Nordic Ecolabelling of Bakeries and bread



Version 1

Consultation version

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Nordic Ecolabelling

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

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Nordic Ecolabelling of bakeries and bread

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What is a Nordic Ecolabelled bakery and what is Nordic Ecolabelled bread?

A Nordic Ecolabelled bakery is a bakery that has been awarded a Nordic Ecolabel licence subject to strict environmental requirements that cover the entire business. Criteria are set on ingredients, energy use, packaging, transport, cleaning chemicals, the working environment and waste management.

Nordic Ecolabelled bread is produced in a Nordic Ecolabelled bakery and meets certain specific criteria, including requirements on organic ingredients and nutritional content.

The Nordic Ecolabelled bakery fulfils a number of environmental requirements, ensuring that the manufacturing of the bread has a low environmental impact from a life cycle perspective. This applies to the baking as well as the supplier chain.

The criteria of the Nordic Ecolabel also cover any cafeteria operations run in conjunction with the bakery.

Why choose the Nordic Ecolabel?

- The Nordic Ecolabel is a very well-known and well-reputed trademark in the Nordic region.
- The Nordic 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 use of energy and reducing amounts of packaging and waste.
- Running a greener business prepares the business for future environmental requirements
- Environmental issues are complex. It can take a long time to gain an understanding of a specific area. Nordic Ecolabelling can be seen as an aid in this work.
- The Nordic 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 Ecolabel licence can also be seen as a mark of quality.

What can carry the Nordic Ecolabel?

These criteria enable bakeries and bread to be awarded the Nordic Ecolabel.

Bakery:
"Bakery" means a place of manufacture in which flour and other ingredients are used to produce bakery products such as bread, crispbreads, sweet breads, pasties and patisserie products. A bakery can be Nordic Ecolabelled it if meets the Nordic Ecolabel criteria for bakeries. Large and small bakeries, such as local bakeries and in-store bakeries, can be

Nordic Ecolabelled. Only those bakeries where > 50% of production (calculated as kg/year) is bread or crispbread (e.g. loaves, crispbread, sliced bread, which may be fresh, frozen or bake-off) can be Nordic Ecolabelled. The remainder of the production may comprise bakery products such as sweet breads, pastries, pasties, pies, and similar.

In the criteria document, bread means bread baked from cereals and other ingredients, see the definition below.

The Nordic Ecolabelled bakery must make the dough for the bread itself. A site where products are produced from ready-made dough that is not manufactured at the site itself cannot be Nordic Ecolabelled. A site which only bakes semi-finished goods such as bake-off products cannot be Nordic Ecolabelled either.

Bakeries that serve food and drink/run a café in conjunction with their bakery operations can also apply for a bakery licence. If the café wants to market itself as Nordic Ecolabelled, however, it must apply for a licence under the Nordic Ecolabel's criteria for hotels and restaurants.

Bread:

In these criteria bread is defined as bread baked from cereals and other ingredients such as water, yeast, salt, spices, fat, etc. Cereal species are wheat (including spelt, durum wheat) rye, oats, barley, rice, maize, millet, durra and other sorghum species. Examples of bread include rye bread, different types of loaves and rolls, sweet breads, flatbread (lefsa, tunnbröd), bread for toasting, baguettes, crispbreads, etc. If you are not sure which products can be included as bread, contact Nordic Ecolabelling.

Bread can be Nordic Ecolabelled if it is fully baked and meets the Nordic Ecolabel's criteria for Nordic Ecolabelled bread. This means that part-baked bread cannot be Nordic Ecolabelled. Ready-baked bake-off bread can be Nordic Ecolabelled and must in such cases comply with special energy requirements in line with this criteria document.

How to apply?

The criteria for Nordic Ecolabelling of bakeries and bread consists of a combination of obligatory requirements and points score requirements. The obligatory requirements are marked O + a number and must always be met for a licence to be obtained.

The points score requirements are marked P + a number and a certain number of points is shown for each every points score requirement met. The points are added together and a certain number of points must be achieved in order to obtain a licence.

Icons in the text

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

☺ On-site inspection

Application

Applications are made to the national ecolabelling organisation and the application is valid for 12 months. Applications may be processed by another ecolabelling organisation according to agreement between the organisations. The applicant is notified of this. Companies located outside the Nordic countries make applications to the national ecolabelling organisation of the primary market.

The application must consist of a completed application form together with all of the documentation required to demonstrate compliance with the requirements specified in the criteria document (this is specified for each requirement). The application form must specify in which Nordic countries the products in question are to be sold and the estimated turnover from the products in each country.

Further information and assistance may be available. Visit the relevant national website for further information.

Contact Nordic Ecolabelling if you want to use a form to summarise your application.

Sales in the Nordic region

Once granted, a licence is valid throughout the Nordic region. The licence document specifies in which Nordic countries the products are sold according to the information provided on the application. The products are published on Nordic Ecolabelling's website(s). The licensee undertakes to inform Nordic Ecolabelling of any changes as to where the product is sold. If the product is to be sold in other Nordic countries than those initially specified in the application, the licensee must provide written notification of this and submit any extra documentation required to Nordic Ecolabelling in the country that issued the license.

On-site inspection

During the application process, Nordic Ecolabelling performs an on-site inspection to ensure adherence to the requirements. For this inspection, data used for calculations, original copies of submitted certificates, test records, purchase statistics, and similar documents that confirm compliance with the requirements must be available for examination.

Questions

Please contact Nordic Ecolabelling if you have any queries or require further information. See page 2 for addresses.

What are the requirements of Nordic Ecolabelling?

To be awarded a Nordic Ecolabel licence the following must be complied with:

- All obligatory requirements met
- A sufficient number of points attained on the points score requirements
- Nordic Ecolabelling has carried out an on-site inspection

In order to be granted a Nordic Ecolabel licence, the following documentation must be attached to the application:

- Documentation demonstrating compliance with any national regulations/special requirements.
- Labelling text on the bread/the primary packaging (packaging text) in all relevant languages.
- Documentation demonstrating compliance with national rules and laws, as well as any industry agreements on take-back systems for packaging.

Criteria for Nordic Ecolabelled bakeries

1 Manufacture

O1 General description of the bakery and its products

The bakery must provide a general description of its business, including

- Whether the company is part of a bakery chain or group
- Whether food and drink is served in conjunction with the bakery
- Product range

The bakery must provide a detailed description of its production (on an annual basis, tonnes or kg):

- bread, divided into types of bread: fresh bread, semi-finished, frozen bread, other bread
- other products divided by type: sweet bread, pastries, pies, pasties, other products
- total use of flour, divided by types of flour: rye flour, wheat flour, other cereal flour products
- all other ingredients, e.g. fat, sugar, yeast, liquids, spices and other additives
- summary of all ingredients used in the bakery. For bread production the names of suppliers must be stated.

✉ Description of the bakery's products and ingredients as above. Appendix 1 can be used as a supplement.

O2 Description of the property and the production process

The bakery must describe its production space and the production process stating the various steps of the process and the equipment used.

- Whether the property is independent or included in a larger property (e.g. an in-store bakery)
- Description of the spaces used for production (buildings, warehouse space, refrigerated or freezer space) must be stated (area in m^2, volume in m^3, year built, purpose).
- Other spaces adjoining the bakery, which are not used for bread production (e.g. office premises)
- Year of manufacture of ovens and year of renovation if applicable
- Description of year of refurbishment/renovation of production, heating, ventilation, or refrigeration/freezing facilities
- Description of production lines and their sources of energy (type of dough made: semi-automated, fully-automated, equipment, type of oven, washing returned plastic trays in the bakery, energy sources of production lines and ovens)
- Overview of ventilation and management of heat emissions

✉ Description of production space and production processes as above.

O3 Production of Nordic Ecolabelled bread

The bakery's product range must always include at least one Nordic Ecolabelled bread.

The Nordic Ecolabelled bread must be produced in a Nordic Ecolabelled bakery.

✉ Documentation verifying compliance with the criterion.

2 Ingredients in the bakery

Maximum total points for this section: 6 points.

O4 Flour and grain from conventionally grown cereals

Flour and grain/flakes from conventionally grown types of cereal must be able to be traced to the country in which it is grown and where it is processed.

For a definition of types of cereal, see Terms and definitions.

✉ Supplier's declaration verifying the criteria.

O5 Organic ingredients in Nordic Ecolabelled bakeries

The amount of certified organic ingredients in Nordic Ecolabelled bakeries must be at least 3% (weight) of the total amount of ingredients used in the bakery over a year, not including the amount of liquid.

✉ List of the total amount of organic ingredients used in the bakery. This list is compared with the documentation from requirement O1.

P1 Organic points for Nordic Ecolabelled bakeries (max. 6 points)

If the amount of organically certified ingredients over a year (not including the amount of liquid) is more than requirement O5, points are awarded as below:

The bakery uses 4 - 10% (weight) organically certified ingredients: 1 point

The bakery uses 11 - 15% (weight) organically certified ingredients: 2 points

The bakery uses 16 - 20% (weight) organically certified ingredients: 3 points

The bakery uses more than 20% (weight) organically certified ingredients: 4 points

The bakery produces one organically certified product: 1 point

The bakery produces 2 or more organically certified products: 2 points

✉ See O5.

O6 Certified palm oil

At least 95% of the palm oil used in the bakery must be certified according to a standard and certification system that meets the requirements of Appendix 2 and which has been examined by Nordic Ecolabelling. Fats from palm oil must be traceable from the supplier back to the grower through mass balance.

For a definition of mass balance, see Terms and definitions.

✉ Certification must be carried out by an independent third party. Copies of certificates signed by a third party.

✉ A list of the amount of palm oil used in the bakery. Appendix 3 can be used.

✉ Copies of relevant certificates from suppliers of ingredients that meet the guidelines for chain of custody certification (CoC) as described in Appendix 3 can be used to monitor this requirement.

O7 Trans fats

Fats and oils used as food ingredients in the bakery's production must be free of industrially manufactured trans fatty acids.

✉ Declaration from suppliers stating that all fats and oils are free of industrially manufactured trans fatty acids.

O8 Genetically modified ingredients.

The use of ingredients from pesticide-resistant and insect-resistant genetically modified plants is not permitted in Nordic Ecolabelled bakeries or Nordic Ecolabelled bread.

✉ Declaration from the bakery stating that the requirement is met. Appendix 4 can be used. Nordic Ecolabelling retains the right to demand additional documentation should doubt arise as to whether the requirement is met.

3 Energy and refrigerators/freezers

Maximum total points for this section: 11 points.

O9 Description of energy use in the bakery

The bakery must report the total energy use of the bakery

- Total energy use per year divided into different energy sources (electricity, oil, gas, district heating/district cooling, etc.)
- If possible, divided into different purposes of use (e.g. baking, ovens, freezing, ventilation, heating, lighting, café operations) and different types of products (e.g. bread, sweet bread, pastries, cakes, etc.)
- How energy use is monitored (in total, per production premises or sub-processes, by hourly metering or daily/monthly/annually)
- Whether energy use has been analysed (when)
- Whether there is an energy recycling system in use (heat recycling of process heating/ventilation air, etc.)

✉ Account of energy use in the bakery as above.

O10 Energy use

Total energy use in the bakery calculated as purchased energy may not exceed 1.50 kWh per kg production.

For a definition of production, see Terms and definitions.

If the bakery, using metering equipment or separate invoices, can separate out energy use for the following processes/areas, these are not included in the calculation:

- washing returned plastic trays
- shops and cafés in conjunction with the bakery
- office premises in conjunction with the bakery
- frozen storage at the bakery

For the bakeries that manufacture bake-off products (which are not Nordic Ecolabelled) a factor (times 2) is introduced which takes into account the fact that bake-off products are not completely baked when they leave the bakery. The energy calculation formula is:

$E_{BOB} = E_B * ((1 * B_K) + (2 * BO_A))$

Where

E_{BOB} = Energy use in a bakery that manufactures bake-off products (kWh/kg production)

E_B = Actual energy use in the bakery (kWh/kg production)

B_K = Proportion of non bake-off products in the bakery's total production

BO_A = Proportion of bake-off products in the bakery's total production

Alternatively, the actual energy use for the production of bake-off bread in the bakery and actual energy use for baking off bake-off bread at the bake-off site is used.

See separate energy requirement O19 which concerns Nordic Ecolabelled bake-off bread.

✉ Account of the bakery's energy use (e.g. with invoices) in relation to the bakery's production (kWh per kg production). The starting values used for the calculation must be clearly shown. The calculations must be carried out and documented as in Appendix 5.

P2 Points for energy use

Points are scored if the total energy use of the bakery is lower than set out in requirement O11.

Energy use is a maximum 0.50 kWh/kg production: 5 points

Energy use is between 0.51 – 0.75 kWh/kg production: 4 points

Energy use is between 0.76 – 1.00 kWh/kg production: 3 points

Energy use is between 1.01 – 1.25 kWh/kg production: 2 points

Energy use is between 1.26 – 1.49 kWh/kg production: 1 point

✉ Account of the bakery's energy use (e.g. with invoices) in relation to the bakery's production (kWh per kg production). The calculations must be carried out and documented as in Appendix 5.

P3 Control of energy use (max. 4 points)

Survey of energy use by an energy expert independent of the business: 2 points

The survey must set out the total consumption of heating, fuel and electricity. The survey must also include suggestions for measures, e.g. potential savings and potential costs plus a plan for improving energy efficiency with annually measurable targets. The report must at least contain information from the most energy-intensive activities, e.g. ovens, ventilation and extractor fans, lighting and electronic equipment. The survey may not be more than 5 years old.

Measuring of the sub-processes in the bakery 0.5 points per meter (max. 1)

The bakery measures and accounts for a clearly delimited part of the bakery's energy use such as ovens, refrigeration/freezing facilities, heating and ventilation.

The bakery has an energy monitoring system for the parts measured: 0.5 points per part (max. 1 point)

At least 30% of the process heating (calculated as kWh) is linked to heat recycling: 1 point

At least 50% of the ventilation (calculated on the basis of air flow) is linked to heat recycling: 1 point

Other energy efficiency arrangements have been introduced that have reduced energy use, e.g. lighting control, optimising compressed air: 0.5 points

✉ Account of the metering, energy monitoring systems, energy surveys and measures carried out. Copy of energy survey carried out. The business must be able to show that relevant measures have been carried out or are planned. See also O9.

☺ The requirement is partly checked on site.

P4 Refrigerants (max. 2 points)

The refrigerant in refrigeration and freezing equipment has a global warming potential (GWP) factor of a maximum of 1 and ozone depletion potential (ODP) factor of 0: 2 points

More than 50% by weight of refrigerants in the refrigeration and freezing facilities has a GWP factor of a maximum of 1 and an ODP factor of 0: 1 point

The refrigerant in the refrigeration and freezing facilities has a GWP factor of a maximum of 5 and an ODP factor of 0: 0.5 points

No refrigerants are used: 2 points

For a definition of GWP and ODP, see Terms and definitions.

✉ Account of types and amounts of refrigerants. Appendix 7 can be used.

4 Waste management

Maximum total points for this section: 4 points.

O11 Waste plan

The bakery must have a plan for sorting waste and for handling waste fractions.

✉ Account of waste fractions and how waste fractions are managed.

☺ The requirement is partly checked on site.

P5 Waste from production

Points are awarded if waste from production is less than 4.5% of the bakery's production

The proportion of waste is a maximum of 2.0%: 2 points

The proportion of waste is 2.1% - 3.0%: 1.5 points

The proportion of waste is 3.1% - 4.5%: 1 point

For a definition of waste and production, see Terms and definitions.

✉ Summary of the amount of waste from production. The proportion of waste is calculated in relation to the total annual production of the bakery.

P6 Management of organic waste (max. 2 points)

The bakery separates organic waste which goes for biofuel production (biogas, ethanol etc.) or is used as animal feed: 2 points

The organic waste goes to other biological treatment, e.g. compost: 1 point

In this document no points are awarded for incineration of organic waste in incineration plants.

✉ Reporting sorting for processing.

5 Transport

Maximum total points for this section: 3 points

All the requirements only concern transport of the bakery's products from the bakery. The requirements cover external transporters with a contractual relationship with the bakery and the bakery's own or leased vehicles.

P7 Euronorm - vehicles (max. 2 points)

The bakery's 3 largest transporters or the transporters that cover more than 70% of the bakery's goods transporters have more than 50% vehicles that meet Euronorm 5: 2 points

The bakery's 2 largest transporters or the transporters that cover more than 30% of the bakery's goods transporters have more than 30% vehicles that meet Euronorm 5: 1 point

Transport concerns goods from the bakery, via a warehouse to stores, measured as volume or weight transported.

✉ List of the bakery's transporters.

✉ Declaration from transporters on the proportion of vehicles that meet Euronorm 5.

P8 Vehicle fuel (max. 2 points)

At least 40% of the bakery's production is transported with vehicles that run on Nordic Ecolabelled fuel: 2 points

At least 30% of the bakery's production is transported in electric vehicles: 1 point

At least 20% of the bakery's production is transported with vehicles that run on Nordic Ecolabelled fuel: 1 point

✉ The bakery's summary of vehicles and types of fuel or declarations from transport companies verifying the requirement.

P9 Refrigerants in refrigerated and freezer vehicles (max. 0.5 points)

One of the bakery's three largest transporters for refrigerated or frozen goods uses at least 95% refrigerants with a global warming potential (GWP) of 1 and an ozone depletion potential (ODP) of 0: 0.5 points

No refrigeration/freezing is required in transporting the bakery's products: 0.5 points

Transport concerns goods from the bakery, via a warehouse to stores, measured as volume or weight transported.

✉ List of the bakery's transporters for refrigerated and frozen goods

✉ Declaration on refrigerants used from transporters of frozen and refrigerated goods.

P10 Courses in EcoDriving

More than 20% of the bakery's own or external drivers have completed a certified course in EcoDriving: 1 point

10% of the bakery's own or external drivers have completed a certified course in EcoDriving: 0.5 points

The transporter annually monitors the rules for EcoDriving by means of a course or by checking fuel consumption per driver: 0.5 points

When monitoring EcoDriving courses, at least 75% of the bakery's drivers should have taken part.

✉ Certificate from an EcoDriving course or equivalent showing that the course was completed.

✉ Procedures that show that a follow-up course has been completed or that fuel consumption has been monitored annually.

6 Chemicals - cleaning products, dishwashing and laundry

Maximum total points for this section: 2 points.

O12 Reactive chlorine compounds

Reactive chlorine compounds (such as chlorine) may not be used for cleaning, with the exception of cleaning where the authorities recommend the use of disinfectant.

✉ Declaration that reactive chlorine compounds are not used for cleaning in the bakery.

O13 Cleaning, dishwashing and laundry chemicals

70% of the bakery's cleaning, dishwashing and laundry chemicals calculated in kg or litres, must be ecolabelled with the Nordic Ecolabel or the EU Ecolabel.

The requirement covers the following areas of use at the bakery:

- floor cleaning
- sanitary cleaning
- general cleaning
- dishwashing
- washing plastic trays
- washing workwear

Exception: chemical products for special cleaning are not included in the requirement (e.g. drain cleaner, grease removal, oven cleaning, disinfectant)

✉ Lists and safety data sheets of all cleaning products covered by the requirement.

✉ Total amount (kg or litres) of chemicals and proportion of ecolabelled products. Licence number of ecolabelled products.
"Ecolabelled" here means products labelled with the Nordic Ecolabel or the EU Ecolabel.

P11 Score for ecolabelled chemical products.

At least 80% of cleaning, dishwashing and laundry chemicals are ecolabelled: 1 point

At least 95% of cleaning, dishwashing and laundry chemicals are ecolabelled: 2 points

✉ Documentation is provided in O13.

7 Use of ecolabelled products

Maximum total points for this section: 3 points.

P12 Use of ecolabelled products or services (max. 3 points)

"Ecolabelled" here means products/services labelled with the Nordic Ecolabel or the EU Ecolabel.

Products	
At least 90% of tissue/toilet paper is ecolabelled	0.5 points
At least 90% of fabric towel reels are ecolabelled	0.5 points
100% of hand/shower soap is ecolabelled	0.5 points
At least 90% of copying paper is ecolabelled	0.5 points
At least one set of bought-in workwear for staff is ecolabelled	0.5 points
At least 90% of the cloths and mops used are ecolabelled	0.5 points
At least 20% of bought-in car tyres are ecolabelled	0.5 points
Other ecolabelled goods, following approval from Nordic Ecolabelling	0.5 points
Services	
At least 90% of external laundry services bought in are ecolabelled	0.5 points
At least 50% of purchased car washing is ecolabelled	0.5 points
At least 50% of purchased cleaning services is ecolabelled	0.5 points
At least 90% of printed materials ordered from printers are ecolabelled	0.5 points
Other ecolabelled services, following approval from Nordic Ecolabelling	0.5 points

✉ Summary of products and services and licence number according to the table.

8 Packaging

Maximum total points for this section: 1 point.

O14 Packaging

Materials in transport and sales packaging must be able to be recycled or reused. The producer must describe the packaging.

Halogenated plastics must not be included in the primary packaging or its components such as clips, closures and labelling materials.

For a definition of primary packaging, see Terms and definitions

✉ Description of the packaging, its composition and how it is handled.

✉ Declaration from producers of primary packaging and its components that halogenated plastics are not included.

O15 Coatings and impregnation

This requirement only applies to primary packaging that is coated/impregnated.

Coating and impregnation chemicals may not contain chromium or fluorine compounds.

Octamethylcyclotetrasiloxane, D4, (CAS 556-67-2) and decamethylcyclopentasiloxane, D5, (CAS 541-02-6) may not be included in chemical products used for silicone treatment of primary packaging of bakery products.

D4 and D5 which are included as pollutants are an exception to the requirement.

✉ Declaration from the chemicals supplier that coating or impregnation chemicals do not contain chromium or fluorine compounds.

✉ Declaration from the chemicals supplier that octamethylcyclotetrasiloxane, D4 and decamethylcyclopentasiloxane, D5, are not included in the chemical products used for silicone treatment of components.

P13 Packaging for bread sold loose by weight

All bread sold loose by weight is placed in Nordic Ecolabelled disposable packaging at point of sale: 1 point

✉ Description of the packaging and the licence number.

9 Working environment

Maximum total points for this section: 3 points.

O16 Flour dust

The bakery has carried out an internal overview of the working environment focusing on dust exposure and allergy risks. The requirements of the authorities setting hygienic limit values for inhalable dust in production premises must be met.

The bakery must have procedures in place to reduce exposure to flour dust.

✉ Report on flour dust measurements carried out (measurement report enclosed) and procedures for minimising exposure. Any reports from the authorities on the working environment at the production site must be enclosed.

P14 Working environment

- There is an external audit of the working environment and a report of planned and carried out follow-up work. The audit must at least include a general assessment of flour dust, chemical exposure, noise, ergonomics and heavy lifting: 2 points
- The bakery has its own working environment audit and accounts for follow-up work planned and carried out. The audit must at least include a general assessment of flour dust, chemical exposure, noise, ergonomics and heavy lifting: 1 point
- Lids, capsules and enclosing sections of the process (for example, making dough, rolling, cutting out) are used or vacuum systems or similar are fitted to limit the contents of flour dust and particles in the air: 1 point
- Procedures are in place for measuring flour dust when emptying ingredients, making dough and other elements of the process: 1 point
- The ventilation systems have infiltration air from the ceiling with vacuum extraction at floor level: 1 point
- The premises are divided into sections to reduce the risk of dust spreading: 1 point

✉ Account of the working environment audit. Copy of the audit report. Description of procedures and measures.

10 Serving food

This section only covers bakeries which serve food (e.g. café, cafeterias).

Maximum total points for this section: 2 points.

P15 Score for bakeries that serve food

More than 70% of all disposable packaging is based on renewable and compostable ingredients, e.g. paper, cardboard or wood: 0.5 points

At least 10% of disposable packaging used is Nordic Ecolabelled: 1 point

Only Nordic Ecolabelled napkins are used: 0.5 points

Organic coffee/tea/milk is provided 0.5 points

✉ Invoices showing which products and are bought in and in what amount.

☺ On-site inspection

11 Requirements for Nordic Ecolabelled bread

Maximum total points for this section: 7 points.

The requirements in this section only apply to Nordic Ecolabelled bread. Only Nordic Ecolabelled bakeries can manufacture Nordic Ecolabelled bread. A Nordic Ecolabelled bakery must always have one Nordic Ecolabelled bread in its product range according to requirement O3.

11.1 Ingredients in Nordic Ecolabelled bread

O17 Organic ingredients in Nordic Ecolabelled bread

The Nordic Ecolabelled bread must contain at least 15% certified organic ingredients by weight, of which:

1. at least 5% must be certified organic ingredients declared in the list of ingredients on the product's packaging. These ingredients must fulfil the regulatory requirements in Council Regulation (EC) No 834/2007 which means that a third party must check that these ingredients are organic.
2. The remainder of the ingredients in the list of ingredients must be organic such that the total proportion of certified organic ingredients in the bread is at least 15%.

Liquid added according to the recipe must not be included in the proportion of organic ingredients.

For a definition of ingredient labelling, see Terms and definitions.

✉ Documentation verifying that the amount of organic ingredients bought in matches the amounts used in the Nordic Ecolabelled bread. Recipes, list of ingredients and packaging text for the Nordic Ecolabelled bread.

✉ Audit report from an organic certification organisation verifying the organic ingredients stated on the ingredients label according to the requirements of Council Regulation (EC) No 834/2007.

P16 Score for production of Nordic Ecolabelled bread and a high proportion of organic ingredients (max. 7 points)

Points are awarded if the organic proportion of ingredients in the Nordic Ecolabelled bread is higher than in O17.

The following points are awarded for the production of Nordic Ecolabelled bread:

Proportion of Nordic Ecolabelled bread produced per year	Proportion of organic ingredients in Nordic Ecolabelled bread		
	15.5 – 50%	50 – 95%	>95%
< 10%	1	2	3
10 – 30%	2	3	4
30 – 50%	3	4	5
50 – 75%	4	5	6
>75%	5	6	7

✉ See O17. When several Nordic Ecolabelled breads are produced, the proportion of organic ingredients in Nordic Ecolabelled bread is calculated by a weighted annual

average of the organic proportion of the amount of Nordic Ecolabelled bread produced. The annual average is based on the sales for the previous year of Nordic Ecolabelled bread or on forecast future annual sales.

O18 Requirements for fat, salt, sugar and dietary fibre

The Nordic Ecolabelled bread must meet the requirements for fat, salt (sodium), sugar and dietary fibre as set out below for bread and crispbreads.

Bread must contain at least 25% whole grain calculated based on the dry matter in the product, fat maximum 7 g/100 g, sugars total max 5 g/100 g, sodium max 0.5 g/100 g, dietary fibre at least 5 g/100 g.

Crispbreads must contain at least 50% whole grain calculated based on the dry matter in the product, fat maximum 7 g/100 g, sugars total max 5 g/100 g, sodium max 0.5 g/100 g, dietary fibre at least 6 g/100 g.

Fat and oils used in the Nordic Ecolabelled bread must contain max. 20% saturated fat of the total fat content of the fat or oil.

For a definition of the Keyhole label, dietary fibre, grain and whole grain, see Terms and definitions.

✉ Declaration of nutritional value of the product that must be carried out according to the guidelines for the Keyhole label. The declaration of nutritional value must be stated as average values based on one of the following options: 1) analysis of nutritional content, 2) calculation on the basis of known or real average values of the ingredients included in the product or 3) calculation based on generally determined and approved information. The bakery must be able to show documentation to justify how the values in the declaration of nutritional value have been produced.

✉ For fats and oils the declaration of contents must be reported.

11.2 Energy requirements in the bake-off process

O19 Energy use in manufacturing Nordic Ecolabelled bake-off bread

Energy use in manufacturing Nordic Ecolabelled bake-off bread calculated as purchased energy may not exceed 1.50 kWh per kg product.

The baking off of bake-off bread at the bake-off site is added to the bakery's energy use for the production of bake-off bread. It is sufficient to only document the energy use of the ovens at the bake-off site.

Where there are several bake-off sites, an average energy value for baking off bake-off bread can be used to calculate the energy use of the ovens. The energy calculation formula is

$E_{BO} = E_{BB} + E_U$

E_{BO} = Total energy use for Nordic Ecolabelled bake-off bread (kWh/kg production)

E_{BB} = Actual energy use for the production of bake-off bread in the bakery (kWh/kg production)

E_U = Actual energy use for baking off bake-off bread at the bake-off site (kWh/kg production). An average value can be used for the energy use of the ovens at the baking site.

✉ Account of the bakery's energy use for the production of bake-off bread (kWh per kg production). The input values used for the calculation must be clearly shown. The calculations must be carried out and documented as in Appendix 5.

12 Summary of points

O20 Summary of points requirements

At least 12 points must be scored for requirements P1-P4 and P16 (ingredients and energy).

A bakery without transport, which does not serve food, must score at least 15 points to be Nordic Ecolabelled.

A bakery with transport, which does not serve food, must score at least 16 points to be Nordic Ecolabelled. The same applies to a bakery without transport, which serves food, it must at least score 16 points to be Nordic Ecolabelled.

A bakery with transport, which serves food, must score at least 17 points to be Nordic Ecolabelled.

	Application points	Potential maximum points
Ingredients at the bakery (P1)		Max. 6 points
Ingredients in the Nordic Ecolabelled bread (P16)		Max. 7 points
Energy and refrigerators / freezers (P2 – P4)		Max. 11 points
Waste (P5-P6)		Max. 4 points
Transport (P7 – P10)		Max. 3 points
Cleaning (P11)		Max. 2 points
Use of ecolabelled products (P12)		Max. 3 points
Packaging (P13)		Max. 1 point
Working environment (P14)		Max. 3 points
Serving food (P 15)		Max. 2 points
Total for bakeries without transport, which do not serve food		Max. 37 points
Total for bakeries without transport, which serve food		Max. 39 points
Total for bakeries with transport, which do not serve food		Max. 40 points
Total for bakeries with transport, which serve food		Max. 42 points

✉ Summary of points in line with the table above. Contact Nordic Ecolabelling if you want to use a formula to calculate points.

13 Quality and regulatory requirements

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

If the bakery has an environmental management system that is certified under ISO 14 001 or EMAS and the following procedures are applied, it is sufficient if the accredited auditor certifies compliance with the requirements.

O21 Laws and regulations

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

Documentation is not required. However, Nordic Ecolabelling may revoke the licence if the requirement is not fulfilled.

O22 Licence administrators

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

✉ Organisational chart showing who is responsible for the above.

O23 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.

O24 Quality management system

The licensee must guarantee that the quality of production in the Nordic Ecolabelled bakery and the Nordic Ecolabelled bread does not deteriorate during the period of validity of the licence.

✉ Procedures to summarise and where necessary tackle complaints regarding the quality of the Nordic Ecolabelled bakery and the Nordic Ecolabelled bread.

✉ Procedures for how the bakery safeguards the quality of the Nordic Ecolabelled bread that is fully baked at an external site.

O25 Planned changes

Written notice of planned product and marketing changes that affect the Nordic Ecolabelling requirements must be given to Nordic Ecolabelling.

✉ Procedures detailing how planned product and marketing changes are dealt with.

O26 Unforeseen non-conformities

Unforeseen non-conformities that affect Ecolabelling requirements must be reported to Nordic Ecolabelling in writing and logged.

✉ Procedures detailing how unforeseen non-conformities are handled.

O27 Traceability

The licensee must have a traceability system for the production of the Nordic Ecolabelled bread.

✉ Description of/procedures for fulfilment of the requirement.

O28 Take-back system

Relevant national regulations, legislation and/or agreements within the sector regarding take-back systems for products and packaging shall be complied with in all the Nordic countries where the Nordic Ecolabelled bakery markets its products.

✉ Declaration from the applicant regarding affiliation to existing recycling/processing agreements.

O29 Annual follow-up

Every year a follow-up of the environmental requirements must be made in line with instructions from Nordic Ecolabelling. In the annual follow-up the focus will be on requirements related to energy and ingredients.

✉ The documentation for the annual follow-up must be signed by the person responsible for the Nordic Ecolabel licence and then be sent to Nordic Ecolabelling.

O30 Marketing

Marketing of the Nordic Ecolabelled bakery and the bread must comply with the "Regulations for the Nordic Ecolabelling of Products" dated 22 June 2011 or later versions.

✉ Duly completed Appendix 8.

✉ Enclose examples of product labelling/information on primary packaging.

Design of the Nordic Ecolabel

The design of the Nordic Ecolabel is as follows:



licence number

Each licence has a unique six-digit licence number that must be displayed along with the label.

Use of the Nordic Ecolabel on products: Licensed bakeries must use the Nordic Ecolabel logo on the products that are Nordic Ecolabelled. The logo may not be used on other products.

If the bakery manufactures Nordic Ecolabelled bread which is also organic: Any additional labelling stating that the product is organic is regulated by legislation on the labelling of organic products: **Council Regulation (EC) No 834/2007 on organic production and labelling of organic products.**

Use of the Nordic Ecolabel in other marketing: Bakeries with a licence can state that the bakery is Nordic Ecolabelled and market the entire business with the Nordic Ecolabel. The ecolabel can be used on signs, posters, advertisements, advertising and similar. When the bakery uses the Nordic Ecolabel in this other marketing (i.e. not on products) one of the following additional texts must be used (other terms can be used with the agreement of Nordic Ecolabelling):

Danish: Bageri

Swedish: Bageri

Finnish: Leipomo

Norwegian: Bakeri

Icelandic: Bakari

English: Bakery

In addition the licensee can market the bakery with advertisements and advertising in other media and in campaign material. Irrespective of the instructions in "Regulations for the Nordic Ecolabelling of Products" dated 22 June 2011, or subsequent versions, the additional text must also be shown in marketing.

It is permitted to refer to the Nordic Ecolabel in conjunction with the name of the bakery but not use the logo on all products produced at the Nordic Ecolabelled bakery if the bakery's licence number is stated. For example, it is permitted to write "Nordic Ecolabelled bakery" or similar and add the bakery's licence number.

More information on the design of the label can be found in "Regulations for the Nordic Ecolabelling of Products" dated 22 June 2011 or later versions.

Follow-up inspections

Nordic Ecolabelling may check that the bakery continues to meet the Nordic Ecolabel requirements after a licence has been granted. This may involve a site visit, random sampling or a similar test.

If it is found that the bakery does not comply with the requirements, the licence may be withdrawn.

Samples can also be taken from the retail stage and analysed by an impartial laboratory. If the requirements are not met, Nordic Ecolabelling may charge the analysis costs to the licensee.

How long is a licence valid?

The Nordic Ecolabel licence will continue to apply as long as 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 will automatically be extended and the licensee informed.

At least one year prior to the expiry of the present criteria, it will be announced which criteria will continue to apply after the expiry date. The licensee will then be offered the opportunity to renew the licence.

New criteria

These criteria are the first Nordic Ecolabelling criteria in a whole new product area, food, and therefore need to be specially evaluated before the next version. Because we do not yet have any licensing experience, it can be difficult to correctly define important evaluation points for the next revision, but it may be relevant to address the following when revising criteria:

- The level of requirements set for organic produce in the bakery and in the bread.
- Traceability and growing of conventionally grown ingredients.
- Sustainability certified sugar and soya.
- Energy use. The design of energy requirements, particularly considering absolute limit value, functional unit and bake-off processes.
- The environmental impact of the transport packaging (e.g. trays that are returned, corrugated cardboard boxes) including the environmental impact of washing trays.
- New discoveries on the impact of fats on human health.

Terms and definitions

Actual energy use:	Specific energy use based on purchased or measured energy in the form of electricity, district heating/district cooling and fuel (e.g. gas).
Bake-off:	Bread which is not completely baked and must be baked before consumption. Bake-off bread may be a frozen or a fresh product. It is pre-baked to a varying extent and is then sometimes frozen. It is (defrosted) and baked at the bake-off site/point of sale.
Bake-off site:	Defined in these criteria as a place where bake-off bread is finally baked for sale to the consumer. Examples of these are supermarket in-store bakeries that bake part-baked bread.
Bakery:	"Bakery" means a place of manufacture where flour from cereals and other ingredients are used to produce bakery products such as bread and crispbreads (e.g. loaves, crispbread, rolls), sweet bread, pies, pastries, patisserie products, etc.
Bread:	Bread means bread baked from cereals and other ingredients. Cereal species are wheat (including spelt, durum wheat), rye, oats, barley, rice, maize, millet, durra and other sorghum species. Bread may be rye bread, white bread, baguettes, rolls, crispbread, etc. Other products means biscuits, sweet bread and crispbread, buns, pizza, pasties, etc.

Cereal: Cereal species are wheat (including spelt, durum wheat), rye, oats, barley, rice, maize, millet, durra and other sorghum species.

Dietary fibre: Dietary fibre: carbohydrate polymers with three or more monomeric units, which are neither digested nor absorbed in the human small intestine and belong to the following categories: 1) edible carbohydrate polymers naturally occurring in the food as consumed, 2) edible carbohydrate polymers which have been obtained from food raw material by physical, enzymatic or chemical means and which have a beneficial physiological effect demonstrated by generally accepted scientific evidence, 3) edible synthetic carbohydrate polymers which have a beneficial physiological effect demonstrated by generally accepted scientific evidence.

Dietary fibre has a energy value and the conversion factor is 2 kcal/g or 8 kJ/g.

Ecolabelled: Defined in these criteria as products/services labelled with the Nordic Ecolabel or the EU Ecolabel.

GWP: Global Warming Potential Global (GWP) is a relative measurement of the climate impact of greenhouse gases. The climate impact of gases is relative and compared with the climate impact of the equivalent amount of carbon dioxide.

Ingredients labelling:
This means that one ingredient in the list of ingredients of a food product can be organic and the remaining ingredients conventionally grown in line with Council Regulation (EC) No 834/2007. The organic ingredient may not be found together with the same ingredient in non-organic form. These ingredients must comply with the regulatory requirements under Council Regulation (EC) No 834/2007. Under these requirements a third party must check that these ingredients are organic.

The references to the organic production method may only appear in relation to the organic ingredients and the list of ingredients shall include an indication of the total percentage of organic ingredients in proportion to the total quantity of ingredients of agricultural origin. The terms and the indication of percentage referred to in the previous subparagraph shall appear in the same colour, identical size and style of lettering as the other indications in the list of ingredients. (Council Regulation (EC) No 834/2007, Article 23)

Keyhole label: Aims to guide consumers towards healthier foods.

The Keyhole label is used by agencies in Sweden, Norway and Denmark. The criteria are set jointly by the food agencies of the three countries. The criteria for being able to label food with the Keyhole label include fibre and whole grain, fat and fat quality, sugar and salt.

Mass balance:	Mass balance means that when ingredients with different characteristics are mixed, the added total of all the batches taken from the mix must have the same characteristics in the same amounts as the total of all the batches that were added to the mix. It is therefore required that information about characteristics and the amounts of the batches referred to remain associated with the mix.
ODP	Ozone depletion potential (ODP): Used as a measurement of the individual refrigerant's effect on depletion of the ozone layer. The reference value for ODP is the refrigerant CFC11 which has an ODP value of 1.
Primary packaging:	
	The packaging closest to the actual product.
Production:	In these criteria the bakery's production means the bakery's entire prime production of fresh bread, semi-finished products, frozen bread and other products such as sweet bread and other bakery products (fresh, semi-finished products and frozen). Prime production means the production that meets the quality requirements the bakery has in place for its products for sale. This production concept does not thus include the bakery products that go to waste, such as spoiled bread and seconds.
Trans fats:	Industrially manufactured trans fats can be formed when vegetable oil is converted into partially hydrogenated fat. The food industry uses hydrogenation to make the fat more solid so that the products achieve the desired crispness, solidity and melting point. Hydrogenation also increases shelf-life. Trans fats also occur naturally in small amounts in milk fat.
Waste:	In these criteria waste is defined as organic waste arising in the bakeries in the form of flour, dough, bread and bread products. Any bread returned from stores and other points of sale is not included in the concept of waste in these criteria.
Whole grain:	The whole grain (cereal germ, endosperm and bran); the grain may be milled, crushed or similar but the component parts must be included in their original proportions for the cereal concerned.

Appendix 1 Description of the bakery's production

Can be used as a template, supplemented by the bakery's own lists of the information required below.

Company:			
Contact:			
ANNUAL PRODUCTION			
	Amount in kg or tonnes/year	**Supplier**	**Additional information**
Production			
Total milk consumption			
PRODUCTS All the bakery's products should be listed here, e.g. - Fresh bread** - Bake-off bread - Frozen bread - Other products*** such as sweet breads, pasties, etc.			
TOTAL AMOUNT OF ALL INGREDIENTS excluding liquids All ingredients should be listed here, e.g. - Wheat flour - Organic wheat flour - Rye flour - Organic rye flour - Oats - Other cereal products - Rapeseed oil - Other fats - Sugar, syrup - Other ingredients and additives			

** Bread means rye bread, white bread, baguettes, rolls, crispbreads, etc.

*** Other products means biscuits, sweet bread and crispbread, buns, pizza, pasties, etc.

Appendix 2 Guidelines for certification of oil palm production and traceability certification

Criteria for standards

Nordic Ecolabelling sets the criteria for a certification system and standards in accordance with which the production of ingredients is to be certified. The criteria are described below. Each individual national standard and each certification system is assessed by Nordic Ecolabelling to ensure that all the criteria are met. When the standards are revised, the standard must be reassessed.

Criteria for standards

1. The standard shall balance financial, ecological and social interests and comply with the UN's Rio document Agenda 21 and the forestry principles and respect relevant international conventions and agreements.
2. The standard must contain absolute requirements and must promote and contribute towards sustainable forestry and agriculture. Nordic Ecolabelling places particular emphasis on the standard having effective criteria that protect the forest/agriculture from illegal felling and that the absolute criteria product the biodiversity of the forest/agriculture.
3. The standard must be public. It must be drawn up in an open, fair process in which environmental, economic and social stakeholders have been invited to take part.

The criteria for standards are worded as process criteria, in which the starting point is that if the economic, social and environmental stakeholders in a process are in agreement on a forestry standard, an acceptable level for the standard is assured.

If a standard is developed or accepted by economic, organic and social stakeholders, it is likely that the standard maintains a good level of requirements. For this reason, it is a requirement that the standard balances the three stakeholder groups and that all stakeholder groups must have been invited to be involved in developing the standard.

The standard must contain absolute criteria that must be met before the forestry or agriculture can be certified. This ensures that the forestry/agriculture concerned maintains its environmental work at an acceptable level. When Nordic Ecolabelling requires that the standard promotes and contributes towards sustainable forestry/agriculture, it is required that the standard is evaluated and revised on a regular basis such that the process is developed and environmental impact reduced on an ongoing basis.

Criteria for certification systems

- The certification must be open, have major national or international credibility and be able to verify that the requirements of the forestry standard are met.

Criteria for certification bodies

- The certification body must be impartial and trustworthy and must be able to check that the requirements of the standard are met. The certification body must also be

able to communicate the results and be capable of efficiently implementing the standard.

The purpose of certification is to quality assure that the criteria of the standard are met. The certification system must be suitable to verify that the requirements of the standard have been met. The methods used in certification must be replicable and usable for forestry/agriculture and certification is to take place in relation to a specific standard. Checks of the standard are to be carried out in the forest/farmed area before the certificate is issued.

Traceability criteria (CoC Chain of Custody)

- Chain of custody certification is to be carried out by an accredited third party as in the certification requirement.
- The system must set requirements for the CoC chain guaranteeing traceability, documentation and checks throughout the production chain.

Organic farming criterion

For ingredients certified as organic, the vegetable ingredients must be produced and checked in compliance with EU Regulation 2092/91 or 834/2007, or manufactured and checked in a corresponding manner by a corresponding control system such as Debio, Luomu, Statskontrollert, KRAV, SKAL, IMO, OCIA, etc.

Documentation

Copy of the standard, the name address and phone number of the organisation which drew up the standard and the final report of the certification body.

Nordic Ecolabelling is entitled to require further documentation to check that the requirements of standards and the certification systems have been met.

Appendix 3 Certificate for certified palm oil (O6)

At least 95% of the palm oil bought in and used in the bakery is certified under a standard and certification system that meets the criteria in Appendix 2.

Enclose a copy of a valid certificate.

Based on the documentation in table 3.1 and the documentation according to requirement O1 the proportion of palm oil is:

_____percent of the total amount of fat used in the bakery.

Table 3.1. Report on palm oil

Product name of fat/oil in which it is included.	Fat ingredient/blend, sort	Proportion of fat blend comprising palm oil (%)	Amount of certified palm oil (tonnes/year)
	Total amount of palm oil		

Certified by applicant's contact:

_____	_____
Date and place	Company
_____	_____
Contact (block capitals)	Phone
_____	_____
Signature	E-mail

Appendix 4 Declaration from bakery re. requirement O8 GM ingredients

Declaration that no ingredients come from plants genetically modified for pesticide and/or insect resistance (O8). The bakery must obtain a declaration from suppliers of the ingredients concerned.

We hereby declare that ingredients used in the Nordic Ecolabelled bakery and the Nordic Ecolabelled bread do not come from pesticide-resistant and/or insect-resistant genetically modified plants. The bakery has declarations from the suppliers of the ingredients concerned to substantiate this.

Completed by the applicant's contact:

_____	_____
Date and place	Company
_____	_____
Contact (block capitals)	Phone
_____	_____
Signature	E-mail

Appendix 5 Energy use at the bakery

Under requirement O10 energy use in the bakery calculated as purchased energy in the form of electricity, district heating/district cooling and fuel may not exceed 1.5 kWh per kg production.

The bakery must report the bakery's energy use in relation to the bakery's total production (kWh per kg production). The term production here refers to the bakery's total production of prime products manufactured. Energy use at the bakery is calculated based on information on the bakery's supplier invoices for electricity, fuel and heating/cooling in relation to the amount of production on an annual basis. The starting values used for the calculation must be clearly shown.

Energy use at the bakery covers energy used in production (the baking process, ovens, refrigeration, freezing, etc.) and in the property (lighting, ventilation, heating, etc.). If the bakery, using metering equipment or separate invoices, can separate out energy use for the following processes/areas, these can be ignored in the calculation: washing returned plastic trays, shops and cafés in conjunction with the bakery, office premises in conjunction with the bakery and freezer storage at the bakery. Freezing which is part of the bakery's production line cannot be ignored.

The bakery's energy use

The bakery's energy use is calculated as follows:

$E_B = E_{BB}/\text{Total P}$

E_B = Energy use at the bakery per kg production (kWh/kg production)

E_{BB} = Actual energy use per year (kWh/year) i.e. purchased energy in the form of electricity, district heating/district cooling and fuel

Total P = The bakery's total production per year (kg/year)

According to requirement O11

E_B must be < 1.50 kWh per kg production

When producing bake-off products

The following calculation principles apply if bake-off products are manufactured at a Nordic Ecolabelled bakery (A). If the bake-off bread is Nordic Ecolabelled, calculation principle (B) must be applied.

A The Nordic Ecolabelled bakery manufactures bake-off products. For the bakeries that manufacture bake-off products (which are not Nordic Ecolabelled) a factor (times 2) is introduced which takes into account the fact that bake-off products are not completely baked when they leave the bakery. The energy calculation formula

$E_{BOB} = E_B * ((1 * B_K) + (2 * BO_A))$

E_{BOB} = Energy use in a bakery that manufactures bake-off products (kWh/kg production)
E_B = Actual energy use in the bakery (kWh/kg production)
B_K = Proportion of non bake-off products in the bakery's total production
BO_A = Proportion of bake-off products in the bakery's total production

Alternatively, the actual energy use for the production of bake-off bread in the bakery and actual energy use for baking off bake-off bread at the bake-off site is used. See the calculation principle set out in more detail under B below. To calculate the energy use of the ovens at the bake-off site, an average energy value for baking off bake-off bread can be used (see "Calculating an average energy value for baking off bake-off bread" for more detail).

The absolute limit value for energy use is the same for all bakeries (requirement O10): energy use in a bakery that manufactures bake-off products may not exceed 1.5 kWh per kg product.

B. Nordic Ecolabelled bake-off bread. If the bake-off bread is to be Nordic Ecolabelled, baking off at the bake-off site (ovens that finally bake bake-off bread) is added to the bakery's energy use for the production of bake-off bread. Only the energy use of the ovens at the bake-off site is to be included in the calculations. Energy from any refrigeration, freezing, etc. is not included in the calculations. To calculate the energy use of the ovens at the bake-off site, an average energy value for baking off bake-off bread can be used (see "Calculating an average energy value for baking off bake-off bread" below). The energy calculation formula is

$$E_{BO} = E_{BB} + E_{U}$$

E_{BO} = Total energy use for Nordic Ecolabelled bake-off bread (kWh/kg production)

E_{BB} = Actual energy use for the production of bake-off bread in the bakery (kWh/kg production)

E_{U} = Actual energy use for baking off bake-off bread at the final bake-off site (kWh/kg production). An average value can be used for the energy use of the ovens at the bake-off site. The average value is to be calculated according to the instructions below (see "Calculating an average energy value for baking off bake-off bread").

The absolute limit value for energy use is the same for all bakeries (requirement O13): energy use for manufacturing Nordic Ecolabelled bake-off bread may not exceed 1.5 kWh per kg product.

Calculating an average energy value for baking off bake-off bread. An average energy value can be used to calculate the energy use of the ovens where there are several bake-off sites. The applicant must produce an average energy value as follows:

- energy use from at least 10% of the ovens used for baking off by those to whom the bakery sells bake-off bread.
- if the number of bake-off sites is very high, it is sufficient to use data from 10 ovens used for baking off.
- if the number of bake-off sites is less than 10, the energy value must be based on at least 3 bake-off ovens (maximum 10 ovens, minimum 3).

The applicant must provide documentation of how the average value has been reached. A list is to be provided of the bake-off sites included in the calculations, number of ovens, type of oven, power, calculated amount baked, and the time for heating up and baking and other details.

Appendix 6 Heat values for fuel

Reference values for fuel use*

	Unit	Heat value
Fuel oil (EO2-5, Sweden)	GJ/m^3	38.16
	MWh/ m^3	10.6
Natural gas	GJ/1000 m^3	39.74
	MWh/1000 m^3	11.04
Coal	GJ/tonne	27.21
	MWh/tonne	7.56
Peat	GJ/toe	41.87
(milled peat, peat in block) 1toe=14.54 m^3	GJ/m^3	2.88
	MWh/ m^3	0.8
Peat in block	MWh/ m^3	1.1
Wood fuel	GJ/toe	41.87
	MWh/ m^3	11.63

Ref. Swedish Environmental Protection Agency reports in line with the Convention on Long-range Transboundary Air Pollution and the Framework Convention on Climate Change

**If more specific data is available from the supplier, this can be used instead.*

If necessary, i.e. if no data is available from the supplier, the following density values can be used:

Natural gas: 0.85 kg/m^3N

Light fuel oil: 0.89 kg/litre

Heavy fuel oil: 0.98 kg/litre

Data from the supplier can be used for fuel that is not included in the table. This must be the Lower Heating Value.

Appendix 7 GWP and ODP factors for refrigerants

(Reference for data: http://energytool.svanen.se in Nordic Ecolabelling's calculation tool for store criteria)

Ashrae Number	Type	ODP	GWP
R123	HCFC	0.02	90
R124	HCFC	0.022	470
R125	HFC	0	2,800
R1270 (propene)	HC	0	3
R134a	HFC	0	1,300
R141b	HCFC	0.11	600
R170	HC	0	3
R22	HCFC	0.05	1,700
R23	HFC	0	11,700
R23	HFC	0	11,700
R290 (propane)	HC	0	3
R401A	HCFC	0.04	973
R401B	HCFC	0.04	1,062
R401C	HCFC	0.03	760
R402A	HCFC	0.02	2,250
R402B	HCFC	0.03	1,964
R403A	HCFC	0.04	2,525
R403B	HCFC	0.03	3,570
R404A	HFC	0	3,260
R407A	HFC	0	1,770
R407B	HFC	0	2,285
R407C	HFC	0	1,526
R407D	HFC	0	1,428
R408A	HCFC	0.02	2,649
R409A	HCFC	0.05	1,288
R409B	HCFC	0.05	1,273
R410A	HFC	0	1,725
R411B	HCFC	0.05	1,500
R413A	HFC	0	1,774
R417A	HFC	0	1,968
R507	HFC	0	3,300
R508B	HFC	0	11,700
R600A (isobutane)	HC	0	3
R601 (pentane)	HC	0	3
R601A (Isopentane)	HC	0	3
R717 (ammonia)		0	0
R744 (CO2)		0	1
R404A	HFC	0	3,260

Appendix 8 Marketing of Nordic Ecolabelled bakeries and bread

We hereby certify that we are well acquainted with the regulations governing the use of the Nordic Ecolabel, as detailed in "Regulations for the Nordic Ecolabelling of Products" dated 22 June 2011 or later versions. We agree to follow these regulations when marketing Nordic Ecolabelled bakeries and bread.

Further, we confirm that we are familiar with the content of the criteria for the Nordic Ecolabelling of bakeries and bread.

We undertake to advise those individuals within the company involved in marketing the Nordic Ecolabelled bakeries and bread of the criteria for the Nordic Ecolabelling of Bakeries and Bread and "Regulations for the Nordic Ecolabelling of Products" dated 22 June 2011 or later versions.

_____ _____

Place and date Company

_____

Signature, contact person

_____ _____

Name (BLOCK CAPITALS) Phone

_____

Signature, marketing manager

_____ _____

Name (BLOCK CAPITALS) Phone

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