CAS 35691-65-7)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Nitro musks and polycyclic musk compounds	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Perfluorinated and polyfluorinated substances (PCF)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Phosphate, phosphonate, phosphonic acid and phosphoric acid	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
BHT (butylated hydroxytoluene, cas 128-37-0) <i>An exception is made for BHT in perfumes in the amount of ≤100 ppm provided that the amount in the hand dishwashing detergents does not exceed 1 ppm.</i>	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Microplastics <i>Microplastic means particles with a size of below 5 mm of insoluble macromolecular plastic, obtained through one of the following processes: (a) a polymerisation process such as polyaddition or polycondensation or a similar process using monomers or other starting substances; (b) chemical modification of natural or synthetic macromolecules; (c) microbial fermentation.</i>	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Substances considered to be (potential) category 1 or 2 endocrine disruptors accordance with the European Union's reports concerning endocrine disruptors The EU's reports on potential endocrine disruptors can be read in their entirety at <a href="http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf">http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf</a> , see appendix page 238 onwards)	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Substances that have been judged in the EU to be PBT (persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative), in accordance with the criteria in Annex XIII of REACH and substances that have not yet been investigated but which meet these criteria.	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Substances on the Candidate List (SVHC), se ECHA webpage: <a href="http://echa.europa.eu/sv/candidate-list-table">http://echa.europa.eu/sv/candidate-list-table</a>	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Nanomaterials/-particles <i>The definition of a nanomaterial follows the European Commission's definition of nanomaterials from 18 October 2011, "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, TiO<sub>2</sub>, SiO<sub>2</sub> and Ag. Polymer emulsions are not considered nanomaterials</i>	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
<b>O7: Does the raw material/ingredient contain fragrances (incl. plant extracts)?</b>			
If yes, have fragrances been added in line with IFRA guidelines? (IFRA, International Fragrance Association, <a href="http://www.ifraorg.org/">www.ifraorg.org/</a> )	Yes	<input type="checkbox"/>	No <input type="checkbox"/>

If yes, does the fragrance contain BHT? (see O6) If yes, please state the amount (ppm or % by weight)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>														
If yes, does the fragrance contain substances that are judged to be sensitising with the hazard statement H317 and/or H334, or which is subject to declaration? If yes, please send in perfume specifications.	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>														
If yes, does the fragrance contain following:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Cananga Odorata och Ylang-ylang oil</td> <td style="width: 40%;">83863-30-3; 8006-81-3</td> </tr> <tr> <td>Eugenia Caryophyllus Leaf / Flower oil</td> <td>8000-34-8</td> </tr> <tr> <td>Jasminum Grandiflorum / Officinale</td> <td>84776-64-7; 90045-94-6; 8022-96-6</td> </tr> <tr> <td>Myroxylon Pereirae</td> <td>8007-00-9;</td> </tr> <tr> <td>Santalum Album</td> <td>84787-70-2; 8006-87-9</td> </tr> <tr> <td>Turpentine oil</td> <td>8006-64-2; 9005-90-7; 8052-14-0</td> </tr> <tr> <td>Verbena absolute Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.</td> <td>8024-12-02 8007-80- 5/84649-98-9</td> </tr> </table>					Cananga Odorata och Ylang-ylang oil	83863-30-3; 8006-81-3	Eugenia Caryophyllus Leaf / Flower oil	8000-34-8	Jasminum Grandiflorum / Officinale	84776-64-7; 90045-94-6; 8022-96-6	Myroxylon Pereirae	8007-00-9;	Santalum Album	84787-70-2; 8006-87-9	Turpentine oil	8006-64-2; 9005-90-7; 8052-14-0	Verbena absolute Cinnamomum cassia leaf oil/Cinnamomum zeylanicum, ext.	8024-12-02 8007-80- 5/84649-98-9
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If yes, please send in perfume specifications.																		
If yes, does the fragrance contain HICC, chloroatranol and atranol?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>														
<b>O8: Does the raw material/ingredient contain preservatives?</b> If yes, please state name and log Kow/BCF:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>														
<b>O10: Does the raw material/ingredient contain substances classified as environmentally hazardous with H410, H411 and H412, incl. selfclassification in ECHA's database?</b> If yes, please state the amount (% by weight) per classification:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>														
<hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/>																		

If the answer to any of the above questions is Yes, state the CAS no. (where possible), chemical name and level (in ppm, % by weight or mg/kg). Also state whether the substance is contained in the form of an impurity or an added substance.

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**Are renewable raw materials used in the raw material/ingredient?**

Yes  No

**Part 2 – Only to be used if a raw material/ingredient contains renewable raw materials**

PLEASE ONLY ONE RENEWABLE RAW MATERIAL PER LINE

<b>Part 2 – List the renewable raw materials used (e.g. palm oil, coconut oil, rapeseed oil, beeswax) and the amount in % on a yearly basis:</b>		
	Origin of renewable raw material in the raw material/ingredient (e.g. palm oil, coconut oil, rapeseed oil, beeswax, etc)	Amount of the renewable raw material (weight percent) in the raw material/ingredient on a yearly basis The calculation of the proportion of the renewable material can be done using the following formula: Used amount renewable material / (used amount renewable material + used amount non-renewable material) x 100% Amounts in kg, molar weight or carbon atoms can be used in the calculation. Average carbon chain lengths can be used. State how the calculation has been done.
Renewable raw material 1		
Renewable raw material 2		
Renewable raw material 3		
Renewable raw material 4		
Renewable raw material 5		
Total amount (weight percent) of renewable raw materials in the raw material / ingredient:		

For each renewable raw material in the raw material / ingredient, the following data is to be completed.

<b>Renewable raw material 1</b> (e.g. palm oil or coconut oil or rapeseed oil or beeswax):	
Name of the supplier if stated:	
Is the renewable raw material sustainability certified? Yes <input type="checkbox"/> No <input type="checkbox"/>	
If yes, please state the raw material sustainability certification system:	
If a raw material sustainability certification system is used, state the level of traceability (shown in a Chain of Custody certificate where applicable)	
No traceability	<input type="checkbox"/>
Identity preserved	<input type="checkbox"/>
Segregated	<input type="checkbox"/>
Mass balance	<input type="checkbox"/>
Book & Claim	<input type="checkbox"/>
<b>Renewable raw material 2</b> (e.g. palm oil or coconut oil or rapeseed oil or beeswax):	

Name of the supplier if stated:	
Is the renewable raw material sustainability certified?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, please state the raw material sustainability certification system:	
If a raw material sustainability certification system is used, state the level of traceability (shown in a Chain of Custody certificate where applicable)	
No traceability	<input type="checkbox"/>
Identity preserved	<input type="checkbox"/>
Segregated	<input type="checkbox"/>
Mass balance	<input type="checkbox"/>
Book & Claim	<input type="checkbox"/>

<b>Renewable raw material 3</b> (e.g. palm oil or coconut oil or rapeseed oil or beeswax):	
Name of the supplier if stated:	
Is the renewable raw material sustainability certified?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, please state the raw material sustainability certification system:	
If a raw material sustainability certification system is used, state the level of traceability (shown in a Chain of Custody certificate where applicable)	
No traceability	<input type="checkbox"/>
Identity preserved	<input type="checkbox"/>
Segregated	<input type="checkbox"/>
Mass balance	<input type="checkbox"/>
Book & Claim	<input type="checkbox"/>

<b>Renewable raw material 4</b> (e.g. palm oil or coconut oil or rapeseed oil or beeswax):	
Name of the supplier if stated:	
Is the renewable raw material sustainability certified?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, please state the raw material sustainability certification system:	
If a raw material sustainability certification system is used, state the level of traceability (shown in a Chain of Custody certificate where applicable)	
No traceability	<input type="checkbox"/>
Identity preserved	<input type="checkbox"/>
Segregated	<input type="checkbox"/>
Mass balance	<input type="checkbox"/>
Book & Claim	<input type="checkbox"/>

<b>Renewable raw material 5</b> (e.g. palm oil or coconut oil or rapeseed oil or beeswax):	
Name of the supplier if stated:	
Is the renewable raw material sustainability certified?	Yes <input type="checkbox"/> No <input type="checkbox"/>
If yes, please state the raw material sustainability certification system:	
If a raw material sustainability certification system is used, state the level of traceability (shown in a Chain of Custody certificate where applicable)	
No traceability	<input type="checkbox"/>
Identity preserved	<input type="checkbox"/>
Segregated	<input type="checkbox"/>
Mass balance	<input type="checkbox"/>
Book & Claim	<input type="checkbox"/>

In the event of any change to the composition of the product, a new declaration of fulfilment of the requirements is to be submitted to Nordic Swan Ecolabelling.

Place and date	
Raw material producer	Company name or stamp
Responsible person	Signature of responsible person (electronic signature is accepted)
Telephone	Email

## Appendix 4 Declaration from the manufacturer of the primary packaging

To be used in conjunction with an application for a licence for the Nordic Ecolabelling of hand dishwash detergents.

This declaration is based on the knowledge we have at the time of the application, based on tests and/or declarations from raw material manufacturers, with reservations for new advances and new knowledge. Should such new knowledge arise, the undersigned is obliged to submit an updated declaration to Nordic Ecolabelling.

Producer/distributor
Part of the packaging (bottle, closure, label)
Packaging material (type of plastic (PE, PP, PET), cardboard etc.)

<b>Plastic packaging (including bottles)</b>				
Is the bottle white or coloured? (O14)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Is the bottle coloured/tinted with Carbon black (O14)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Is there metal coverings or metal seals or other metal parts? (O14)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are fillers used?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
If yes, state concentration and density of the plastic:				
Does the bottle contain postconsumer recycled material (PCR)? (O16)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
If yes, what is the recycling percent?				
<b>O15 Plastic packaging: pouches</b>				
Is the packaging of monomaterial, ie not laminates with different material layers (O15)?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Is the pouch white or coloured (O15)?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
<b>Is the pouch tinted/coloured with Carbon Black (O15)?</b>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are fillers used (O15)?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
If yes, state concentration and density of the plastic:				
Is there a barrier coating of EVOH (Ethylene vinyl alcohol) of max 5% of the weight of the packaging (O15)?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Does the packaging contain postconsumer recycled material (PCR)? (O16)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
If yes, what is the recycling percent?				
<b>Paper and cardboard packaging</b>				
Does the paper/cardboard packaging contain postconsumer recycled material (PCR)? (O16)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
If yes, what is the recycling percent?				
<b>Closures (including cork / lid and mounted dosing devices / pumps)</b>				
Is there PS and PVC or plastics based on other types of halogenated plastics present in the closure? (O16)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

Is the closure coloured black? (O14)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are there metal parts in the closure? (O14-15)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
What is the density (g/cm <sup>3</sup> ) of the closure? (see Appendix 5)				
Does the closure contain postconsumer recycled material (PCR)? (O16)	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
If yes, what is the recycling percent?				
<b>Labels and shrink film labels</b>				
Please specify the label material (O14B)				
_____				
_____				
For non-polyolefin plastic labels applied to PE or PP containers: Please state the density of the label (O14B)				
_____				
_____				
<i>Note: Density in g/cm<sup>3</sup>, not the grammage (g/cm<sup>2</sup>).</i>				
For labels applied to PET containers: Please state the density of the label (O14B)				
_____				
_____				
<i>Note: Density in g/cm<sup>3</sup>, not the grammage.</i>				
Is there PS (polystyrene) and PVC (polyvinylchloride) or plastic based on other types of halogenated plastics present in the label (O14B-O15)?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Are there metal parts in the label (O14B-O15)?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Does the packaging have labels covering > 60% of the surface of the packaging?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Does the label contain recycled material (postconsumer regrind/recycled) (O16)?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
If yes, what is the recycling percent?				

Place and date	Company name or stamp
Responsible person	Signature of responsible person (electronic signature is accepted)
Telephone	Email

## Appendix 5 Performance test

The purpose of the performance test is to demonstrate the satisfactory ability and capacity of an ecolabelled hand dishwasher detergent. The test procedure compares the test product (subject of the application) and a reference product with respect to cleaning ability and capacity. The use of test results in marketing should be avoided (and only used if the test method is specified in detail). The framework allows for a wide range of test procedures as long as the requirements below are a part of the test procedure. In the test, washing-up may be done by hand or a machine may be responsible for the mechanical work. Alternatively, the test may include no mechanical processing. The test is based on the washing of crockery (e.g. plates).

### Framework

The test shall be performed according to the following framework. At least five repetitions must be performed in which the test and reference products are compared with one another. Each repetition shall comprise two subtests – one for the test product and one for the reference product. The reference product and the test product shall be anonymous to the tester.

The elements and stages included in each repetition must be decided in advance and must be identical for each repetition (e.g. application of soil, processing and possible rinsing). The temperature and relative humidity of the room must be measured and kept reasonably constant in all repetitions (measured at beginning and end of test).

### Water test

In addition to the 10 subtests, a further test shall be performed in the same way as the other subtests but that uses water alone (no detergent). The water test shall demonstrate that the chosen test method is suitable for testing the cleaning performance of the hand dishwashing detergent. If the test demonstrates that water cleans equally as well as the hand dishwashing detergents, the test is unsuitable. The water test shall be performed after testing the test product and reference product respectively. The test is to be performed on the same number of plates as the capacity test. For example, if the average capacity of the reference product is 20 plates and that of the test product is 22 plates, 21 plates shall be used for the water test.

### Soil selection and preparation

The soil shall primarily consist of animal and vegetable fats. It should also contain proteins and carbohydrates (e.g. egg and flour). This means that soil should primarily contain fats. The origin or chemical composition of the soil must be described in detail (e.g. olive oil or animal fat). The soil must be homogenous and of even consistency. Enough soil for all 11 subtests must be prepared in one batch.

### Water

The water hardness and the calcium-magnesium-ratio must be known. The calcium-magnesium-ratio can be determined using deionised/distilled water that is then hardened with known quantities of calcium. The test shall be



performed using water of a typical hardness for the area in which the product is to be sold. Justification must be provided for the selection of water hardness.

Water hardness shall be specified in whole German degrees of hardness (°dH).

1°dH = 10 mg CaO or 7.19 mg MgO (0.179 mmol metal ions/litre) or equivalent quantity of other metal oxides per litre of water.

### **Preparation of washing water**

The volume of water must be determined in litres to one decimal point. The same volume of water must be used in all repetitions. The temperature of the water shall be measured in Celsius at the start and must be the same for all repetitions. The temperature shall be measured at the start and end of the washing cycle.

The test and reference detergent shall be dosed according to the lowest dosage recommended for each product respectively. The dosage shall be measured to one decimal point and shall be the same in all repetitions. The detergent must be mixed and completely dissolved in the water.

### **Test procedure**

The quantity of soil must be weighed in grams (or smaller unit) to two significant figures for each repetition.

The soil shall be introduced in the same way in each repetition via the crockery to be washed. All processing shall be performed in a predetermined, controlled fashion for all tests, preferably with 20 circular movements on the front and 6 circular movements on the back of the plates. If a different method of processing is used, a description and justification of this must be provided.

### **Assessment of cleaning capacity**

The test must be capable of generating results that provide a measure of capacity, i.e. how long the dishwashing detergent lasts. The test is then stopped at predetermined conditions. The recommended conditions are when there is no more foam but other indicators may be used. If a different indicator than “no foam” is chosen, this must be described and justified. The number of plates is determined when the predetermined conditions are reached. Either the total number of plates or the number of clean plates can be counted.

### **Assessment of cleaning ability**

The test must be capable of generating results that provide a measure of cleaning ability. This may be through visual, optical, gravimetric or some other relevant method of analysis. The method of analysis and units of measure shall be determined in advance and specified. Visual inspection can be performed using a rating scale.

The following rating scale can be used. Evaluation shall be performed by two people using the same lighting conditions (preferably a 1000-1500 lux lamp). Both the front and reverse of the plate shall be evaluated together:

5 = Completely clean

4 = 1-10 small fat droplets/spots with a maximum combined surface area of 4 mm<sup>2</sup>

3 = More than 10 small fat droplets/spots with a combined surface area of 4-50 mm<sup>2</sup>

2 = Fatty coating of 50-200 mm<sup>2</sup>

1 = Fatty coating of more than 200 mm<sup>2</sup>

## Results

The cleaning ability and capacity of the reference product and test product shall be documented for each test repetition. A positive result of a test round is obtained when the cleaning ability and capacity is as good or better for the test product compared with the reference product.

The test product is considered to have fulfilled the performance requirements when positive results are obtained in at least 80% of the test rounds (e.g. 4 out of 5). As an alternative, the applicant may use statistical methods and demonstrate with a one-sided 95% confidence range that the test product is as good as or better than the reference product in at least 80% of test rounds.

## Documentation

The entire test shall be reported in accordance with the framework specified above. The report must contain the following points:

- Specification of the temperature and humidity in the test room and details describing how the test person(s) ensured that these conditions were kept constant in all repetitions.
- Description of the composition of the soil and of the procedure used to ensure that the soil was of a homogenous and even consistency.
- Specification of the hardness of the water, and how it was achieved, and specification of the calcium-magnesium ratio.
- Specification of the quantity of water used in each part of the test.
- Water temperature at the start and end of the test.
- Specification of the results of the weighing of the hand dishwashing detergent (test product and reference product) in each repetition and description of the procedure for dissolving the product in the water.
- Specification of the results of the weighing of the soil in each repetition and a description of how the procedure for apply the soil to the plates.
- Description of how the products are kept anonymous from the test individuals.
- Description of the other steps and stages in each individual repetition.
- Description of how cleaning capacity is evaluated / determined.
- Description of how cleaning ability is measured and/or evaluated.
- The partial results from all five repetitions stated in terms of cleaning capacity and ability, including all raw data.
- Results of the water test in which no detergent was used.
- Final results based on this raw data (and, if applicable, a statistical evaluation of the data).