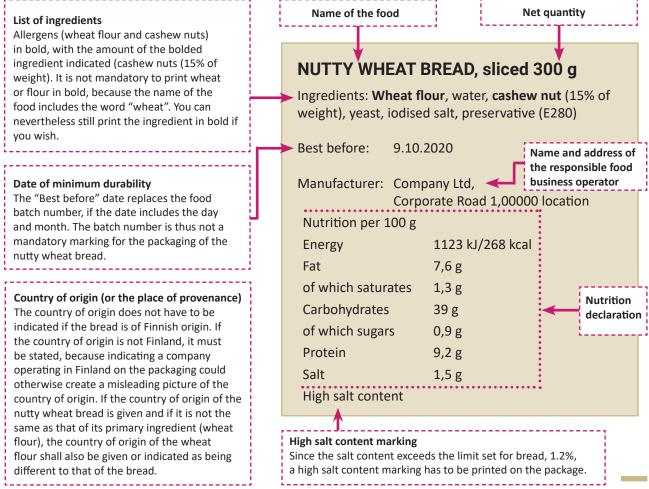


Section 10, Examples

In this section of the guide, you will learn about mandatory food labelling through examples of products. The section also includes examples of recipe calculations.

Example 1: Labelling for nutty wheat bread

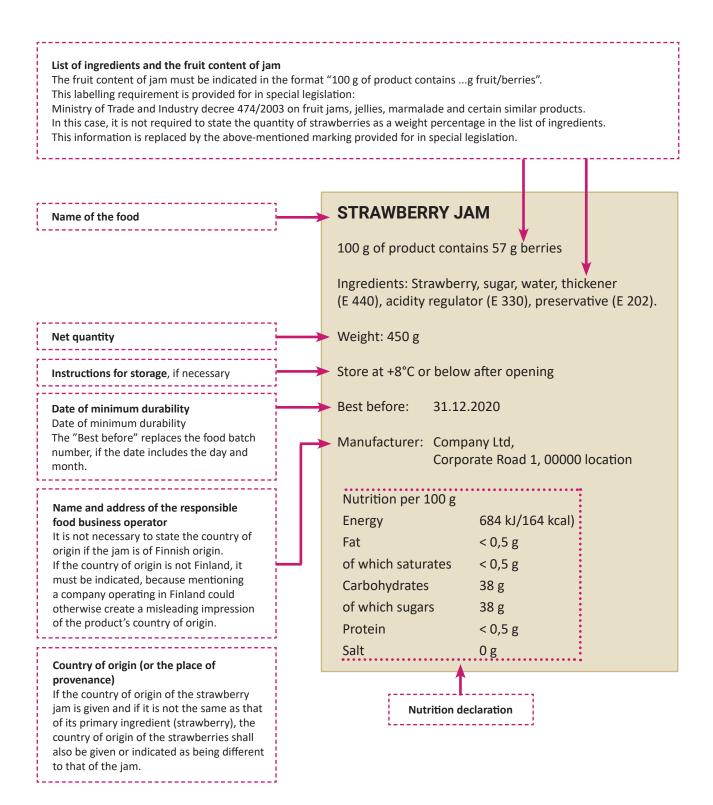
The first example demonstrates the mandatory labelling for nutty wheat bread. Please note that mandatory labelling for prepacked foods must be in Finnish and Swedish. However, if the food is sold only in a monolingual municipality, the mandatory labelling can be made only in the language of that municipality. (Translations: Please see the guides *Elintarvikkeista annettavat tiedot – Opas pk-yrityksille* (in Finnish) and *Livsmedelsinformation – Handbok för små och medelstora företag* (in Swedish). Guides are available on Finnish Food Authority`s website.)



Example 2: Labelling for strawberry jam

The next example shows the mandatory labelling for strawberry jam.

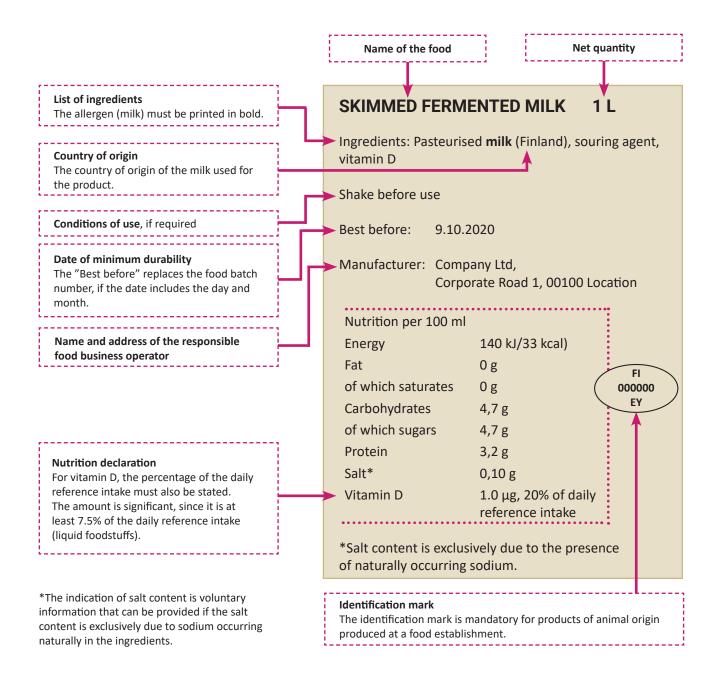
Please note that mandatory labelling for prepacked foods must be in Finnish and Swedish. However, if the food is sold only in a monolingual municipality, the mandatory labelling can be made only in the language of that municipality.



Example 3: Labelling for skimmed fermented milk

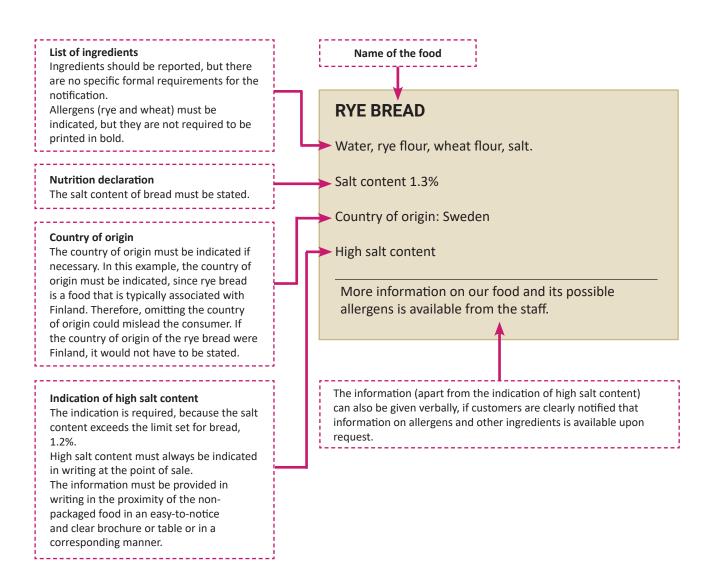
This example shows the mandatory labelling for skimmed fermented milk.

Please note that mandatory labelling for prepacked foods must be in Finnish and Swedish. However, if the food is sold only in a monolingual municipality, the mandatory labelling can be made only in the language of that municipality.



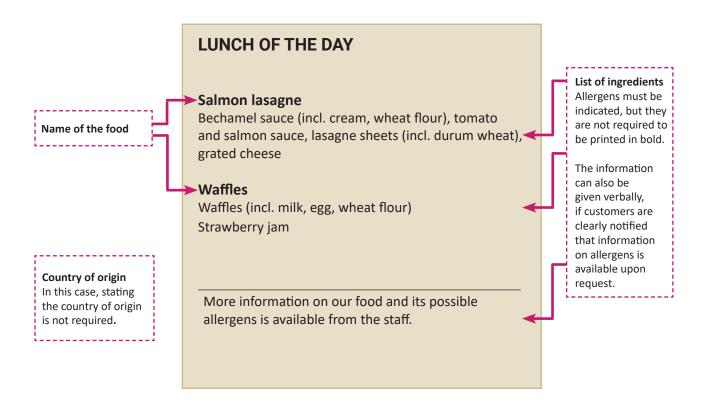
Example 4: Food information for non-prepacked rye bread in retail sale

This example shows what information is mandatory for non-prepacked rye bread in retail sale.



Example 5: Lunch menu information at a catering establishment

This example shows what information is mandatory for non-prepacked foods at a catering establishment.



Example 6: Recipe calculation for nutty wheat bread

This example shows you how to produce mandatory information based on the recipe for nutty wheat bread.

Recipe for nutty wheat bread

Weight	Ingredient
1 400 g	wheat flour
1 100 g	water
400 g	cashew nuts
55 g	yeast
40 g	iodised salt
5 g	propionic acid (E 280)

baking loss 10%

Weight and loss

Weigh the product when it is raw and finished, or calculate the weight of the finished product while taking baking loss into account:

Raw weight

Product raw weight = weight of the dough Raw weight of nutty wheat bread: $1\,400\,g + 1\,100\,g + 400\,g + 55\,g + 40\,g + 5\,g = 3\,000\,g$

Baked weight

Weight of the baked product

= product raw weight – (product raw weight x baking loss percentage / 100)

Baked weight of nutty wheat bread:

 $3\ 000\ g - 300\ g$ (= $3\ 000\ g$ x $10\ \%$ / 100) = $2\ 700\ g$

Baking loss

Loss refers to the change that occurs to a food's weight during the baking process.

In practice, this is due to water evaporating. In the example of a nutty wheat bread, it is known that baking loss is 10%. If the amount of loss is unknown, you can measure this by weighing the raw and baked products and calculating the difference.

Loss = product raw weight – product baked weight

Loss percentage

= (loss x 100) / product raw weight %

Order of ingredients

List the ingredients in the labelling in descending order of their weight in the recipe. Indicate added water according to its amount in the finished product.

The amount of water in the finished product is affected by baking loss.

Amount of water in the finished product

= (total amount of water as an ingredient) – (product raw weight – product baked weight)

Amount of water in finished nutty wheat bread:

```
1\ 100\ g - 300\ g \ (= 3\ 000\ g - 2\ 700\ g) = 800\ g
```

Therefore, the order by which ingredients are listed in the bread's packaging is as follows:

- 1. wheat flour (1400 g)
- 2. water (800 g)
- 3. cashew nut (400 g)
- 4. yeast (55 g)
- 5. iodised salt (40 g)
- 6. propionic acid (E 280) (5 g)

Emphasising an ingredient

If an ingredient is emphasised in a place such as the name of the food and it can be assumed to influence the consumer's purchase decision, the share of the ingredient as a percentage of the total weight of the product must be indicated. In the case of nutty wheat bread, this means that the share of nuts must be indicated. The share of wheat does not need to be indicated despite the fact that it is included in the name of the food, as it is unlikely that it influences the consumer's decision.

The percentage of a certain ingredient in the food is calculated as follows: (amount of the ingredient / product baked weight) x 100%

Percentage of cashew nuts in nutty wheat bread: $(400 \text{ g} / 2700 \text{ g}) \times 100 \% = 14.8 \% \approx 15 \%$.

Allergens

Substances and products that cause allergies or trigger intolerances must be emphasised in the list of ingredients. In the case of nutty wheat bread, the allergens are nuts and wheat. As the word 'wheat' is already indicated in the name of the food, it does not need to be emphasised in the list of ingredients. If you wish, you may also emphasise this in the list of ingredients.

The word 'nut' is also indicated in the name of the food. However, as there are different types of nuts and consumers might only be allergic to a specific variety, the word 'cashew nut' must be emphasised in the list of ingredients.

Additives

First, check whether an additive listed in the recipe is permitted to be used to manufacture bread. Be sure to also check if there are maximum content limits for the additive.

You can find the information under the food category "07.1 Bread and rolls" in part E of annex II to the Regulation (EC) No 1333/2008, or In the European Commission web application: (Categories \rightarrow Bakery wares (7) \rightarrow Bread and rolls (7.1)).

You can find the regulation on food additives and the EU Commission application in the list of links on our website.

The recipe for wheat bread includes propionic acid (E 280). Under the regulation on additives, prepacked sliced bread may contain propionic acid up to 3 000 mg/kg. In the recipe, the amount of propionic acid is indicated as 5 g.

The amount of propionic acid in mg/kg in the finished product is calculated as follows: To begin with, the units can be changed to their consistent forms as mg/kg as follows (Propionic acid in nutty wheat bread 5 g = 5000 mg and weight of finished bread 2700 g = 2.7 kg).

To calculate the amount of additive in the finished product in mg/kg, divide the amount of additive by the weight of the finished product.

Amount of propionic acid in nutty wheat bread: 5 000 mg / 2.7 kg = 1 850 mg/kg

The amount of propionic acid does not exceed the permitted maximum level. The recipe may thus be followed. The additive must be indicated in the list of ingredient by the name of the category of its functional class, followed by the specific name or E number.

Propionic acid is used as a preservative. In the list of ingredients, it can be indicated as follows: "preservative (E 280)" or "preservative (propionic acid)".

Final list of ingredients

Ingredients: **Wheat flour**, water, **cashew nut** (15% of weight), yeast, iodised salt, preservative (E 280).

Calculating nutrition information

he information presented in the nutrition declaration may be based on analysis or calculations. The amounts of nutrients in the food may be calculated in several ways.

This example uses the average values indicated for various ingredients in the Fineli food composition database(www.fineli.fi).

Energy and nutrition values per 100 grams of nutty wheat bread ingredients (Fineli database)*

	Ene	ergy	Fat	Saturates	Carbohydrates	Sugars	Protein	Salt
Ingredient	kJ	kcal	g	g	g	g	g	mg
Wheat flour	1 467	350	1,4	0,2	70	0,4	11,5	2,5
Water	-	-	-	-	-	-	-	2,5
Cashew nut	2 403	574	46,4	7,8	18,8	4,6	20	25,5
Yeast	312	74	0,4	-	1,1	-	13,1	11,2
lodised salt	11	3	-	-	-	-	0,6	98 607,6
Propionic acid	-	-	-	-	-	-	-	-

^{*}Source: National Institute for Health and Welfare, Nutrition Unit. Fineli. Food composition database. Version 18. Helsinki 2017. www.fineli.fi

Energy and nutrition values per 1400 grams of wheat flour

Energy (kJ)	(1 467 kJ / 100 g) x 1 400 g = 20 538 kJ					
Energy (kcal)	(350 kcal / 100 g) x 1 400 g = 4 900 kcal					
Fat	(1,4 g / 100 g) x 1 400 g = 19,6 g					
Saturates	(0,2 g / 100 g) x 1 400 g = 2,8 g					
Carbohydrates	(70 g / 100 g) x 1 400 g = 980 g					
Sugars	(0,4 g / 100 g) x 1 400 g = 5,6 g					
Protein	(11,5 g / 100 g) x 1 400 g = 161 g					
Salt	(2,5 mg / 100 g) x 1 400 g = 35 mg *					

^{*} Salt is indicated in the Fineli database in milligrams (mg). In the final nutrition declaration, salt content must be indicated in grams (g).

Energy and nutrition values in other ingredients of nutty wheat bread The amounts are calculated in the same way as for wheat bread in the above example.

Amount of ingredient Carboin recipe Fat **Saturates** hydrates **Protein** Salt Energy Sugars Ingredient g kJ kcal g g g g g mg Wheat 4 900 980 1 400 20 538 19,6 2,8 5,6 161 35 flour Water 800 20 Cashew 400 9 612 2 296 185,6 31,2 75,2 18,4 80 102 nut

	Amount of ingredient in recipe	Energy		Fat	Saturates	Carbo- hydrates	Sugars	Protein	Salt
Ingredient	g	kJ	kcal	g	g	g	g	g	mg
Yeast	55	171,6	40,7	0,2	-	0,6	-	7,2	6,16
Iodised salt	40	4,4	1,2	-	-	-	-	0,24	39 443,04
Propionic acid	5	-	-	-	-	-	-	-	-
Total (≈)		30 326	7 238	205	34	1 056	24	248	39 606

Energy and nutrition values per 100 grams of finished nutty wheat bread

Energy (kJ)	(30 326 kJ / 2 700 g) x 100 g ≈ 1 123 kJ
Energy (kcal)	(7 238 kcal / 2 700 g) x 100 g ≈ 268 kcal
Fat	(205 g / 2 700 g) x 100 g ≈ 7,6 g
Saturates	(34 g / 2 700 g) x 100 g ≈ 1,3 g
Carbohydrates	(1 056 g / 2 700 g) x 100 g ≈ 39,1 g
Sugars	(24 g / 2 700 g) x 100 g ≈ 0,9 g
Protein	(248 g / 2 700 g) x 100 g ≈ 9,2 g
Salt	(39 606 mg / 2 700 g) x 100 g ≈ 1 467 mg ≈ 1,5 g *

^{*} Salt is indicated in the Fineli database in milligrams (mg). In the final nutrition declaration, salt content must be indicated in grams (g).

The European Commission has published a guide on rounding nutrition values in 2012. The guide is found in the list of links on our website.

Alternative methods of calculation

Calculating energy value using conversion factors

The average energy values of several foods are readily available in the Fineli database, as shown above. Next, you will learn how to calculate energy values manually in cases where the information is not readily available.

The energy value of a food includes all nutrients contained in the food that produce energy. In the case of nutty wheat bread, the energy-producing nutrients are carbohydrates, protein, fat and fibre.

In the Fineli database, fibre is listed under carbohydrate components, but it is not included in the total amount of carbohydrates (absorbed carbohydrates) and must be taken into account separately when calculating energy value.

The energy value of each nutrient is calculated by multiplying the amount of the nutrient (g/100 g of finished product) by the conversion factor defined for each nutrient. The conversion factors are found in annex XIV to the food information regulation.

Example: Nutty wheat bread

	Amount of nutrient	Conversi	on factor	Energy value	Energy value
Nutrient	g/100 g	kJ/g	kcal/g	kJ/100 g	kcal/100 g
Carbohydrates	39,1*	17	4	39,1 x 17 = 664,7	39,1 x 4 = 156,4
Protein	9,2*	17	4	9,2 x 17 = 156,4	9,2 x 4 = 36,8
Fat	7,6*	37	9	7,6 x 37 = 281,2	7,6 x 9 = 68,4
Fibre	2,58**	8	2	2,58 x 8 = 20,64	2,58 x 2 = 5,16
Total				≈ 1 123 kJ / 100 g	≈ 267 kcal / 100 g

^{*} The quantities of carbohydrates, fat and protein (g / 100 g) were defined previously when calculating nutrition information.

Calculating the amount of fibre in 100 grams of nutty wheat bread

	Amount of ingredient in recipe	Fibre*	Fibre / whole ingredient	Fibre / whole product
Ingredient	g	g / 100 g	g	g
Wheat flour	1 400	3,7	(3,7 g / 100 g) x 1 400 g = 51,8 g	
Water	800	-	-	
Cashew nut	400	3,5	(3,5 g / 100 g) x 400 g = 14 g	
Yeast	55	6,9	(6,9 g / 100 g) x 55 g = 3,795 g	
Iodised salt	40	-	-	
Propionic acid	5	-	-	
Total	2 700		≈ 69,6 g	(69,6 g / 2 700 g) x 100 g ≈ 2,58 g

^{*} Source: National Institute for Health and Welfare, Nutrition Unit. Fineli. Food composition database. Version 18. Helsinki 2017. www.fineli.fi

Note that when calculating energy values, you must also take into account other energy-producing nutrients in the food, if necessary (see annex XIV to the food information regulation). For example, if the food is manufactured using alcohol (and the product is not heated) or polyols, i.e. sugar alcohols.

^{**} The amount of fibre (g / 100 g) is calculated similarly to the quantities of carbohydrates, fat and sugar. The calculations are shown in the table below.

Calculating total salt content

The salt contents of several foods are readily available in the Fineli database, as shown above.

If the data is not readily available, you can also calculate total salt content manually. When calculating the total salt content of a finished product, both added salt and naturally occurring sodium in the ingredients are taken into account. The amounts of naturally occurring sodium in ingredients are available in the Fineli database.

Amount of naturally occurring sodium in nutty wheat bread ingredients and in the total product weight:

	Amount of ingredient in recipe	Naturally occurring sodium*	Naturally occurring sodium
Ingredient	g	mg / 100 g	mg / total ingredient
Wheat flour	1 400	1,0	(1,0 mg / 100 g) x 1 400 g= 14 mg
Water	800	1,0	(1,0 mg / 100 g) x 800 g = 8 mg
Cashew nut	400	10	(10 mg / 100 g) x 400 g = 40 mg
Yeast	55	4,4	(4,4 mg / 100 g) x 55 g = 2,42 mg
Iodised salt	40	38 700	(38 700 mg / 100 g) x 40 g= 15 480 mg
Propionic acid	5	-	-
Total	2 700		≈ 15 544 mg

^{*} Source: National Institute for Health and Welfare, Nutrition Unit. Fineli. Food composition database. Version 18. Helsinki 2017. www.fineli.fi

Conversion of sodium to salt

In the above calculation, the total amount of sodium in the ingredients of nutty wheat bread was 15 544 mg. The amount of sodium is converted to salt by a factor of 2.5. 15 544 mg x $2.5 = 38\,860$ mg ≈ 38.9 g.

The total salt content (g / 100 g) of finished nutty wheat bread is calculated as follows: (amount of salt g / product baked weight g) \times 100.

The salt content of nutty wheat bread is: $(38.9 \text{ g} / 2700 \text{ g}) \times 100 \text{ g} = 1.44 \text{ g} \approx 1.4 \text{ g} / 100 \text{ g}.$

Earlier in the part "calculating nutrition information", the total salt content was rounded to 1.5 when using the information available in the Fineli database on the salt content of the ingredients. Now that we converted the salt content from sodium by a factor of 2.5, the total salt content of the finished product differs by a rounded amount of 0.1 g from the previous result (1.4 g (1.44 g) vs 1.5 g (1.46 g)). The reason for this is that the second example uses a conversion factor of 2.5 as stated in law, which is actually rounded from the more precise value of 2.54. In the Fineli database, meanwhile, salt content is calculated using the more precise factor of 2.54.

When calculating the second example using a factor of 2.54, the results of both calculations are identical 15 544 mg x 2.54 = 39 481.76 mg = 39.5 g

The salt content of nutty wheat bread is: $(39.5 \text{ g} / 2700 \text{ g}) \times 100 \text{ g} = 1.46 \text{ g} \approx 1.5 \text{ g} / 100 \text{ g}.$

In the case of nutty wheat bread, the salt content to be indicated on the final nutrition declaration should be $1.5 \, \text{g} / 100 \, \text{g}$, since we know that this value is more precise.

However, as the use of the rounded conversion factor of 2.5 is permitted by law, it would not be wrong to indicate salt content as $1.4\,\mathrm{g}$ / $100\,\mathrm{g}$. This issue is particularly important in cases where the product is close to the limit of requiring a warning label of high salt content. In the case of nutty wheat bread, this is of no consequence as the salt content exceeds the limit of 1.2% permitted for bread, and the packaging must therefore include the words "high salt content".

Final nutrition declaration

The nutrition declaration for nutty wheat bread must include at least the following values per 100 grams of the product:

-
1 123 kJ / 268 kcal
7,6 g
1,3 g
39 g
0,9 g
9,2 g
1,5 g

Example 7: Recipe calculation for strawberry jam

This example shows you how to produce mandatory information for strawberry jam based on the recipe.

Recipe for strawberry jam

. , ,	
Weight	Ingredient
5 000 g	strawberry
3 000 g	sugar
1 750 g	water
30 g	thickener (E 440)
12 g	acidity regulator (E 330)
8 g	preservative (E 202)

Cooking loss 10 %

Raw weight and weight after cooking:

Raw weight of a batch of strawberry jam: $5\,000\,g + 3\,000\,g + 1\,750\,g + 30\,g + 12\,g + 8\,g = 9\,800\,g$

Weight of finished strawberry jam, taking into account cooking loss: 9800 g - 980 g (= $9800 \text{ g} \times 10 \% / 100$) = 8820 g

Loss = product raw weight – product baked weight Loss percentage = (loss x 100) / product raw weight %

List of ingredients

Order of ingredients

Amount of water in a finished batch of strawberry jam:

1750 - 980 (= 9800 g - 8820 g) = 770 g

The ingredients are listed in the same order by weight as in the recipe.

Emphasising an ingredient

The share of strawberries in strawberry jam: $(5\,000\,\mathrm{g}\,/\,8\,820\,\mathrm{g})\,\mathrm{x}\,100\,\% = 56.7\,\% \approx 57\,\% (= 57\,\mathrm{g}\,/100\,\mathrm{g})$

Additives

First, check whether an additive listed in the recipe is permitted to be used to manufacture strawberry jam. Be sure to also check if there are maximum content limits for the additive. You can find the information under the food category "04.2.5.1 Extra jam and extra jelly as defined by Directive 2001/113/EC" in part E of annex II to the Regulation (EC) No 1333/2008, or In the European Commission web application: (Categories \rightarrow Fruit and vegetables (4) \rightarrow Processed fruit and vegetables (4.2) \rightarrow Jam, jellies and marmalades and similar products (4.2.5) \rightarrow Extra jam and

extra jelly as defined by Directive 2001/113/EC (4.2.5.1)). You can find the regulation on food additives and the EU Commission application in the list of links on our website.

The following limits are prescribed on the use of the additives listed in the strawberry jam recipe: E 330 (citric acid) and E 440 (pectins) are permitted in extra jam and extra jelly (food category 04.2.5.1) under the quantum satis principle. The quantum satis principle means that there is no maximum limit set for the additive, but it must be used according to good manufacturing practice.

E 202 (potassium sorbate) may be used only in low-sugar and similar low calorie or sugar-free extra jams and extra jellies up to a limit of 1 000 mg/kg.

In the strawberry jam recipe, the amount of potassium sorbate is listed as 8 g: 8 g / 8 820 g = 0.000907 g / g = 0.907 mg / g = 907 mg / kg

The amount of potassium sorbate does not exceed the maximum permitted limit. The recipe may thus be followed. Potassium sorbate is used in jam as a preservative. In the list of ingredients, it may be indicated either as "preservative (E 202) or "preservative (potassium sorbate)".

Citric acid (E 330) is used in jam as an acidity regulator. In the list of ingredients, it may be indicated either as "acidity regulator (E 330) or "acidity regulator (citric acid)".

Pectins (E 440) are used in jam as a thickener. In the list of ingredients, it may be indicated either as "thickener (E 440)" or "thickener (pectins)".

Final list of ingredients

Ingredients: Strawberry, sugar, water, thickener (E 440), acidity regulator (E 330), preservative (E 202). In addition, the indication that the strawberry jam contains 57 g of berries per 100 g of the product must accompany the name of the food.

Nutrition declaration

Energy and nutrition values per 100 grams of strawberry jam ingredients (Fineli database)*

	Ene	rgy	Energy	Fat	Saturates	Carbo- hydrates	Sugars	Protein	Salt
Ingredient	kJ	kcal	g	g	g	g	g	mg	
Strawberry	187	45	0,3	< 0,1	7,7	7,0	0,5	5,1	
Sugar	1 698	406	-	-	99,9	99,9	-	0,2	
Thickener (E 440)	-	-	-	-	-	-	-	-	
Acidity regulator (E 330)	-	-	-	-	-	-	-	-	
Preservative (E 202)	-	-	-	-	-	-	-	-	

^{*} Source: National Institute for Health and Welfare, Nutrition Unit. Fineli. Food composition database. Version 18. Helsinki 2017. www.fineli.fi

Energy and nutrition values per 5000 grams of strawberry

Energy (kJ)	(187 kJ / 100 g) x 5 000 g = 9 350 kJ
Energy (kcal)	(45 kcal / 100 g) x 5 000 g = 2 250 kcal
Fat	(0,3 g / 100 g) x 5 000 g = 15 g
Saturates	(< 0,1 g / 100 g) x 5 000 g = < 5 g
Carbohydrates	(7,7 g / 100 g) x 5 000 g = 385 g
Sugars	(7 g / 100 g) x 5 000 g = 350 g
Protein	(0,5 g / 100 g) x 5 000 g = 25 g
Salt	(5,1 mg / 100 g) x 5 000 g = 255 mg

Energy and nutrition values in other ingredients of strawberry jam

The amounts are calculated in the same way as for strawberry in the above example.

	Amount of ingredient in recipe	Ene	ergy	Fat	Saturates	Carbo- hydrates	Sugars	Protein	Salt
Ingredient	g	kJ	kcal	g	g	g	g	g	mg
Strawberry	5 000	9 350	2 250	15	< 5	385	350	25	255
Sugar	3 000	50 940	12 180	-	-	2 997	2 997	-	6
Water	770	-	-	-	-	-	-	-	19,25
Thickener (E 440)	30	-	-	-	-	-	-	-	-
Acidity regulator (E 330)	12	-	-	-	-	-	-	-	-
Preservative(E 202)	8	-	-	-	-	-	-	-	-
Total		60 290	14 430	15	< 5	3 382	3 347	25	280,25

Energy and nutrition values per 100 grams of finished strawberry jam

(60 290 kJ / 8 820 g) x 100 g ≈ 684 kJ		
(14 430 kcal / 8 820 g) x 100 g ≈ 164 kcal		
(15 g / 8 820 g) x 100 g = 0,2 g		
(5 g / 8 820 g) x 100 g = 0,1 g		
(3 382 g / 8 820 g) x 100 g = 38,3 g		
(3347 g / 8 820 g) x 100 g = 37,9 g		
(25 g / 8 820 g) x 100 g = 0,3 g		
(280,25 mg / 8 820 g) x 100 g ≈ 3,2 mg ≈ 0,0032 g		

The Fineli database also contains ready nutritional values for many products, including strawberry jam. These ready values may be used for your products directly, if the product is sufficiently similar to that listed in the database.

Final nutrition declaration

Nutrition per 100 g	
Energy	684 kJ (164 kcal)
Fat	< 0,5 g
- of which saturates	< 0,5 g
Carbohydrates	38 g
- of which sugars	38 g
Protein	< 0,5 g
Salt	0 g

The European Commission has published a guide on rounding nutrition values in 2012. The guide is found in the list of links on our website.