

Nordic Ecolabelling of
**Dishwasher detergents and
Rinsing agents**



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017 Dishwasher detergents and Rinsing agents, version 6.11, 03 May 2022

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

Addresses

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 dishwasher detergent?

Nordic Swan Ecolabelled dishwasher detergents and/or Nordic Swan Ecolabelled rinsing agents are amongst the least environmentally harmful dishwasher detergents / rinsing agents. The substances they contain have the lowest impact on the environment possible. There are strict requirements on the ingoing substances regarding environment and health. Amongst the environmental requirements there are strict requirements regarding environmentally harmful substances and substances that are not readily biodegradable.

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

The dishwasher detergents / rinsing agents are discharged into water after use. Properties such as biodegradability, bioaccumulation and toxicity to aquatic organisms are accordingly key considerations with regard to all constituent components.

The effect of the dishwasher detergents / rinsing agents on the environment will also depend on the way in which they are used. Accordingly, there are requirements on dosing instructions and performance testing at low temperature to show that the product is performing well at the recommended dosage. Furthermore, packaging requirements are imposed in order to reduce the quantity of packaging used and to optimize the fill ratio of the packaging.

Nordic Swan Ecolabelled cleaning products:

- Contain low levels of substances that are harmful to health and the environment
- Clean effectively even at low temperatures
- Have optimised and well-filled packaging

Why choose the Nordic Swan Ecolabel?

- Environmental issues are complex. It can take a long time and extensive resources to gain an understanding of a specific area. Nordic Swan Ecolabelling can be seen as aid in this work.
- The Nordic Swan Ecolabel is a cost-effective and simple way of communicating environmental work and commitment to customers and suppliers.
- Reducing environmental impact often creates scope for lowering costs, such as by cutting the consumption of energy and reducing amounts of packaging and waste.
- 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?

The document relates to dishwasher detergents and rinsing agents for household machines. The rinsing agent may be integrated into the product or it may be a separate product.

Dishwasher detergents for professional use cannot be labelled under these criteria. See the requirements for dishwasher detergents for professional use instead. Cleaning agents for dishwashers cannot be labelled under these criteria.

How to apply

Application and costs




For information about the application process and fees for this productgroup, please refer to the respective national web site. For addresses see page 3.

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
-  The requirement checked on site
-  Enclose procedure in environmental and quality management system

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 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 page 3 for addresses. Further information and assistance (such as calculation sheets or electronic application help) may be available. Visit the relevant national website for further information.

1 Requirements on products and constituent substances

The term constituent substance refers to all substances in the product, including additives in the ingredients (such as preservatives and stabilisers) but does not include impurities from primary production. Impurity refers to residues from primary production which may be found in the finished product at concentrations below 0.0100% (100 ppm), but not substances that have been added to a raw material actively and for a particular purpose. Impurities of over 1.0% concentration in the raw material are, however, regarded as constituent substances. Substances known to be liberated by the constituent substances are also themselves considered to be constituent substances.

The criteria for dishwasher detergents allow licence applications for dishwasher detergent and/or rinsing agent. In applications for rinsing agents, an amount of 3 ml is to be used for calculations.

Dishwasher detergents in which rinse aid and/or salt are included are considered to be multifunctional products. Dishwasher detergents where salt and/or rinse aid is added as a separate product are considered to be single function products.

Foil that is not removed before use of the product is counted as part of the formulation/ingredients.

1.1 General requirements

01 Formulation/composition

The applicant must provide detailed information on the composition of the dishwasher detergent, and enclose a safety data sheet for each ingredient. The information on the composition must include:

- Trade name
- Chemical name
- Constituent amounts of each ingredient (also applies to any fragrances in the packaging)
- CAS number
- DID number for each ingredient
- The function of each ingredient must be stated
- Recommended dose in grams or millilitres
- Description of the product type (multifunction or single function product or rinsing agent) and product form (powder, liquid or tablet).

The DID number is the number an ingredient has on the DID list, which is to be used when calculating chemical requirements. The DID list can be obtained from Nordic Ecolabelling, see addresses on page 3. See Appendix 2 for more details on the DID list.

- ☒ A complete declaration of the composition of the product with information as set out in the requirement.
- ☒ Safety data sheets for each ingredient in line with prevailing European legislation.

02 Classification of the product

Products must not have a classification as listed in Table 1 below, following the regulations in the Nordic countries or the EU's Dangerous Substances Directive 67/548/EEC as amended and/or CLP Regulation (EC) No 1272/2008 as amended. For a transitional period, i.e. until the products are classified under the CLP Regulation (no later than 1 June 2015), classification under the Dangerous Substances Directive or the CLP Regulation may be used. After the transitional period, only classification under the CLP Regulation applies (see Table 1 below):

Table 1. Classification of the product

Classification	Hazard class, hazard category and hazard phrase/ Hazard symbols and risk phrases	
	CLP Regulation 1272/2008	EU's Dangerous Substances Directive 67/548/EEC
Toxic to the environment	Toxic to aquatic organisms: H400 – acute hazard, category: acute 1 H410 – risk of damaging long-term effects, category: chronic 1 H411 – risk of damaging long-term effects, category: chronic 2 H412 – risk of damaging long-term effects, category: chronic 3 H413 – risk of damaging long-term effects, category: chronic 4	N with R50, R50/53 or R51/53. R52, R53 or R52/53 without N
Very toxic	H300 – Acute oral toxicity, hazard category 1 and 2 H310 – Acute dermal toxicity, hazard category 1 and 2 H330 – Acute inhalation toxicity, hazard category 1 and 2 H370 – Specific target organ toxicity – single exposure, hazard category 1	Tx (T+ in Norway) with R26, R27, R28 and/or R39
Toxic	H301 – Acute oral toxicity, hazard category 3 H311 – Acute dermal toxicity, hazard category 3 H330 – Acute inhalation toxicity, hazard category 2 H331 – Acute inhalation toxicity, hazard category 3 H372 – Specific target organ toxicity – repeated exposure, hazard category 1	T with R23, R24, R25, R39 and/or R48
Carcinogenic	H350 – Carcinogenic, hazard category 1A and 1B H351 – Carcinogenic, hazard category 2	Carc with R40, R45 and/or R49
Mutagenic	H340 – May cause genetic defects, hazard category 1A and 1B H341 – May cause genetic defects, hazard category 2	Mut with R46 and/or R68
Toxic for reproduction	H360 – Toxic for reproduction, hazard category 1A and 1B H361 – Toxic for reproduction, hazard category 2 H362 – Toxic for reproduction – effects on or through breastfeeding (supplementary category)	Repr with R60, R61, R62, R63 and/or R64
Harmful to health	H304 – Aspiration hazard, hazard category 1 H312 – Acute dermal toxicity, hazard category 4 H332 – Acute inhalation toxicity, hazard category 4 H371 – Specific target organ toxicity – single exposure, hazard category 2 H373 – Specific target organ toxicity – repeated exposure, hazard category 2	Xn with R20, R21, R48, R65 and/or R68
Skin or respiratory sensitisation	H317 – Skin sensitisation, hazard category 1/1A/1B H334 – Respiratory sensitisation, hazard category 1/1A/1B	Xi with R43 Xn with R42
Corrosive	H314 – Skin corrosion/irritation, hazard category 1A/1B/1C	C with R34 or R35

Note that responsibility for classification lies with whoever places the product on the market.



Safety data sheet/product sheet in line with prevailing European legislation.

03 Substances that are carcinogenic, mutagenic or toxic for reproduction (CMR)

Substances in the product or in the raw materials that make up the product must not be classified as shown in Table 2 below under applicable regulations in the Nordic countries. They must also not be classified as shown in Table 2 under CLP Regulation No 1272/2008 or the EU's Dangerous Substances Directive 67/548/EEC:

Table 2 Classification of constituent substances

Classification	Hazard class, hazard category and hazard phrase	Hazard symbols and risk phrases
	CLP Regulation 1272/2008	EU's Dangerous Substances Directive 67/548/EEC
Carcinogenic	H350 – Carcinogenic, hazard category 1A and 1B H351* – Carcinogenic, hazard category 2	Carc with R40, R45 and/or R49
Mutagenic	H340 – May cause genetic defects, hazard category 1A and 1B H341 – May cause genetic defects, hazard category 2	Mut with R46 and/or R68
Toxic for reproduction	H360 – Toxic for reproduction, hazard category 1A/1B H361 – Toxic for reproduction, hazard category 2 H362 – Toxic for reproduction – effects on or through breastfeeding (supplementary category)	Repr with R60, R61, R62, R63 and/or R64

* Complexing agents of the type MGD A and GLDA may, however, contain a maximum of 1.0% NTA in the raw material as long as the level in the end product is lower than 0.1%.

Exemption: Trimethylol propane (CAS 77-99-6), that is classified with H361, may be used in water soluble foil until 2021-10-31.

Note that titanium dioxide in solid mixtures (e.g. in enzymes) is prohibited by this requirement, in effect from 2021-10-01. Note: a transition period until 2023-06-30 applies.



Duly completed and signed declaration that the requirement has been fulfilled, Appendices 3 (completed by the producer of the dishwasher detergent) and 4 (completed by the producer of the raw material) may be used.

04 Sensitising substances

The product must not contain substances that are classified as sensitising – H334 (R42) and/or H317 (R43).

The following substances are exempted from the requirement:

- Enzymes (including stabilizers and preservatives in the enzyme raw material)
- Stabilizers and preservatives in colourant raw material
- Fragrances (see O10)
Fragrances containing substances classified with H334 and/or H317 can not occur at levels* that trigger the following warning on the end product's packaging: "Contains (name of sensitising substance). May cause an allergic reaction."

* CLP enters into force for products in June 2015, for substances which then have the classification resp sens 1A, H334 or skin sens 1A, H317 and appears in the product at a concentration of at least 0.01% (100 ppm), the CLP requires this warning to be printed on the packaging. For categories 1 and 1B for both resp sens and skin sens, the trigger value for the warning is 0.1% (1000 ppm).



Duly completed and signed declaration from the manufacturer of the dishwashing detergent (Appendix 3), declaration from the raw material manufacturer/supplier (Appendix 4) and safety data sheets for each constituent substance (see O1) in accordance with European legislation.

05 Enzymes

Enzymes must be liquid or in the form of non-dust producing granules.

- ☒ Declaration from the enzyme manufacturer or information on safety data sheet/product data sheet.

06 Environmentally harmful substances

This requirement applies to substances that are in the product or that are intentionally released during the use of the product. In fragrance mixtures, all the fragrance substances are to be included in the calculation of environmentally harmful substances.

Substances classified as H410 (R50/53), H411 (R51/53) and/or H412 (R52/53) are restricted under the following formula:

$$\text{Dose (g/wash)} \bullet (100 \bullet \text{concH410} + 10 \bullet \text{concH411} + \text{concH412}) \leq 0.10 \text{ g/wash}$$

Or

$$\text{Dose (g/wash)} \bullet (100 \bullet \text{concR50/53} + 10 \bullet \text{concR51/53} + \text{concR52/53}) \leq 0.10 \text{ g/wash}$$

Surfactants classified as H411 and H412 are exempted from the requirement, on condition that they are readily degradable* and anaerobically degradable** (see also O12).

Proteases/Subtilisins classified with Aquatic Chronic 2 (H411) are exempted from the requirement, see requirement O5 concerning how to handle enzymes. Beware that all products need to fulfil requirement O2 regarding classification of the product.

** In accordance with the DID list. If the substance is not on the DID list, the substance is documented in line with test method no. 301 A-F or no. 310 in the OECD guidelines for testing chemicals or other equivalent test methods.*

*** In accordance with the DID list. If the DID list 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 2. 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 third party, and refer to relevant data from literature that has been subjected to scientific scrutiny.*

- ☒ Report on surfactants that are to be exempted from the requirement (quantity, classification, degradability).
- ☒ Duly completed and signed declaration that the requirement has been fulfilled (Appendices 3 completed by the producer of the dishwasher detergent and 4 completed by the producer of the raw material may be used). Also attach a report on the total quantity of H410 (R50/53), H411 (R51/53) and H412 (R50/53). If data is not available, the substance is assessed according to a worst case scenario.

1.2 Requirements for particular substances**07 Phosphorous**

The total level of phosphorous must not exceed the following:

Dishwasher detergents $\leq 0.20 \text{ g P/wash}$.

Rinsing agents $\leq 0.030 \text{ g P/wash}$

Note the national legislations concerning phosphorous in the Nordic countries. In Norway phosphorus is regulated in «Forskrift om begrensning i bruk av helse- og miljøfarlige kjemikalier og andre produkter (produktforskriften)», §2- 12 and § 2-14. In Sweden phosphorus is regulated in Regulation 1998:944.

- ☒ The amount of phosphorous has to be made clear in the formulation plus a calculation of the total quantity of phosphorous.

08 Substances that must not be included in the end product or exist as actively added substances in the ingredients

The following substances must not be included in the end product or exist as actively added substances in the ingredients:

- EDTA
- DTPA
- Reactive chlorine compounds
- Alkylphenol ethoxylates (APEO)
- Alkylphenol derivatives (APD)
- LAS
- Nitro musks and polycyclic musk compounds
- Substances considered to be potential endocrine disruptors in category 1 or 2 on the EU's priority list of substances that are to be investigated further for endocrine disruptive effects. The EU reports on potentially endocrine disruptors can be read on: http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf (Appendix L, page 238 onwards)
- 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. See e.g. <http://esis.jrc.ec.europa.eu/index.php?PGM=pbt>
- Substances on the Candidate List*.

* The Candidate List can be found on the ECHA website at: <http://echa.europa.eu/candidate-list-table>



Duly completed and signed declaration that the requirement has been fulfilled (Appendices 3 completed by the producer of the dishwasher detergent and 4 completed by the producer of the raw material may be used).

1.3 Fragrances, colourants and preservatives

09 Fragrances

The constituent substances added to the end product as fragrance substances must fulfill the following:

- The fragrance substances must be produced and handled in line with the guidelines of the International Fragrance Association (IFRA). The manufacturer (of the fragrance and the dishwasher detergent) must comply with the stated requirements in the IFRA standard concerning prohibition, restricted use and specified purity criteria for materials.
- The 26 fragrance substances encompassed by the declaration requirement in the Detergents Regulation 648/2004/EEC and its subsequent amendments must not be included in the product at levels > 100 ppm (>0.010%) per substance.
- The fragrances classified as H317 (R43) and/or H334 (R42) must not be included in the product at levels > 100 ppm (>0.010%) per substance.
- The following fragrance substances must not be included in the product at levels > 100 ppm (>0.010%) per substance:

Table 3. Limited fragrance substances

INCI name (or, if none exists, perfuming name according to CosIng)	CAS number
Cananga Odorata and 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

- Fragrance substances added to the packaging as a fragrances must comply with the following:
- The fragrances used to fragrance the packaging must not contain CMR substances.
- The fragrance in the packaging must be produced and handled in line with the guidelines of the International Fragrance Association (IFRA). The manufacturer (of the fragrance and the dishwasher detergent) must comply with the stated requirements in the IFRA standard concerning prohibition, restricted use and specified purity criteria for materials.

- ☒ Duly completed and signed declaration from the dishwasher detergent /rinsing agent manufacturer and the fragrance manufacturer showing that the fragrance has been handled and manufactured in line with IFRA's guidelines. Appendices 3 completed by the producer of the dishwasher detergent and 4 completed by the producer of the raw material can be used.
- ☒ Duly completed and signed declaration from the fragrance manufacturer on the content of the relevant fragrance substances in the fragrance (e.g. analysis certificate for the 26 allergens encompassed by declaration requirements in the Detergents Regulation 648/2004 EEC and its subsequent amendments) plus information on substances classified as H334 and H317 and the above mentioned 7 fragrance substances. Appendix 4 (completed by the fragrance producers) or equivalent documentation can be used.
- ☒ Calculation of the quantity of the 26 allergens encompassed by declaration requirements in the Detergents Regulation 648/2004 EEC and its subsequent amendments, the substances classified as H317 (R43) and H334 (R42) and the above mentioned 7 fragrance substances in the end product.
- ☒ Duly completed and signed declaration that the fragrances used in the packaging do not contain CMR substances, and have been handled in line with IFRA's guidelines, covering questions O3 and O9 in appendix 4 (completed by the fragrance producer).

010 Approved colourants

Colourants, in the final product or in constituent substances regardless of function, can not be bioaccumulative or must be approved for use in food with an E-number. Colourants are not considered to be bioaccumulative if having a logKow < 4.0 or a BCF < 500. If information is available on both BCF and logKow, the information on BCF must be used.

- ☒ Duly completed and signed declaration that the requirement has been fulfilled (Appendices 3 completed by the producer of the dishwasher detergent and 4 completed by the producer of the raw material may be used).

- ☒ Statement of the E-number (number allocated as part of approval for use in food), or logKow value (octanol/water partition coefficient) or BCF value (bioconcentration factor).

011 Preservatives

Preservatives that are used in the end product or one of the 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 values for the highest measured BCF are to be used.

- ☒ Documentation of BCF or logKow (e.g. safety data sheet, see O1).

1.4 Degradability and CDV

012 Surfactants

- All surfactants must be readily degradable (aerobically).
- All surfactants classified as environmentally hazardous* must also be anaerobically degradable.

**Classified as environmentally hazardous with H410, H411, H412, H413.*

- ☒ Reference to the DID list dated 2014. If the DID list 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 2. 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 third party, and refer to relevant data from literature that has been subjected to scientific scrutiny.

- ☒ The classification of the surfactant should be stated in accordance with the MSDS or appendix 4 (completed by the raw material producer).

013 Anaerobic degradability

The content of organic non-anaerobically degradable substances in the dishwasher detergent (multifunction and single function products) and rinsing agent must not exceed:

Dishwasher detergent ≤ 1.2 g/wash

Rinsing agent ≤ 0.30 g/wash

The calculation for rinsing agent uses a dose of 3 ml.

Iminodisuccinate (DID 2555) and cumene sulphonates (DID 2540) can be omitted from the calculation of anDEG.

- ☒ Documentation referring in the first instance to the DID list dated January 2014 or later. For substances not covered by the list, other documentation such as test reports or copies of references in literature may be used. For test methods, see Appendix 2.

014 CDV (Critical Dilution Volume)

The critical dilution volume (CDV) is to be calculated for all the chemicals included in the dishwasher detergent and/or rinsing agent. CDV is a theoretical value that takes account of each substance's toxicity and degradability in the environment.

The critical dilution volume, $CDV_{chronic}$, must not exceed the following:

Table 4. CDV limits

	$CDV_{chronic}$
Dishwasher detergents (multifunction)	38,000 litres/wash
Dishwasher detergents (single function)	28,000 litres/wash
Rinsing agents	10,000 litres/wash

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

where

dose_i = dose of component i, expressed in g/wash

DF_i = degradation factor for substance i

TF_{chronic} = chronic toxicity factor

When calculating CDV_{chronic} for rinsing agents, a dose of 3 ml is used.

- ☒ Calculations of CDV_{chronic} for the dishwasher detergent and/or rinsing agent showing that the requirement has been fulfilled. Documentation of each substance shall refer to the DID list dated January 2014 or later. Part B of the DID list is to be used for calculating substances not on the DID-list.

1.5 Dosing, packaging and consumer information

015 Dosing

The maximum dose per wash must not exceed the following limit values in Table 5.

Table 5. Limit values for dosing

Dishwasher detergents	dose g/wash
Single function products	18
Multifunctional products	20

Rinsing agent is exempted from this requirement.

- ☒ Dose must be specified in the formulation (in line with O1).

016 Consumer information

The following should clearly be stated on the label:

- The recommended dosage* for soft water (0-6° dH) and a recommendation is to be given to use salt to soften the water in the dishwasher.
- Information stating that the product is efficient at /from 50°C (or lower if tested at a lower temperature).

** Recommended dosage for soft water is to be the same as the one used in the performance test.*

Exceptions:

- If multifunction products meet the performance requirement without added salt in the machine, the recommendation about salt does not need to be given.
- The text on water softener is not required in Norway.

The requirement does not apply to rinsing agents.

- ☒ Sample label.

017 Information on phosphates

If the product contains phosphates, the product must display the following or equivalent text:

“Products that contain phosphates should only be used by households that are connected to mains drainage.”

Note the national legislations concerning phosphorous in Sweden and Norway (for Norway see FOR-2004-06-01-922).

- ☒ Sample label.

018 WUR (weight-utility ratio)

The product's weight-utility ratio (WUR) must not exceed

Table 6. Limit values for WUR

	WUR
Dishwasher detergents (multifunctional and single functional)	2.75 g/wash
Rinsing agents	1.5 g/wash*

* *Rinsing agent is calculated at a dose of 3 ml.*

To calculate the product's weight-utility ratio (WUR), see Appendix 2.



Calculation of WUR for the product.



Declaration of how much recycled material the packaging contains.

019 Fill ratio

The fill ratio is the ratio between the number of doses and the volume of the packaging in litres. It is to be calculated for all sizes of packaging for the same product variant (dishwasher detergents).

Fill ratio ≥ 22 doses/litre

Rinsing agent is exempted from this requirement.



Calculation of the fill ratio.

020 Packaging

- PVC and other chlorinated plastics must not be used for packaging.
- To ease the sorting of packaging materials for recycling all packages need to have information on what they are made of and how they should be sorted in the relevant user stage. The packaging can be marked according to European standards (for example DIN 6120, section 2) recommendations from national recycling systems (such as for example Grønt Punkt's or FTiAB's recommendations) or equivalent.



Duly completed and signed declaration that the requirement is fulfilled. Appendix 3 (completed by the producer of the dishwasher detergent) can be used.



Documentation showing labelling and/or instructions on how to sort the packaging material on the primary packaging or on the label.

021 Take-back system

The Nordic Ecolabelling's Criteria Group decided on the 9 October 2017 to remove this requirement.

2 Performance**022 Dishwasher detergent performance**

- At the recommended dose, the dishwasher detergent must perform as well as or better than the reference detergent (IEC-D or IEC-B), with an average for each soil categories (of minimum 3 cycles) in all four soil categories (bleachable, burnt-on, amylase-specific, protease-specific). Alternatively the product is considered as good as the reference if the average value for all 8 soil types (at a minimum of 3 dish cycles) is better than the reference detergent. A 95% confidential interval is to be used when evaluating the results.
- Cleaning performance is to be tested in accordance with the standard test* for dishwasher detergents developed by IKW (Association of German Detergent Manufacturers e V /Industrieverband Körperpflege und Waschmittel e.V.), with the following amendments:

- Wash temperature 50°C for the test product and 55°C for the reference (IEC-D or IEC-B)
Alternativly: Wash temperature 50°C for the test product and 50°C for the reference (only IEC-D may then be used)
- Water hardness 6°dH
- Reference detergent IEC-D or IEC-B (depending on temperature) is to be used at a dose of 20 g
- Reference rinsing agent (formula III)** at dose setting of between 2 and 3.
- The same machine and the same type of program will be used
- Other claims concerning the product's performance must also be tested (with relevant test methods) and proven (short programmes, lower temperatures, specific stains and so on).

** The applicant can choose to perform the performance test according to IKW's standard test from 1995 with updates done in 2005 or the test updated in 2015.*

*** The reference rinsing agent is "formula III" as specified in Appendix D of the standard EN 50242:2008.*

- ☒ Complete test report (results are to be reported in line with Appendix 5) including test results, conclusions and a description of the test.
- ☒ Test proving any functional claims made on the packaging.

3 Quality and regulatory requirements

If the producer's environmental management system is certified to ISO 14 001 or EMAS, and the following procedures implemented, it is sufficient for the accredited auditor to certify that the requirements are observed.

023 Laws and regulations

The licensee must guarantee adherence to applicable safety regulations, working environment legislation, environmental legislation and conditions/concessions specific to the operations at all sites where the Nordic Swan Ecolabelled dishwasher detergent is manufactured.

- ☒ Duly signed application form.

024 Licence administrators

The company shall appoint an individual responsible for ensuring the fulfilment of Nordic Ecolabelling requirements, and a contact person for communications with Nordic Ecolabelling.

- 📖 Organisational chart showing the responsible contacts.

025 Documentation

The licensee must be able to present a copy of the application and factual and calculation data supporting the documents submitted with the application (including test reports, documents from suppliers and suchlike).

- 🔍 On-site inspection

026 Changes and nonconformities

Written notice must be given to Nordic Ecolabelling of planned product and marketing changes and unforeseen nonconformities that have a bearing on Nordic Ecolabelling requirements.

- 📖 Procedures detailing how product and marketing changes and unforeseen nonconformities are handled.

027 Traceability

The licensee must have a traceability system for the production of the Nordic Swan Ecolabelled dishwasher detergent/rinsing agent.



Description of/procedures for fulfilment of the requirement.

028 Marketing

The requirement is removed as decided by the Board of Directors 17 November 2014.

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.svanen.se/regulations/ or at www.nordic-ecolabel.org/regulations/

Follow-up inspections

Nordic Ecolabelling may decide to check whether the dishwasher detergent / the rinsing agent 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 dishwasher detergent / rinsing agent 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.

Criteria version history

Nordic Ecolabelling adopted version 6.0 of the criteria for Dishwasher detergents and rinsing agents on 19 March 2014. The criteria are valid until 31 March 2018.

The Board of Directors decided on 22 October 2014 to make an exemption for the enzyme protease in the requirement O6. The new criteria version is called 6.1.

Nordic Ecolabelling's Criteria Group decided on 22 April 2015 to adjust requirement O22 Dishwasher detergent performance. On 17 November 2014 the Board of Directors decided to remove requirement O28 Marketing. The new criteria version is called 6.2.

Nordic Ecolabelling's Criteria Group decided on 21 October 2015 to adjust requirement O4 Sensitising substances. On 12 April 2016 it was decided to update requirement O22 performance test and the appendix connected to that. The new criteria version is called 6.3.

Nordic Ecolabelling's Criteria Group decided on 7 February 2017 to prolong the criteria with 24 months to the 31 March 2020. The new version is called 6.4.

On the 9 October 2017 Nordic Ecolabelling's Criteria Group decided to remove O21 Take-back system. On the 12 December 2018 Nordic Ecolabelling decided to prolong the criteria with 20 months to 30 November 2021. The new version is called 6.5.

Nordic Ecolabelling decided on 21 January 2020 to prolong the criteria for dishwasher detergents and rinsing agents with 9 months to the 31 August 2022. The new version is called 6.6.

Nordic Ecolabelling decided on 25 August 2020 to exempt trimethylol propane (CAS 77-99-6) from requirement O3 until 31 October 2021, when used in water soluble foil. The new version is called 6.7.

Nordic Ecolabelling decided on 10 November 2020 to clarify that Titanium dioxide will be prohibited by requirement O3 when 14. ATP of CLP comes into effect. The new version is called 6.8.

Nordic Ecolabelling introduced a transition period for titanium dioxide in requirement O3 on 26 January 2021. Furthermore, Nordic Ecolabelling decided on 9 March 2021 to prolong the validity of the criteria with 4 months until 31 December 2022. The new version is called 6.9.

Nordic Ecolabelling decided on 22 March 2022 to prolong the validity of the criteria to the 30 June 2023. The new version is called 6.10.

Nordic Ecolabelling decided on 29 March 2022 to adjust requirement O6 by also exempting H411 classified surfactants from the requirement. Nordic Ecolabelling decided on 3 May 2022 to prolong the transition period for titanium dioxide in solid mixtures (e.g. in enzymes) in requirement O3. The new version is called 6.11.

New criteria

- Assess the possibility of setting requirements for renewable raw materials.
- Assess test methods at even lower washing temperatures and evaluate the newly revised IKW test method to consider switching to that as performance test.
- Assess the possibility of prohibiting phosphorus.
- Consider further tightening the requirements concerning fill ratio and WUR
- Consider the relevance of including a requirement to exclude nanoparticles/nanomaterials from the products

Appendix 1 Marketing of Nordic Swan Ecolabelled Dishwasher detergent / rinsing agent – removed appendix

The appendix is removed as decided by the Board of Directors 17 November 2014.

Appendix 2 Analysis and test laboratories

1. Requirements on the analysis laboratory

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

The applicant's analysis laboratory/test procedure may be approved for analysis and testing such as performance tests if:

- the manufacturer's quality assurance system covers analyses and sampling and is certified to ISO 900.
- The test method is implemented in the quality system.
- Nordic Ecolabelling must have access to all raw data from the test.

2. CDV calculation

The critical dilution volume (CDV) is calculated as follows:

$$CDV_{\text{chronic}} = 1000 * \sum \text{dosage}(i) * DF(i) / TF(i)$$

Dosage(i) = Dosage of component i, expressed in g/wash

DF(i) = Degradation factor for component i.

TF_{chronic}(i) = Toxicity factor for component i.

DF(i) and TF(i) are specified in the DID-list. Reference shall be made to the DID-list. If the substance is listed on the DID-list, the parameters shall be calculated in accordance with the guidelines in section B of the DID-list. Documentation providing a background to the calculations shall be enclosed with the application.

3. Weight-utility ratio (WUR)

WUR is calculated for primary packaging only:

$$WUR = \sum [(W_i + N_i) / (D_i * t_i)], \text{ where}$$

W_i = weight (g) of packaging component (i) including label.

N_i = weight (g) of non-recycled (virgin) material in packaging component (i). If the proportion of recycled material in the packaging component is 0%, N_i = W_i.

D_i = number of standard recommended dosages that packaging (i) contains.

t_i = the number of times packaging component (i) is used for the same purpose through a return or refill system (r=1 if the packaging is not reused for the same purpose).

4. Acute aquatic toxicity

Use test methods 201, 202 and 203 in the OECD guidelines for testing of chemicals, or equivalent method to test acute aquatic toxicity.

5. Bioaccumulation

If nothing else is proven, the substance is classified as bioaccumulating if $\log K_{ow} \geq 4.0$ in accordance with OECD guidelines 107, 117 or equivalent. Such a substance can be tested on fish according to OECD test method 305 A-E. If the substance's biologic concentration factor (BCF) is ≥ 500 , the substance is deemed bioaccumulating. If the substance has a BCF, this determines the substance's bioaccumulation potential.

6. Aerobic degradation

Use test method 301 (A to F) in the OECD guidelines for testing of chemicals (or equivalent method to test aerobic degradation).

7. Anaerobic degradation

Use ISO 11734, ECOTOC no. 28 (June 1988) or equivalent test method to determine anaerobic degradation. The minimum requirement to be considered as anaerobically degradable is $> 60\%$ mineralization after maximum 60 days (equivalent to $>60\%$ ThOD/ThCO₂ or $> 70\%$ DOC reduction).

The following exceptions from anaerobic degradation for non-surfactants that are not on the DID-list can be made for substances that are aerobically degradable and not toxic to the aquatic environment ($LC_{50}/EC_{50}/IC_{50} > 10$ mg/l) and if one of the following is fulfilled:

- Ready biodegradability and low adsorption ($A < 25\%$), or
- Ready biodegradability and high desorption ($D > 75\%$), or
- Ready biodegradability and not bioaccumulating.

Adsorption/desorption can be tested according to OECD guidelines 106 or ISO CD 18749 "Water quality - Adsorption of substances on activated sludge - Batch test using specific analytical methods".

8. DID-list

The DID-list is common to the EU Ecolabel and Nordic Ecolabelling. The list has been established in collaboration with stakeholders from industry, consumer organisations and environmental bodies. The list contains information on the toxicity and degradability of substances that may be used in chemical 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 raw material supplier shall be used.

The DID-list is available from the ecolabelling body in each country and their websites.

Valid for these criteria is the DID-list dated January 2014.

Appendix 3 Declaration from the manufacturer of the dishwasher detergents and rinsing agents

For use in applications for the Nordic Swan Ecolabel licence for dishwasher detergents / rinsing agents. To be able to complete the following declaration requires completed declarations for all ingredients (Appendix 4 or equivalent).

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

Product name: _____

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

	Yes	No
O3: Does the product contain any substances classified as carcinogenic, mutagenic and/or reproductive toxic with the following classifications or combinations of them?		
H350 – Carcinogenic, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H351 – Carcinogenic, hazard category 2		
Carc with R40, R45 and/or R49		
H340 – May cause genetic defects, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H341 – May cause genetic defects, hazard category 2		
Mut with R46 and/or R68		
H360 – Toxic for reproduction, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H361 – Toxic for reproduction, hazard category 2		
H362 – Toxic for reproduction – effects on or through breastfeeding (supplementary category)		
Repr with R60, R61, R62, R63 and/or R64		
O4: Does the product contain any substances classified as sensitizing with the following classifications or combinations of them?		
H334 - Resp. Sens. 1/1A/1B (R42)	<input type="checkbox"/>	<input type="checkbox"/>
H317 - Skin sens 1/1A/1B (R43)	<input type="checkbox"/>	<input type="checkbox"/>
O6: Does the product contain any substances classified as toxic to the environment with the following classifications or combinations of them?		
H410 (R50/53) - Aquatic Chronic 1	<input type="checkbox"/>	<input type="checkbox"/>
H411 (R51/53) - Aquatic Chronic 2	<input type="checkbox"/>	<input type="checkbox"/>
H412 (R52/53) - Aquatic Chronic 3	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
O8: Does the product contain any of the following substances?		
• Titanium dioxide (of any particle size, prohibited by O3)	<input type="checkbox"/>	<input type="checkbox"/>
• EDTA (ethylene diamin tetraacetate) and/or its salts	<input type="checkbox"/>	<input type="checkbox"/>
• DTPA (diethylene triamine pentaacetic acid, CAS 67-43-6)	<input type="checkbox"/>	<input type="checkbox"/>
• Reactive chloro-compounds	<input type="checkbox"/>	<input type="checkbox"/>
• Alkylphenolethoxylates (APEO)	<input type="checkbox"/>	<input type="checkbox"/>
• Alkylphenol derivatives (APD)	<input type="checkbox"/>	<input type="checkbox"/>
• LAS (linear alkylbenzene sulphonate)	<input type="checkbox"/>	<input type="checkbox"/>
• Nitromusks and polycyclic musks	<input type="checkbox"/>	<input type="checkbox"/>
• Substances with potential for endocrine disruption of Category 1 or 2 in accordance with official EU lists. The EU report on endocrine disruptors can be read in full at http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf (Appendix L, from page 238)	<input type="checkbox"/>	<input type="checkbox"/>
• Substances that have been evaluated in the EU to be PBT (Persistent, bioaccumulable and toxic) or vPvB (very persistent and very bioaccumulable) in accordance with Annex XIII of REACH. See for example http://esis.jrc.ec.europa.eu/index.php?PGM=pbt	<input type="checkbox"/>	<input type="checkbox"/>
• Substances on the candidate list, http://echa.europa.eu/candidate-list-table	<input type="checkbox"/>	<input type="checkbox"/>
O9: Does the product contain fragrance?	<input type="checkbox"/>	<input type="checkbox"/>
If fragrance is included answer the following questions:		
Is the fragrance handled in accordance with the guidelines of the International Fragrance Association (IFRA)?	<input type="checkbox"/>	<input type="checkbox"/>
Does the fragrance contain any of the 26 fragrance substances encompassed by the declaration requirement in the Detergents Regulation 648/2004/EEC and its subsequent amendment?	<input type="checkbox"/>	<input type="checkbox"/>
Does the fragrance contain fragrance substances classified as H334 (R42) and/or H317 (R43)?	<input type="checkbox"/>	<input type="checkbox"/>
Does the fragrance contain any of the following fragrance substances:	<input type="checkbox"/>	<input type="checkbox"/>
• Cananga Odorata and Ylang-ylang oil (Cas nr 83863-30-3, 8006-81-3)		
• Eugenia Caryophyllus Leaf / Flower oil (CAS nr 8000-34-8)		
• Jasminum Grandiflorum / Officinale (CAS nr 84776-64-7, 90045-94-6, 8022-96-6)		
• Myroxylon Pereirae (CAS nr 8007-00-9)		
• Santalum Album (CAS nr 84787-70-2, 8006-87-9)		
• Turpentine oil (CAS nr 8006-64-2; 9005-90-7; 8052-14-0)		
• Verbena Absolute (CAS nr 8024-12-02)		
O10: Does the product contain colourants?	<input type="checkbox"/>	<input type="checkbox"/>
If yes, specify logKow or BCF or E-number: _____		
O10: Does the product contain preservatives?	<input type="checkbox"/>	<input type="checkbox"/>
If yes, specify logKow or BCF: _____		
Packaging O20-O21		
O20: Does the packaging (including caps, lids and labels) contain PVC or other halogenated plastics?	<input type="checkbox"/>	<input type="checkbox"/>
O21: Are pertinent national regulations, legislation and/or agreements with-in the sector regarding recycling systems for products and packaging met in the Nordic countries in which the Nordic Swan Ecolabelled product is/will be marketed?	<input type="checkbox"/>	<input type="checkbox"/>
Finland (t.ex. PYR), Sverige (FTiAB)		
Norge (Grønt Punkt)		

If the answer is yes to any of the above questions (excluding O20 and O21), specify the name, CAS number, concentration and purpose of adding each substance in question:

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

Location and date:	Company name:
Responsible (signature):	
Name of contact person	Phone number

Appendix 4 Declaration from the manufacturer of the raw material/ingredients

For use in applications for the Nordic Swan Ecolabel licence for dishwasher detergents / rinsing agents.

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

Trade name of the raw material/ingredient:

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

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

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=006>):

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.

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

O3: Does the ingredient contain any substances classified as carcinogenic, mutagenic and/or reproductive toxic with the following classifications or combinations of them?

	Yes	No
H350 – Carcinogenic, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H351 – Carcinogenic, hazard category 2		
Carc with R40, R45 and/or R49		
H340 – May cause genetic defects, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H341 – May cause genetic defects, hazard category 2		
Mut with R46 and/or R68		
H360 – Toxic for reproduction, hazard category 1A and 1B	<input type="checkbox"/>	<input type="checkbox"/>
H361 – Toxic for reproduction, hazard category 2		
H362 – Toxic for reproduction – effects on or through breastfeeding (supplementary category)		
Repr with R60, R61, R62, R63 and/or R64		

O4: Does the ingredient contain any substances classified as sensitizing with the following classifications or combinations of them?

H334 - Resp. Sens. 1/1A/1B (R42)	<input type="checkbox"/>	<input type="checkbox"/>
H317 - Skin sens 1/1A/1B (R43)	<input type="checkbox"/>	<input type="checkbox"/>

O6: Does the ingredient contain any substances classified as toxic to the environment with the following classifications or combinations of them?

H410 (R50/53) - Aquatic Chronic 1	<input type="checkbox"/>	<input type="checkbox"/>
H411 (R51/53) - Aquatic Chronic 2	<input type="checkbox"/>	<input type="checkbox"/>
H412 (R52/53) - Aquatic Chronic 3	<input type="checkbox"/>	<input type="checkbox"/>

O8: Does the ingredient contain any of the following substances?

	Yes	No
• Titanium dioxide (of any particle size, prohibited by O3)	<input type="checkbox"/>	<input type="checkbox"/>
• EDTA (ethylene diamine tetraacetate) and/or its salts	<input type="checkbox"/>	<input type="checkbox"/>
• DTPA (diethylene triamine pentaacetic acid, CAS 67-43-6)	<input type="checkbox"/>	<input type="checkbox"/>
• Reactive chloro-compounds	<input type="checkbox"/>	<input type="checkbox"/>
• Alkylphenolethoxylates (APEO)	<input type="checkbox"/>	<input type="checkbox"/>
• Alkylphenol derivatives (APD)	<input type="checkbox"/>	<input type="checkbox"/>
• Nitromusks and polycyclic musks	<input type="checkbox"/>	<input type="checkbox"/>
• LAS (linear alkylbenzene sulphonate)	<input type="checkbox"/>	<input type="checkbox"/>

- Substances with potential for endocrine disruption of Category 1 or 2 in accordance with official EU lists. The EU report on endocrine disrupters can be read in full at http://ec.europa.eu/environment/chemicals/endocrine/pdf/final_report_2007.pdf (Appendix L, from page 238) ☐ ☐
- Substances that have been evaluated in the EU to be PBT (Persistent, bioaccumulable and toxic) or vPvB (very persistent and very bioaccumulable) in accordance with Annex XIII of REACH. See for example <http://esis.jrc.ec.europa.eu/index.php?PGM=pbt> ☐ ☐
- Substances on the candidate list, <http://echa.europa.eu/candidate-list-table> ☐ ☐

O9: Does the ingredient contain fragrance? ☐ ☐

If fragrance is included answer the following questions:

Is the fragrance handled in accordance with the guidelines of the International Fragrance Association (IFRA)? ☐ ☐

Does the fragrance contain any of the 26 fragrance substances encompassed by the declaration requirement in the Detergents Regulation 648/2004/EEC and its subsequent amendment? ☐ ☐

Does the fragrance contain fragrance substances classified as H334 (R42) and/or H317 (R43)? ☐ ☐

Does the fragrance contain any of the following fragrance substances: ☐ ☐

- Cananga Odorata and Ylang-ylang oil (Cas nr 83863-30-3, 8006-81-3)
- Eugenia Caryophyllus Leaf / Flower oil (CAS nr 8000-34-8)
- Jasminum Grandiflorum / Officinale (CAS nr 84776-64-7, 90045-94-6, 8022-96-6)
- Myroxylon Pereirae (CAS nr 8007-00-9)
- Santalum Album (CAS nr 84787-70-2, 8006-87-9)
- Turpentine oil (CAS nr 8006-64-2; 9005-90-7; 8052-14-0)
- Verbena Absolute (CAS nr 8024-12-02)

O10: Does the ingredient contain colourants? ☐ ☐

If yes, specify logKow or BCF or E-number: _____

O10: Does the ingredient contain preservatives? ☐ ☐

If yes, specify logKow or BCF: _____

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

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

Location and date:	Company name:
Responsible (signature):	
Name of contact person	Phone number

Appendix 5 Performance test

Cleaning performance is to be tested in accordance with the standard test for dishwasher detergents developed by IKW (Association of German Detergent Manufacturers e.V. /Industrieverband Körperpflege und Waschmittel e.V.) updated in 2005 or the version updated in 2015, with the following amendments:

- Wash temperature 50°C for the test product and 55°C for the reference (IEC-B or IEC-D) Alternatively: Wash temperature 50°C for the test product and 50°C for the reference (only IEC-D may then be used)
- Water hardness 6 °dH
- Reference detergent IEC-D or IEC-B (depending on temperature) is to be used at a dose of 20 g
- The same machine and the same type of program will be used

The test is performed with at least 3 dish cycles for the test product and 3 dish cycles for the references product.

Soil categories

All the following soil categories need to be included in the test, ie at least 4 soil types.

Table 5.1 Soil categories and soil types

Soil category	Soil type	Soil type (version från 2015)
Bleachable stains	Tea	Tea
Stubborn, burnt-on soil	Minced meat on glass dishes	Milk skin
	Milk in the microwave	Milk in the microwave
Amylase specific soils	Starch mix	Starch mix
	Porridge	Pasta
Protease-specific soils	Egg yolk	Egg yolk
	Minced meat on porcelain plates	Minced meat on porcelain plates
	Egg/milk	Crème brûlée

Soil types from the two versions of the standard test instruction can not be combined, ie the test is to be performed according to one of the versions of the test instructions.

Evaluation of the result:

The product is considered to be acceptable if one of the following alternatives is fulfilled:

1. The tested product performs as well as or better than the reference formula in all 4 soil categories (bleachable stains, burnt-on soils, amylase specific soils and protease specific soils). That means for each soil category the average for at least one soil type for the test product has to be as good as or better than the reference. All stains in the testing instruction are to be included in the test report.

2. The average value* of all 8 soil types (and 3 cycles of each stain) is better for the test product than for the reference. A 95% confidence interval is to be used for the evaluation of the results.

**Since some results are to be evaluated by visual inspection with grades from 1-10 according to the IKW standard and other in percent all values need to be recalculated to the same index scale to then calculate a total average value.*

See example below in table 5.2 for alternative 1.

Table 5.2 Example of testresults

Soil category	Soil type	Reference	Product 1	Product 2
Bleachable stains	Tea	7,1	8,3	7,1
Stubborn, burnt-on soil	Minced meat on glass dishes	7,7	7,7	9,1
	Milk in the microwave	6,2	8,4	8,4
Amylase specific soils	Starch mix	85%	80%	90%
	Porridge	7,0	6,4	8,2
Protease-specific soils	Egg yolk	80%	82%	80%
	Minced meat on porcelain plates	8,1	8,1	7,2
	Egg/milk	79%	90%	86%

The test result shows that product 2 has an acceptable performance but product 1 is not acceptable due to product 1 being worse than the reference on both amylase specific soils.

Test report

The test report must contain:

- Test temperature
- Water hardness
- Dosage
- Description of how the test was performed
- All test results
- Conclusions and evaluation of the results
- Information concerning the testlaboratory according to the requirements in appendix 2, part 1