

# Cereal and potato products 2021

Analysis of nutrients



---

This titel can be downloaded from: [Livsmedelsverkets publications](#).

Please quote Swedish Food Agency texts but do not forget to refer to the source. Figures, photos and illustrations are protected by copyright, which means that you need the copyright holder's permission to use them.

© Livsmedelsverket, 2023.

Author:

Livsmedelsverket.

Recommended citation:

Livsmedelsverket. 2023. PM 2023: Cereal and potato products 2021 Analysis of nutrients.

Livsmedelsverkets PM. Uppsala.

PM 2023

ISSN 1104-7089

Cover: Livsmedelsverket

# Project group

Those who have planned and performed the project are as follows:

Cecilia Axelsson	Risk- and benefit assessment department
Helena Bjermo	Risk- and benefit assessment department
Jessica Petrelius Sipinen	Risk- and benefit assessment department
Karin Stenberg	Risk- and benefit assessment department
Hanna Sara Strandler	Chemistry department
Rasmus Grönholm	Chemistry department
Maria Haglund	Chemistry department
Anna von Malmberg	Chemistry department
Erika Åström	Chemistry department
Emma Eriksson	Chemistry department
Marion Grange	Chemistry department
Anders Staffas	Chemistry department
Niklas Axén	Biology department
Jimmy Sahlin	Biology department

# Content

1. Abbreviations .....	5
2. Summary .....	6
3. Sampling.....	7
3.1 Analysis project.....	7
3.2 Food selection.....	7
3.3 Mapping.....	8
3.4 Sample number .....	8
3.5 Purchasing.....	9
3.6 Sample management.....	9
3.7 Sample preparation .....	9
3.8 Pooling .....	10
4. Weight and weight changes.....	14
5. Analysis.....	15
6. Data quality checks .....	16
7. References.....	17
8. Appendices.....	18
Appendix 1. Scientific names and FoodEx2 codes .....	19
Appendix 2. Weight change factors .....	21
Appendix 3. Calculations and conversion factors .....	22
Appendix 4. Analytical methods.....	24
Appendix 5. Analysis results.....	29

# 1. Abbreviations

app. approximately

g gram

kcal kilocalories

kJ kilojoules

µg microgram

mg milligram

min minutes

n.a. not analysed

s seconds

w/ with

w/o without

## 2. Summary

One of the Swedish Food Agency's assignments is to examine and analyse food (Regulation 2009:1426). To this end, the Swedish Food Agency has a food composition database containing extensive information about different foods and dishes, such as their nutritional content. The database forms an important basis for the Agency's work with dietary surveys, but is also used by, for example, diet planners, food companies, researchers, and private individuals. The content of the Swedish Food Composition Database is intended to reflect the Swedish food supply and therefore must be constantly updated to remain current. As part of this ongoing work, the Swedish Food Agency carries out annual analysis projects in which certain nutrients and food components (e.g., fibre and ash) are analysed.

In 2021, the project Cereals and potato products was carried out and is presented in this report.

In total, 38 food samples were analysed in the project. The report describes which foods were analysed, how they were selected, and how sampling, sample preparation, and analyses were carried out. The results of the analyses, together with estimated and calculated nutrient values/components, are summarised in Appendix 5. The values are also available on the Swedish Food Agency's website, "Search for nutrients".

## 3. Sampling

### 3.1 Analysis project

One of the Swedish Food Agency's assignments is to examine and analyse food (Regulation 2009:1426). To this end, the Swedish Food Agency has a food composition database containing extensive information about different foods and dishes, such as their nutritional content. The database forms an important basis for the Agency's work with dietary surveys, but is also used by, for example, diet planners, food companies, researchers, and private individuals. The content of the Swedish Food Composition Database is intended to reflect the Swedish food supply and therefore must be constantly updated to remain current. As part of this ongoing work, the Swedish Food Agency carries out annual analysis projects in which certain nutrients and food components (e.g., fibre and ash) are analysed.

Each year, about 35 food samples are updated. A food sample is often the same as an analytical sample, but for some food samples several analytical samples are made. For example, this can be the case when a food item can be both fortified and non-fortified. In these cases, three analytical samples are created, one with both fortified and unfortified products, and two separate analytical samples with and without fortified products.

To select the foods to be analysed, 'key foods' are used (Petrelius Sipinen, 2020). Key foods are derived from the Swedish Food Agency's national dietary surveys and are the foods that have contributed most to the intake of energy and/or nutrients.

In addition to key foods, a small proportion of foods are also analysed for which there is a particular need to gain more knowledge. These may include foods needed for future dietary surveys, new or changing products on the market, or foods for which there is a high demand from the Swedish Food Composition Database users.

### 3.2 Food selection

The foods included in this project were based on key foods from the two national dietary surveys, *Riksmaten vuxna 2010–11* and *Riksmaten ungdom 2016–17* (Amcoff, 2012, Warensjö Lemming, 2018). From *Riksmaten ungdom 2016-17*, so-called subcomponents of key foods were also included. Subcomponents are the foods that make up a compound food, for example, a 'Cheese sandwich' may be divided into the subcomponents bread, butter, cheese, and tomato. In addition to key foods, foods needed for the forthcoming dietary survey, new

products on the market, and foods in high demand by the Swedish Food Composition Database users were also included.

Most of the samples analysed are generic, meaning that they contain several different brands of products from the same food category. The exceptions are those food categories with only products from one brand.

### 3.3 Mapping

In order for the analytical samples to represent as much as possible the supply of products in the country, a survey of the supply on the market was carried out. Based on sales statistics (A.C. Nielsen Market trends 2019 and GFK 2019) and store visits, an assessment was made of which products would be included in each analysis sample based on certain specific criteria. The visits were made to stores from the four chains with the largest market shares in Sweden 2019: ICA, Coop, Axfood and Bergendahls. In total, these chains accounted for 93% of the market according to Dagligvarukartan 2019. In the stores, an estimation of shelf shares for the relevant food groups was made, followed by a scoring. The product with the highest shelf share received 10 points, the one with the second-highest shelf share received 9 points, and so on. The scores were then weighted according to the market share of each retail chain (score x market share). Finally, an individual assessment was made for each food group. By weighing the sales statistics, the shelf share scores, and the individual assessment, it was decided which products would be included in each analytical sample.

### 3.4 Sample number

Nutritional composition may differ between different products and between different batches of the same product. Therefore, it is ideal that different products and several batches of the same product should be included in the analytical sample. If similar analyses have been done before, differences in these analyses can be used to calculate the optimal number of purchase samples. This is done using a formula (Proctor, 1998). There were no previous data to compare against therefore the formula was not used in this project. The aim was to purchase at least ten samples however due to prerequisites during Covid-19 a lower number of samples was accepted.

The distribution among products within each analytical sample was based on the mapping described above. Due to the pandemic and limited possibilities of collecting samples, no fixed number of batches was decided. However, the goal was to get as many different batches as possible.



## 3.5 Purchasing

Due to the pandemic most of the samples were purchased in online stores and the restaurants where foods were purchased in person were limited. To increase the chances of getting as many batches of samples were bought from different chains: Coop, Willys, Citygross and ICA. Supplementary purchases in stores were made for products with only one or two batches from online stores. The smallest amount requested for the analysis was 1500 g. Sushi rice was bought from seven different restaurants and pizza and kebab meat was bought from eight different restaurants. All samples were purchased during December 2020 and February 2021 in Uppsala and Norrtälje.

## 3.6 Sample management

The foods were stored at the respective appropriate temperatures until arrival at the Swedish Food Agency. Upon arrival, they were registered and given individual record numbers, allowing the traceability of the food contained in each sample. Food packaging, ingredients lists, and nutritional labels were photographed. The food was then stored in a dark place at the temperature appropriate until time for sample preparation.

The purchased samples were handled as laboratory samples as soon as they arrived at the laboratory. This means that factors that may affect stability, such as oxygen, temperature, and visible light of certain wavelengths, are taken into account. Water-soluble vitamins, tocopherols, sugars, and carotenoids are examples of nutrients that are sensitive to oxidation and/or light. Frozen products were stored at -20 °C while fresh products were stored in darkened cold storage fridges at 4 °C until sample preparation. Dry goods were stored at room temperature. All samples were stored in the packaging in which they were purchased. Fresh bread was weighed and frozen in -20 °C, if possible in their packages. Otherwise packed in freezing bags.

## 3.7 Sample preparation

All samples were analysed and prepared in a room equipped with a UV filter to prevent degradation of light-sensitive nutrients. Each product and batch was handled separately and the equipment was cleaned between each product and batch. Only the edible part of the food was included in the analytical sample.

Products that were solid or contained solid pieces were homogenised with a homogeniser (Tecator 1094 homogeniser) and samples were afterwards divided into different jars according to analysis type. Products in powder or liquid form were mixed well with a spoon.

Noodles, bulgur, pizza dough, croissants and cinnamon buns were cooked/baked according to instructions on the package. The foods were weighed before and after cooking, information is available in separate cooking protocols. Four portions of bulgur was cooked from each batch and iodised salt was added. The excess of water was poured off the cooked bulgur. One package of noodles was cooked from each batch and brand. The cooked noodles were rinsed for 30 seconds in cold water and left to drain for 5 minutes.

Bulgur and noodles were homogenised in connection to the cooking, while frozen products were thawed in refrigerator during night. Bread, buns and pizza dough was cut into thin slices and dried at room temperature for two days. Weight was noted before and after drying. Raisins in “lussebulle” (saffron bun) were separated from the buns before drying and weighed. Weight loss during freezing and drying was calculated and used to derive the amounts of sample to be included in the analytical sample. Same figures were used to recalculate analysis results from dry to fresh weight.

## 3.8 Pooling

The amount of each product to be included in each analytical sample was calculated based on the mapping, with any necessary correction for the actual amount purchased. The distribution of products in the food samples is shown in Table 1. Scientific names and FoodEx2 codes of the foods in the project are presented in Appendix 1.

Table 1. Distribution of food samples.

Food sample <sup>1</sup>	Product	Percentage share
Bread wheat rye w/ seeds 24% wholegrain	Fazer, Frökusar	100
Bread white 3.5% fibre	Polarbröd, Vetekaka	100
Bread white app. 5% fibre e.g. loaf	Skogaholm, Skogaholmslimpan	50
	Pågen, Pågenlimpan	50
Hamburger bun	Korvbrödsbagaren, Klassiska hamburgerbröd	56
	Pågen, Färska hamburgerbröd	44
Hamburger bun coarse	Korvbrödsbagaren, Fiberrika hamburgerbröd	100
Bread wholegrain wheat rye app. 6% fibre	Pågen, Lingongrova	77
	Skogaholm, Varsågod	23
Bread white app. 5% fibre e.g. formfranska	Pågen, Jättefranska	34
	Skogaholm, Originalrost	34
	Pågen, Rosta	32
Bread w/ sifted rye app. 4% fibre e.g. rågkaka	Polarbröd, Rågkaka	100
Sweet wheat bread e.g. cinnamon bun	ICA, Butiksbakade kanelbullar	41

Food sample <sup>1</sup>	Product	Percentage share
	Willys, Butiksbakade kanelbullar	14
	Coop, Butiksbakade kanelbullar	14
	Pågen, Gifflar	13
	Findus, Svenska kanelbullar frysta	12
	Citygross, Butiksbakad kanelsnäcka	6
Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	ICA, Butiksbakade lussekatter	43
	Willys, Butiksbakade lussekatter	14
	Coop, Butiksbakade lussekatter	14
	Skogaholms, lussekatter	12
	Pågen, Små lussekatter	11
	Citygross, Butiksbakade lussekatter	6
Sponge cake gingerbread	Eldorado, Sockerkaka	17
	Eldorado, Mjuk pepparkaka	17
	ICA Basic, Sockerkaka	17
	ICA Basic, Mjuk pepparkaka	17
	Coop, Sockerkaka	16
	Coop, Mjuk pepparkaka	16
Croissant bake off	ICA, Butiksbakad croissant	42
	Coop, Croissant fryst	15
	Willys, Butiksbakad croissant	13
	Danerolls, Croissant deg	8
	Hatting, Croissant frysta	8
	Picard, Croissant frysta	8
	Citygross, Butiksbakad croissant	6
Gingerbread dough chilled product	Nyåkers, Pepparkaksdeg	50
	Skogholm, Pepparkaksdeg	50
Biscuits for children wholegrain	Brago, Bokstavskex	100
Wafers plain	Göteborgskex, Smörgåsrån	100
Puffed maize cracker cheese flavour	Friggs, Majsakakor ost	34
	Coop, Majsakakor ost	33
	ICA, Majsakakor ost	33
Puffed lentil cracker flavoured	Friggs, Linskakakor ost	40
	Friggs, Linskakakor pizza	30
	Risenta, Linskakakor havssalt	30
Granola breakfast cereal w/ fruit nuts	Paulúns, Granola hasselnötter & dadlar	60
	Axa, Granola Simply great hazelnut & cashew	10
	Renée Voltaire, Crunchy granola hazelnut & raisin	10

Food sample <sup>1</sup>	Product	Percentage share
	ICA, Knaprig granola fikon & hasselnötter	10
	Coop, Granola hasselnöt & jordgubb	10
Granola breakfast cereal w/ cocoa and raspberry	Paulúns, Granola kakao & hallon	100
Breakfast cereal puffed wheat w/ honey fortified	Honey monster, Kalaspuffar	100
Breakfast cereal corn flakes w/ sugar fortified	Kelloggs, Frosties	100
Oat crunches	Nestlé, Cheerios	50
	Quaker, Havrefras	50
Breakfast cereal puffed wheat w/ chocolate wholegrain	Nestlé, Nesquik choklad	100
Breakfast cereal e.g. corn flakes	Kelloggs, Cornflakes	100
Potato chips flavoured frozen product	Lamb Weston, Pommes frites twister fries	33
	Lamb Weston, Pommes frites waffle fries	33
	Coop, Räfflade pommes	17
	Coop, Skruvade pommes	17
Potato chips wedges frozen product	Felix, Pommes frites	25
	Felix, Pommes strips	25
	Felix, Pommes chateau	25
	Felix, Pommes criss cuts	25
Potato gratin chilled product	Peka	30
	ICA	28
	Outinen	20
	Garant	10
	Coop	8
	Favorit	4
Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre	Wasa, Ströbröd	100
Flour mix sifted rye w/ wheat	Kungsörnen, Rågsikt	33
	Saltå Kvarn, Rågsikt	33
	ICA, Rågsikt	33
Noodles eggnoodles boiled w/o salt	Santa Maria, Egg noodles	100
Bulgur cooked	ICA, Bulgur	33
	Sevan, Bulgur	33
	Saltå Kvarn, Bulgur	33
Sushi rice boiled	Hinode Sushi	15
	Saluhallen	15
	Ayakos	14
	Mikaku	14
	Sushi Yama	14

Food sample <sup>1</sup>	Product	Percentage share
	Aikin	14
	AI	14
Corn flour yellow refined or polenta	Risenta, Majsmjöl	100
Rice pudding w/ sugar	Risifrutti, Jordgubb	55
	Risifrutti, Hallon	45
Rice pudding w/o sugar w/ artificial sweeteners	Risifrutti utan tillsatt socker, Jordgubb	50
	Risifrutti utan tillsatt socker, Hallon/passion	50
Pizza dough heated chilled product	Pop bakery, Pizzadeg original	48
	ICA, Pizzadeg	43
	Coop, Extra stor pizzadeg	9
Pizza w/ tomato sauce cheese from restaurant	Pizza och Curry, Margherita	13
	Amore, Margherita	13
	Durango, Margherita	13
	La Piazza, Margherita	13
	Palermo, Margherita	12
	Trappan, Margherita	12
	Arom, Margherita	12
	Måltid, Margherita	12
Kebab meat from restaurant	Pizza och Curry, Kebab	14
	Amore, Kebab	7
	Durango, Kebab	14
	La Piazza, Kebab	13
	Palermo, Kebab	13
	Trappan, Kebab	13
	Arom, Kebab	13
	Måltid, Kebab	13

<sup>1</sup>A food sample may consist of several analytical samples.

## 4. Weight and weight changes

Weight experiments were made in connection to the cooking of noodles, bulgur and pizza dough since information on gains and losses of water is lacking on these products. More details are shown in Appendix 2.

## 5. Analysis

All nutrients included in the database were analysed in most foods. Some exceptions were made for so-called logical zeros, i.e., nutrients and components not biologically expected to be present in a specific food, or present only in small and negligible amounts in the context. For example, fibre is not expected to be present in pure fats.

External analyses were carried out by an accredited laboratory: ash, total fat, cholesterol, nitrogen, water, starch, mono- and disaccharides, lactose, fibre, alcohol, phosphorus, iodine, calcium, potassium, magnesium, sodium, selenium and vitamin C. Certain nutrients/components were calculated based on the analysed values (see Appendix 3).

Other nutrients were analysed internally by the Swedish Food Agency's chemistry department. A more detailed description of the internal methods can be found in Appendix 4 and on the Swedish Food Agency's website in the Food Composition Database section.

All analytical results are presented in Appendix 5.

## 6. Data quality checks

New analysis results are compared to previous values. When the food item is new the values are compared to a similar food item. Foods used for comparison are firstly foods items from the Swedish Food Composition Database, second-hand food items from other databases and scientific reports. Analytical results are also compared to the nutrient declaration on the foods. Carbohydrates by difference are checked by the formula:

$$100 - (\text{water} + \text{ash} + \text{protein} + \text{fat} + \text{fiber} + \text{alcohol})$$

Differences, larger than the levels in the European Commission guidance (European Commission, 2012) on how much declared values may differ from actual content in foods, are investigated further and may be analysed once more.

Ash is verified through subtracting sodium from ash. A value below zero indicates error since sodium is included in ash. Deviations are investigated further.

Macro nutrients are checked by the formula:

$$100 - (\text{water} + \text{ash} + \text{fat} + \text{protein} + \text{starch} + \text{fiber} + \text{glucose} + \text{fructose} + \text{lactose} + \text{maltose} + \text{galactose} + \text{alcohol})$$

Values larger than 3 or smaller than minus 3 are investigated further. When the values fall within the boundaries of measurement uncertainty for each analytical method the values can sometimes be approved anyway.

Beyond above mentioned checks there are controls done during the analysis according to respective analysis method and accreditation.

Before publication all other data, e.g. name, FoodEx2 and Languag coding, is checked.



## 7. References

- AMCOFF, E. 2012. *Riksmaten-vuxna 2010-11: Livsmedels- och näringsintag bland vuxna i Sverige*. Livsmedelsverket.
- DLF, D. 2019. *Dagligvarukartan 2019*. HUI Research
- EUROPEAN COMMISSION 2012. *Guidance document tolerances: simplified summary table*. [https://food.ec.europa.eu/system/files/2016-10/labelling\\_nutrition-vitamins\\_minerals\\_guidance\\_tolerances\\_summary\\_table\\_012013\\_en.pdf](https://food.ec.europa.eu/system/files/2016-10/labelling_nutrition-vitamins_minerals_guidance_tolerances_summary_table_012013_en.pdf) [2023-08-29].
- JAKOBSEN, J. 2008. *Optimisation of the determination of thiamin, 2-(1-hydroxyethyl)thiamin, and riboflavin in food samples by use of HPLC*. *Food Chemistry*, 106, 1209-1217.
- KALL, M. A. 2003. *Determination of total vitamin B6 in foods by isocratic HPLC: a comparison with microbiological analysis*. *Food Chemistry* 82 315–327.
- PETRELIUS SIPINEN, J. 2020. *Nyckellivsmedel i Riksmaten ungdom 2016-17. Underlag för planering av Livsmedelsdatabasens analysprojekt*. Uppsala, Sverige: Livsmedelsverket.
- PROCTOR, A., MEULLENET, J.F. 1998. *Sampling and sample preparation*. , Gaithersburg, Maryland, USA, Aspen publishers.
- STRANDLER, H. S. 2012. *Determination of folate for food composition data*. Licentiate, Swedish University of Agricultural Sciences.
- SØLVE, M., ERIKSEN, H. & BROGREN, C.-H. 1994. *Automated microbiological assay for quantitation of niacin performed in culture microplates read by digital image processing*. *Food Chemistry*, 49, 419-426.
- WARENSJÖ LEMMING, E. E. A. 2018. *Riksmaten ungdom 2016-17: Livsmedelskonsumtion bland ungdomar i Sverige*. Uppsala, Sweden: Livsmedelsverket.

# 8. Appendices

Appendix 1. Scientific name and FoodEx2 code

Appendix 2. Weight change factors

Appendix 3. Calculations and conversion factors

Appendix 4. Analytical methods

Appendix 5. Analysis results

## Appendix 1. Scientific names and FoodEx2 codes

Table 1. Scientific name and FoodEx2 code of analysed foods.

Food id.	Food name	Scientific name	FoodEx2 code
188	Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre		A007A#F04.A006F\$F04.A006B\$F10.A077J\$F10.A0CJK
202	Bread white 3.5% fibre		A004Y#F26.A07XD
726	Breakfast cereal puffed wheat w/ honey fortified		A0F4Q#F04.A032H\$F27.A001M\$F04.A033J\$F10.A077J\$F10.A0F6C
727	Breakfast cereal corn flakes w/ sugar fortified		A00DD#F04.A0BY6\$F10.A0F6C\$F10.A077J
830	Bulgur cooked	<i>Triticum aestivum L.</i>	A004G#F28.A07GL\$F10.A0CJK
1633	Wafers plain		A0BYR#F20.A0F1K
1678	Sponge cake gingerbread		A00AQ#F04.A019T\$F04.A036V\$F10.A077J
1933	Corn flour yellow refined or polenta	<i>Zea mays L.</i>	A002Q#F20.A0CQT
2294	Kebab meat from restaurant		A03VV#F04.A042P\$F04.A00HC\$F04.A0EZM\$F22.A07SK
2658	Potato gratin chilled product		A03VF#F28.A07KP\$F04.A02ML\$F04.A02ST\$F10.A0CJK
3447	Oat crunches		A00DN
3791	Bread white app. 5% fibre e.g. formfranska		A004Y#F04.A042P\$F04.A032H\$F04.A033Z\$F04.A036V
3794	Bread wholegrain wheat rye app. 6% fibre		A005P
3795	Bread white app. 5% fibre e.g. loaf		A004Y
3818	Hamburger bun		A0BB2#F04.A015K\$F04.A042P\$F10.A077J
3825	Hamburger bun coarse		A0BB2#F10.A06HR\$F04.A042P\$F04.A003X\$F04.A003B\$F04.A004P\$F10.A077J
6576	Flour mix sifted rye w/ wheat		A004S#F27.A001K\$F27.A001N
6757	Bread w/ sifted rye app. 4% fibre e.g. rågkaka		A005N#F04.A042P\$F04.A032H\$F04.A033Z\$F04.A036V
6758	Sweet wheat bread e.g. cinnamon bun		A00BL#F04.A019V
6759	Bread wheat rye w/ seeds 24% wholegrain		A005N#F04.A015G\$F04.A015L\$F04.A042P\$F08.A033Z
6760	Pizza w/ tomato sauce cheese from restaurant		A03ZP
6761	Pizza dough heated chilled product		A008J#F28.A07GX
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain		A0F4Q#F04.A03HG\$F08.A032J\$F08.A033Z\$F10.A077J\$F10.A0CJK

Food id.	Food name	Scientific name	FoodEx2 code
6764	Granola breakfast cereal w/ fruit nuts		A00EL#F04.A0EZH\$F04.A036N\$F04.A01MA
6765	Granola breakfast cereal w/ cocoa and raspberry		A00EL#F04.A01EP\$F04.A01MF\$F04.A0DYD\$F04.A0CZM\$F04.A036V
6766	Puffed maize cracker cheese flavour		A006L#F04.A16FE\$F10.A077J
6767	Puffed lentil cracker flavoured		A006H#F04.A002Q\$F04.A04KT\$F04.A013Q\$F10.A077J
6768	Biscuits for children wholegrain		A00AA
6769	Gingerbread dough chilled product		A009Q#F04.A036N\$F10.A077J
6770	Croissant bake off		A00BM#F10.A077J
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle		A00BL#F04.A001M\$F04.A01AR\$F04.A032J\$F10.A077J
6780	Potato chips flavoured frozen product		A0BYX#F28.A07KQ\$F04.A0EZM\$F10.A077J\$F10.A0CJK
6781	Breakfast cereal e.g. corn flakes		A00DD
6782	Sushi rice boiled		A040Z#F04.A044L\$F04.A032J
6786	Noodles eggnoodles boiled w/o salt		A007R#F28.A07GL\$F04.A001N\$F04.A001P\$F04.A031G\$F10.A0CJK
6843	Potato chips wedges frozen product		A011N#F28.A07KQ\$F04.A036V\$F08.A032V\$F07.A070V\$F10.A077J
6855	Rice pudding w/ sugar		A041E#F07.A06ZX
6856	Rice pudding w/o sugar w/ artificial sweeteners		A041E#F08.A046Y\$F07.A06ZV

## Appendix 2. Weight change factors

Table 1. Cooking method and weight change factors. Calculated values are rounded.

Food item	Average weight raw (g)	Cooking method	Average weight cooked (g)	Weight change factor
<b>Bulgur</b>	281	Simmer under lid for about 8-10 min or soaked for about 30 min and then drained.	782	2.79
<b>Noodles</b>	214	Boiled for 5 min without lid. Cooking water was emptied and noodles were rinsed under cold water for 30 s. Then drained 5 min.	625	2.93
<b>Pizza dough</b>	471	Baked in oven at 200-225 °C for 15-17.5 min.	355	0.75

## Appendix 3. Calculations and conversion factors

Table 1. Calculation of nutrient values.

Nutritional value	Calculation used
Energy (kJ)	Carbohydrates*17.0 + Protein*17.0 + Fat*37.0 + Alcohol*29.0 + Fibre *8.0
Energy (kcal)	Energy (kJ)*0.239
Carbohydrates (g)	100 - (Water (g) + Total ash (g) + Protein (g) + Fat (g) + Fibre (g) + Alcohol (g))
Protein (g)	Nitrogen (g)* Factor <sup>1</sup>
Fatty acids (g)	Factor <sup>2</sup> * Total fat (g) *Fatty acid in percent/100

<sup>1</sup> Factor for the calculation of protein from nitrogen based on Jones factors (Jones, 1931), see Table 2 below. <sup>2</sup> Factor for the calculation of the proportion of fatty acids in total fat, see Table 2 below.

Table 2. Conversion factors for protein and fat.

Food id.	Food name	Protein <sup>1</sup>	Fat <sup>2</sup>
188	Breadcrumbs ground crisp bread wholegrain wheat rye sugar app. 5% fibre	5.7	0.956
202	Bread white 3.5% fibre	5.7	0.956
726	Breakfast cereal puffed wheat w/ honey fortified	5.83	0.956
727	Breakfast cereal corn flakes w/ sugar fortified	6.25	0.86
830	Bulgur cooked	5.7	0.67
1633	Wafers plain	5.7	0.942
1678	Sponge cake gingerbread	5.7	0.956
1933	Corn flour yellow refined or polenta	6.25	0.86
2294	Kebab meat from restaurant	6.25	0.953
2658	Potato gratin chilled product	6.38	0.945
3447	Oat crunches	5.83	0.94
3791	Bread white app. 5% fibre e.g. formfranska	5.7	0.956
3794	Bread wholegrain wheat rye app. 6% fibre	5.7	0.956
3795	Bread white app. 5% fibre e.g. loaf	5.7	0.956
3818	Hamburger bun	5.7	0.956
3825	Hamburger bun coarse	5.7	0.956
6576	Flour mix sifted rye w/ wheat	5.7	0.67
6757	Bread w/ sifted rye app. 4% fibre e.g. rågkaka	5.7	0.956
6758	Sweet wheat bread e.g. cinnamon bun	5.83	0.956
6759	Bread wheat rye w/ seeds 24% wholegrain	5.7	0.956
6760	Pizza w/ tomato sauce cheese from restaurant	6.38	0.956
6761	Pizza dough heated chilled product	5.7	0.956
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain	5.83	0.72

<b>Food id.</b>	<b>Food name</b>	<b>Protein<sup>1</sup></b>	<b>Fat<sup>2</sup></b>
6764	Granola breakfast cereal w/ fruit nuts	6.25	0.956
6765	Granola breakfast cereal w/ cocoa and raspberry	6.25	0.956
6766	Puffed maize cracker cheese flavour	6.25	0.956
6767	Puffed lentil cracker flavoured	6.25	0.956
6768	Biscuits for children wholegrain	5.83	0.956
6769	Gingerbread dough chilled product	5.7	0.956
6770	Croissant bake off	5.7	0.956
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	5.7	0.956
6780	Potato chips flavoured frozen product	6.25	0.956
6781	Breakfast cereal e.g. corn flakes	6.25	0.86
6782	Sushi rice boiled	5.95	0.85
6786	Noodles eggnoodles boiled w/o salt	5.7	0.67
6843	Potato chips wedges frozen product	6.25	0.956
6855	Rice pudding w/ sugar	6.38	0.945
6856	Rice pudding w/o sugar w/ artificial sweeteners	6.38	0.945

<sup>1</sup> Nitrogen to protein. <sup>2</sup> Fatty acids of total fat.

## Appendix 4. Analytical methods

Table 1. Analytical methods, limit of quantification and measurement uncertainty.

Substance	Analytical method	Reference	Limit of quantification dry/wet sample	Range of measurement	Measurement uncertainty
all-trans-retinol	HPLC-UV/UV	SLV-m049-f	12 µg/100 g		10 % (> 30µg/100 g) 18 % (6-30 µg/100 g)
Ash	Gravimetry	NMKL 173, external laboratory	0.1 g/100 g		10 %
Lead	ICP-MS	SLV-m196-f	0.64/0.13 µg/100 g	0.09-250 µg/100 g	28 %
Fiber	Enzymatic, gravimetric	AOAC 2009.01	0.5 g/100 g		
Fat	NMR	NMKL 160 mod., external laboratory	0.1 g/100 g		10 %
Fatty acids	GC-FID	SLV-m062-f	0.1 % fatty acid content (FA)		33 % if FA ≤ 0.5 % 6.5 % if FA 0.5-6 % 2.4 % if FA > 6 % 10 % total trans fatty acids
Folate	Microbiological method, <i>Lactobacillus casei</i>	SLV-m059-f3	0.6 µg/100 g		23 %
Phosphorus	ICP-AES	DIN EN ISO 17294, external laboratory	2.5 mg/100 g		
Iodine	ICP-MS	ICP-MS, external laboratory	0.001 mg/100 g		
Iron	ICP-MS	SLV-m196-f	0.087/0,017 mg/100 g	0.0053-29.9 mg/100 g	16 %
Cadmium	ICP-MS	SLV-m196-f	0.61/0,12 µg/100 g	0.04-0.09 µg/100 g	26 %
Calcium	ICP-AES	DIN EN ISO 17294, external laboratory	1.2 mg/100 g		
Potassium	ICP-AES	DIN EN ISO 17294, external laboratory	5 mg/100 g		
Carotenoids	HPLC-DAD	SLV-m138-f	5 µg/100 g		12 % (> 40 µg/100 g), trans-lycopene 14 % 18 % (5-40 µg/100 g), trans-lycopene 22 %
		SLV-m042-f			18 % (> 80 µg/100 g) 28 % (20-80 µg/100 g)
Cobolt	ICP-MS	SLV-m196-f	0.61/0.12 µg/100 g	0.04-18 µg/100 g	
Cholesterol	Gas chromatography	§64 LFGB L 18.00-17 [DE Food], external laboratory	0.001 mg/100 g		



Substance	Analytical method	Reference	Limit of quantification dry/wet sample	Range of measurement	Measurement uncertainty
Copper	ICP-MS	SLV-m196-f	0.0112/0.0022 mg/100 g	0.00067-16 mg/100 g	33 %
Nitrogen	Kjeldahl	NMKL 6:2003	0.05 g/100 g		10 %
Magnesium	ICP-AES	DIN EN ISO 17294, external laboratory	1.3 mg/100g		
Manganese	ICP-MS	SLV-m196-f	0.0061/0.0012 mg/100 g	0.00037-9.7 mg/100 g	15 %
Molybdenum	ICP-MS	SLV-m196-f	1.2/0.24 µg/100 g	0.08-350 µg/100 g	21 %
Sodium	ICP-AES	DIN EN ISO 17294, external laboratory	3.7 mg/100 g		
Niacin	Microbiological method, <i>Lactobacillus plantarum</i>	SLV-m059-f2	0.05 mg/100 g		
Riboflavin	HPLC-FLD	SLV-m058-f	0.029 mg/100 g		14 %
Selenium	ICP-MS	ICP-MS, external laboratory	0.0002 mg/100 g		
Sugars	Gas-liquid chromatography	AOAC 982.14, mod., external laboratory	0.04 g/100 g		15 % (glucose, fructose, maltose) 25 % (galactose) 30 % (sucrose)
Starch	Polarimetry	Internal method, external laboratory	1 g/100 g		15 % (≥ 5 g/100 g) 25 % (<5 g/100 g)
Thiamin	HPLC-FLD	SLV-m058-f	0.004 mg/100 g		23 %
Tocoferols	HPLC-FLD	SLV-m049-f	0.04 mg/100 g		10 % (> 0.2 mg/100 g) 18 % (0.04-0.2 mg/100 g)
Tocotrienols	HPLC-FLD	SLV-m049-f	0.04 mg/100 g		10 % (> 0.2 mg/100 g) 18 % (0.04-0.2 mg/100 g)
Water	Gravimetry	NMKL 23, external laboratory	0.1 g/100 g		10 %
Vitamin B <sub>12</sub>	Microbiological method, <i>Lactobacillus delbrueckii</i>	SLV-m059-f4	0.12 µg/100 g		24 %
Vitamin B <sub>6</sub>	HPLC-FLD	SLV-m123-f	0.1 mg/100 g		10 %
Vitamin C	HPLC-UV	Food Chemistry, 94 (2006) 626-631, external laboratory	0.5 mg/100 g		
Vitamin D	HPLC-UV	SLV-m061-f	0.3 µg/100 g		7 % (> 1 µg/100 g) 14 % (0.3-1 µg/100 g)

Substance	Analytical method	Reference	Limit of quantification dry/wet sample	Range of measurement	Measurement uncertainty
Vitamin K	HPLC-FLD	SLV-m057-f	1 µg/100 g		8 % (> 8 µg/100 g) 16 % (1-8 µg/100 g)
Zinc	ICP-MS	SLV-m196-f	0.103/0.021 mg/100 g		12 %

## **Description of internal methods used at the Swedish Food Agency**

### **Fatty acids** SLV-m062-f

Fatty acids are determined by gas chromatography using a modified method by IUPAC 6th Ed, Part 1, 2.301 and 2.302, 1979. Methyl esters of fatty acids are produced from triglycerides by metanolysis in an alkaline environment. The percentage proportion of a mixture of methyl esters of fatty acids are determined by gas chromatography. Accredited method (SWEDAC).

### **Trans-retinol** SLV-m049-f

The sample is hydrolysed in a basic environment and thereafter extracted by cyclohexane. Detection is done using HPLC-UV. Accredited method (SWEDAC).

### **Carotenoids** SLV-m042-f and SLV-m138-f

Two methods are used, one direct extraction method for analysis of lycopene and one method using hydrolysis with subsequent extraction for analysis of the other carotenoids. Detection is done using HPLC-DAD. Accredited methods for analyses of trans-alfa-carotene, trans-beta-carotene and trans-beta-cryptoxanthin (SWEDAC).

### **Vitamin D<sub>3</sub>** SLV-m061-f

The sample is hydrolysed in a basic environment after addition of an internal standard, and thereafter extracted using n-heptane. Detection is done using HPLC-UV. Accredited method (SWEDAC).

### **Tocopherols and tocotrienols (vitamin E)** SLV-m049-f

The sample is hydrolysed in a basic environment, and thereafter extracted using cyclohexane. Detection is done using HPLC-fluorescence. Accredited method (SWEDAC).

### **Vitamin K<sub>1</sub> and K<sub>2</sub>** SLV-m057-f

After addition of an internal standard, the sample is extracted using n-heptane. Detection is done using HPLC-fluorescence. Accredited method (SWEDAC).

### **Vitamin B<sub>1</sub> and B<sub>2</sub>** SLV-m058-f

Vitamin B<sub>1</sub> (thiamin and HET) and vitamin B<sub>2</sub> (riboflavin) are determined by liquid chromatography and fluorescence detection. EN14122 and EN14152. Described in the following article (Jakobsen, 2008). Accredited method (SWEDAC).

**Niacin**

SLV-m059-f2

Total niacin content is determined by turbidimetric measurement of growth of the lactic acid bacterium *Lactobacillus plantarum*. Described with alternative detection technique in the following article (Sølve et al., 1994). Accredited method (SWEDAC).

**Folate**

SLV-m059-f3

Total folat content is determined by turbidimetric measurement of growth of the lactic acid bacterium *Lactobacillus casei*, subsp. *Rahmnosus*. EN14131. AACC 86-47. Described in the following article (Strandler, 2012). Accredited method (SWEDAC).

**Vitamin B<sub>12</sub>**

SLV-m059-f4

Total content of vitamin B<sub>12</sub> is determined by turbidimetric measurement of growth of the lactic acid bacterium *Lactobacillus leichmanni*. EN14131. AACC 86-47. Accredited method (SWEDAC)

**Vitamin B<sub>6</sub>**

SLV-m123-f

Free and total content of vitamin B<sub>6</sub> are determined by liquid chromatography and fluorescence detection. Described in the following article (Kall, 2003). Accredited method (SWEDAC).

**Minerals and metals**

SLV-m196-f

Contents of cobolt, copper, cadmium, iron, manganese, molybdenum, lead and zinc are determined by a closed microway influx in nitric acid and hydrochloric acid at 200°C. After dilution with water, the sample solutions are analysed using ICP-MS (Inductively Coupled Plasma-Mass Spectrometry). The instrument uses a collision cell with helium to minimize possible poly atomic interferences. The method is based on EN 15763:2009 and is accredited (SWEDAC).

## Appendix 5. Analysis results

Table 1. Analysis results for macronutrients per 100 g of edible part. Values in the table are rounded, full analytical values are presented in the Swedish Food Composition Database.

Food id.	Food name	Energy <sup>1</sup> (kJ)	Energy <sup>1</sup> (kcal)	Carbohydrates <sup>1</sup> (g)	Fat (g)	Protein <sup>1</sup> (g)	Nitrogen (g)	Fibre (g)	Water (g)	Alcohol (g)	Ash (g)
188	Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre	1681	402	65.6	8.6	10.3	1.8	9.1	4.4	0 <sup>2</sup>	2.0
202	Bread white 3.5% fibre	1189	284	46.0	6.4	8.0	1.4	4.3	34.0	0 <sup>2</sup>	1.2
726	Breakfast cereal puffed wheat w/ honey fortified	1623	388	76.9	3.0	8.3	1.4	7.9	3.0	0 <sup>2</sup>	0.9
727	Breakfast cereal corn flakes w/ sugar fortified	1599	382	86.4	0.9	4.3	0.7	3.1	4.3	0 <sup>2</sup>	1
830	Bulgur cooked	541	129	23.1	1.2	4.3	0.8	4.0	66.8	0 <sup>2</sup>	0.6
1633	Wafers plain	1672	400	75.8	4.9	8.8	1.5	6.7	2.4	0 <sup>2</sup>	1.5
1678	Sponge cake gingerbread	1565	374	56.0	14.1	3.9	0.7	3.2	21.4	0 <sup>2</sup>	1.4
1933	Corn flour yellow refined or polenta	1482	354	71.5	3.4	6.0	1.0	4.7	13.6	0 <sup>2</sup>	0.8
2294	Kebab meat from restaurant	1264	302	4.9	22.9	18.7	3.0	1.9	48.4	0 <sup>2</sup>	3.2
2658	Potato gratin chilled product	481	115	10.5	6.8	2.0	0.3	1.9	77.1	0 <sup>2</sup>	1.7
3447	Oat crunches	1610	385	61.8	6.9	12.0	2.1	12.6	3.7	0 <sup>2</sup>	3.1
3791	Bread white app. 5% fibre e.g. formfranska	1044	249	44.0	3.0	8.6	1.5	4.8	38.2	0 <sup>2</sup>	1.5
3794	Bread wholegrain wheat rye app. 6% fibre	1070	256	42.6	4.1	7.4	1.3	8.8	35.7	0 <sup>2</sup>	1.4
3795	Bread white app. 5% fibre e.g. loaf	1091	261	47.7	2.8	7.5	1.3	6.3	34.3	0 <sup>2</sup>	1.3
3818	Hamburger bun	1213	290	47.0	6.8	8.0	1.4	3.5	33.5	0 <sup>2</sup>	1.1
3825	Hamburger bun coarse	1102	263	43.0	5.0	7.5	1.3	7.3	35.6	0 <sup>2</sup>	1.6
6576	Flour mix sifted rye w/ wheat	1489	356	71.8	1.4	8.6	1.5	8.8	8.7	0 <sup>2</sup>	0.6
6757	Bread w/ sifted rye app. 4% fibre e.g. råstkaka	1106	264	48.9	2.7	7.3	1.3	6.5	32.9	0 <sup>2</sup>	1.7
6758	Sweet wheat bread e.g. cinnamon bun	1443	345	51.7	11.3	6.7	1.2	4.1	25.4	0 <sup>2</sup>	0.9
6759	Bread wheat rye w/ seeds 24% wholegrain	1130	270	41.0	5.9	8.7	1.5	8.2	34.3	0 <sup>2</sup>	1.9
6760	Pizza w/ tomato sauce cheese from restaurant	1372	328	22.9	18.2	16.5	2.6	3.7	36	0 <sup>2</sup>	2.8

Food id.	Food name	Energy <sup>1</sup> (kJ)	Energy <sup>1</sup> (kcal)	Carbohydrates <sup>1</sup> (g)	Fat (g)	Protein <sup>1</sup> (g)	Nitrogen (g)	Fibre (g)	Water (g)	Alcohol (g)	Ash (g)
6761	Pizza dough heated chilled product	1400	335	60.8	4.7	9.5	1.7	3.8	18.6	0.01	2.7
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain	1598	382	73.1	3.4	8.4	1.5	10.5	2.7	0 <sup>2</sup>	1.9
6764	Granola breakfast cereal w/ fruit nuts	1827	436	46.0	19.5	11.4	1.8	16.2	5.1	0 <sup>2</sup>	1.9
6765	Granola breakfast cereal w/ cocoa and raspberry	1709	408	47.8	15.8	8.8	1.4	20.3	5.4	0 <sup>2</sup>	1.9
6766	Puffed maize cracker cheese flavour	1865	446	70.5	14.3	6.8	1.1	2.8	3.8	0 <sup>2</sup>	1.9
6767	Puffed lentil cracker flavoured	1750	418	58.7	11.6	15.9	2.5	6.6	4.6	0 <sup>2</sup>	2.6
6768	Biscuits for children wholegrain	1715	410	62.3	11.2	7.5	1.3	14.2	3.3	0 <sup>2</sup>	1.5
6769	Gingerbread dough chilled product	1603	383	58.8	13.4	4.6	0.8	3.7	17.6	0 <sup>2</sup>	2.0
6770	Croissant bake off	1420	339	34.5	18.4	7.4	1.3	3.4	35.0	0 <sup>2</sup>	1.3
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	1332	318	51.1	8.3	7.7	1.3	3.4	28.7	0 <sup>2</sup>	0.9
6780	Potato chips flavoured frozen product	705	168	21.1	7.3	2.6	0.4	4.0	63.4	0 <sup>2</sup>	1.6
6781	Breakfast cereal e.g. corn flakes	1572	376	80.0	1.2	7.0	1.1	6.1	4.4	0 <sup>2</sup>	1.3
6782	Sushi rice boiled	723	173	38.3	0.4	2.8	0.5	1.2	56.5	0 <sup>2</sup>	0.8
6786	Noodles egg noodles boiled w/o salt	506	121	22.8	0.8	4.2	0.7	2.3	69.6	0 <sup>2</sup>	0.3
6843	Potato chips wedges frozen product	659	158	22.3	5.6	2.4	0.4	3.9	64.9	0 <sup>2</sup>	0.9
6855	Rice pudding w/ sugar	495	118	16.7	4.1	3.6	0.6	0	75	0 <sup>2</sup>	0.7
6856	Rice pudding w/o sugar w/ artificial sweeteners	418	100	12.1	4.0	3.9	0.6	0	79.3	0 <sup>2</sup>	0.7

<sup>1</sup>Calculated from analysed values. <sup>2</sup> Not analysed, assessed as a logical zero.

Table 2. Analysis results for carbohydrates per 100 g of edible part. Values in the table are rounded, full analytical values are presented in the Swedish Food Composition Database.

Food id.	Food name	Glucose (g)	Fructose (g)	Sucrose (g)	Maltose (g)	Lactose (g)	Galactose (g)	Starch (g)
188	Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre	0.7	1.7	0.1	2.2	0 <sup>1</sup>	0	60.6
202	Bread white 3.5% fibre	2.1	2.8	0	1.1	0 <sup>1</sup>	0	42.1
726	Breakfast cereal puffed wheat w/ honey fortified	5.4	3.6	18.4	1	0 <sup>1</sup>	0	41.8
727	Breakfast cereal corn flakes w/ sugar fortified	1.0	0.9	33.4	0.6	0 <sup>1</sup>	0	49.3
830	Bulgur cooked	0.1	0.04	0.1	0.04	0 <sup>1</sup>	0	23.5
1633	Wafers plain	0.1	0.1	0.4	1.0	0 <sup>1</sup>	0	73.1
1678	Sponge cake gingerbread	0.9	0.8	29.6	0.6	2.6	0.1	21.3
1933	Corn flour yellow refined or polenta	0.2	0.2	0.8	0	0 <sup>1</sup>	0	69.9
2294	Kebab meat from restaurant	0.3	0.1	0.1	0.1	0 <sup>1</sup>	0	5
2658	Potato gratin chilled product	0.5	0.4	0.4	0	0.4	0	9.3
3447	Oat crunches	0.2	0.2	8.4	0.2	0 <sup>1</sup>	0	53.5
3791	Bread white app. 5% fibre e.g. formfranska	0.3	0.7	0	3.4	0 <sup>1</sup>	0	40.1
3794	Bread wholegrain wheat rye app. 6% fibre	3.4	3.8	0	3.9	0 <sup>1</sup>	0	32.8
3795	Bread white app. 5% fibre e.g. loaf	4.3	5.0	0	3.3	0 <sup>1</sup>	0	36.1
3818	Hamburger bun	1.9	2.5	0.1	3.2	0 <sup>1</sup>	0	39.9
3825	Hamburger bun coarse	1.2	2.0	0	1.9	0 <sup>1</sup>	0	38.9
6576	Flour mix sifted rye w/ wheat	0	0.1	0.5	0	0 <sup>1</sup>	0.	69.2
6757	Bread w/ sifted rye app. 4% fibre e.g. rågkaka	3.9	4.2	0	1.0	0 <sup>1</sup>	0	41.2
6758	Sweet wheat bread e.g. cinnamon bun	3.9	4.6	8.2	1.8	0.1	0	32.8
6759	Bread wheat rye w/ seeds 24% wholegrain	0.8	1.4	0.1	3.4	0 <sup>1</sup>	0	36.1
6760	Pizza w/ tomato sauce cheese from restaurant	0.6	0.8	0.1	1.0	0.1	0.1	22.5
6761	Pizza dough heated chilled product	1.5	0.6	0	2.1	0 <sup>1</sup>	0	54.0
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain	0.2	0.1	20.5	0.8	0 <sup>1</sup>	0	47.6

Food id.	Food name	Glucose (g)	Fructose (g)	Sucrose (g)	Maltose (g)	Lactose (g)	Galactose (g)	Starch (g)
6764	Granola breakfast cereal w/ fruit nuts	3.1	5.1	1.6	0.2	0 <sup>1</sup>	0	35.5
6765	Granola breakfast cereal w/ cocoa and raspberry	3.5	5.3	1.9	0	0 <sup>1</sup>	0	37.5
6766	Puffed maize cracker cheese flavour	0.1	0.1	0.5	0	2.9	0	64.5
6767	Puffed lentil cracker flavoured	0.3	0.1	1.0	0	1.9	0	53.8
6768	Biscuits for children wholegrain	0.4	0.6	18.7	0.4	0 <sup>1</sup>	0	41.3
6769	Gingerbread dough chilled product	2.9	2.6	22.2	0.1	0 <sup>1</sup>	0	33.3
6770	Croissant bake off	1.8	2.4	0.1	1.2	0.2	0	29.5
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	4.9	6.0	0	1.4	0.3	0	38.1
6780	Potato chips flavoured frozen product	0.1	0	0.2	0.1	0 <sup>1</sup>	0	22.4
6781	Breakfast cereal e.g. corn flakes	1.8	1.7	3.3	1.0	0 <sup>1</sup>	0	70
6782	Sushi rice boiled	1.4	0.9	3.2	0.3	0 <sup>1</sup>	0	33.3
6786	Noodles eggnoodles boiled w/o salt	0	0	0.1	0.2	0 <sup>1</sup>	0	22.6
6843	Potato chips wedges frozen product	0.2	0	0.2	0	0 <sup>1</sup>	0	23.8
6855	Rice pudding w/ sugar	0	0	3.9	0	3.5	0	7.3
6856	Rice pudding w/o sugar w/ artificial sweeteners	0	0	0	0	3.6	0	9.3

<sup>1</sup>Not analysed, assessed as logical zero.



Table 3. Analytical results for vitamin A per 100 g of edible part. Values in the table are rounded, full analytical values are presented in the Swedish Food Composition Database.

Food id.	Food name	all-trans-retinol (µg)	α-carotene (µg)	β-carotene (µg)	β-cryptoxanthin (µg)	Lycopene (µg) <sup>1</sup>	Lutein (µg) <sup>1</sup>	Zeaxanthin (µg) <sup>1</sup>
188	Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre	0 <sup>2</sup>	0	0	0	0	60.7	0 <sup>3</sup>
202	Bread white 3.5% fibre	0 <sup>2</sup>	0	0	0	0	56.85	0 <sup>3</sup>
726	Breakfast cereal puffed wheat w/ honey fortified	0 <sup>2</sup>	0	0	12.1	0	54.9	9.9
727	Breakfast cereal corn flakes w/ sugar fortified	0 <sup>2</sup>	0 <sup>3</sup>	42.9	93.1	0	151	560
830	Bulgur cooked	0 <sup>2</sup>	0	0	0	0	79.2	0 <sup>3</sup>
1633	Wafers plain	0 <sup>2</sup>	0	0	0	0	136	0 <sup>3</sup>
1678	Sponge cake gingerbread	0 <sup>3</sup>	0	0	0	0	45.1	7.5
1933	Corn flour yellow refined or polenta	0 <sup>2</sup>	7.8	30.6	66.8	0	494	324
2294	Kebab meat from restaurant	48.6	0	44.8	17.9	0	10.4	13
2658	Potato gratin chilled product	38.7	0	17	0	0	31.3	6.2
3447	Oat crunches	0 <sup>2</sup>	0	0	0	0	63.3	29.8
3791	Bread white app. 5% fibre e.g. formfranska	0 <sup>2</sup>	0	0	0	0	66.49	0 <sup>3</sup>
3794	Bread wholegrain wheat rye app. 6% fibre	0 <sup>2</sup>	0	0	0	0	42.01	5.10
3795	Bread white app. 5% fibre e.g. loaf	0 <sup>2</sup>	0	0	0	0	32.50	0 <sup>3</sup>
3818	Hamburger bun	0 <sup>2</sup>	0	0	0	0	45.96	0
3825	Hamburger bun coarse	0 <sup>2</sup>	0	0	0	0	49.33	6.64
6576	Flour mix sifted rye w/ wheat	0 <sup>2</sup>	0	0 <sup>3</sup>	0	0	93.1	9
6757	Bread w/ sifted rye app. 4% fibre e.g. rågkaka	0 <sup>2</sup>	0	0	0	0	21.70	0
6758	Sweet wheat bread e.g. cinnamon bun	64.3	0	18.7	0	0	60.68	0 <sup>3</sup>
6759	Bread wheat rye w/ seeds 24% wholegrain	0 <sup>2</sup>	0	0	0	0	43.14	5.56
6760	Pizza w/ tomato sauce cheese from restaurant	115	0 <sup>3</sup>	108	0 <sup>2</sup>	2050	44.5	5.6
6761	Pizza dough heated chilled product	0 <sup>2</sup>	0	0	0	0	100.72	0 <sup>3</sup>
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain	0 <sup>2</sup>	0	12.9	12.9	0	216	90.7

Food id.	Food name	all-trans-retinol (µg)	α-carotene (µg)	β-carotene (µg)	β-cryptoxanthin (µg)	Lycopene (µg) <sup>1</sup>	Lutein (µg) <sup>1</sup>	Zeaxanthin (µg) <sup>1</sup>
6764	Granola breakfast cereal w/ fruit nuts	0 <sup>2</sup>	0	23.4	0 <sup>3</sup>	21.3	78.9	36.1
6765	Granola breakfast cereal w/ cocoa and raspberry	0 <sup>2</sup>	0	0	0	0	82.5	28.8
6766	Puffed maize cracker cheese flavour	0 <sup>3</sup>	0 <sup>3</sup>	70.6	98.7	0	134	445
6767	Puffed lentil cracker flavoured	0 <sup>3</sup>	0 <sup>3</sup>	87.6	68.5	298	248	215
6768	Biscuits for children wholegrain	0 <sup>2</sup>	0	0	0	0	54	6.2
6769	Gingerbread dough chilled product	0	0	11	0	0	60.1	0 <sup>3</sup>
6770	Croissant bake off	176.34	0	64.54	0	0	52.73	5.48
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	11.28	0	7.95	0	0	64.04	4.37
6780	Potato chips flavoured frozen product	0 <sup>2</sup>	0	24.9	21.2	0	47.4	36
6781	Breakfast cereal e.g. corn flakes	0 <sup>2</sup>	5.1	77.2	140	0	216	990
6782	Sushi rice boiled	0 <sup>2</sup>	0	0	0	0	0	0
6786	Noodles egg noodles boiled w/o salt	0	0	0	0	0	51.8	0 <sup>3</sup>
6843	Potato chips wedges frozen product	0 <sup>2</sup>	0	0	0	0	65.3	0 <sup>3</sup>
6855	Rice pudding w/ sugar	30.6	0	15	0	0	0	0
6856	Rice pudding w/o sugar w/ artificial sweeteners	25.6	0	13.8	0	0	0	0

<sup>1</sup>Nutrient is not included in the accreditation. <sup>2</sup>Not analysed, assessed as logical zero. <sup>3</sup>Under the limit of quantification, trace.

Table 4. Analytical results for vitamins D and K per 100 g of edible part. Values in the table are rounded, full analytical values are presented in the Swedish Food Composition Database.

Food id.	Food name	Vitamin D <sub>2</sub> (µg)	Vitamin D <sub>3</sub> (µg)	Vitamin K <sub>1</sub> (µg)	Vitamin K <sub>2</sub> (MK4) (µg)
188	Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre	0 <sup>1</sup>	0 <sup>1</sup>	1.91	0
202	Bread white 3.5% fibre	0 <sup>1</sup>	0 <sup>1</sup>	6.08	0
726	Breakfast cereal puffed wheat w/ honey fortified	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0
727	Breakfast cereal corn flakes w/ sugar fortified	0 <sup>1</sup>	0 <sup>1</sup>	0	0
830	Bulgur cooked	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0
1633	Wafers plain	0 <sup>1</sup>	0 <sup>1</sup>	1.8	0
1678	Sponge cake gingerbread	0 <sup>1</sup>	0	20	1.29
1933	Corn flour yellow refined or polenta	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0
2294	Kebab meat from restaurant	0 <sup>1</sup>	0 <sup>2</sup>	7.21	16.8
2658	Potato gratin chilled product	0 <sup>1</sup>	0	4.84	2.47
3447	Oat crunches	0 <sup>1</sup>	0 <sup>1</sup>	2.12	0
3791	Bread white app. 5% fibre e.g. formfranska	0 <sup>1</sup>	0 <sup>1</sup>	2.60	0
3794	Bread wholegrain wheat rye app. 6% fibre	0 <sup>1</sup>	0 <sup>1</sup>	3.21	0
3795	Bread white app. 5% fibre e.g. loaf	0 <sup>1</sup>	0 <sup>1</sup>	1.94	0
3818	Hamburger bun	0 <sup>1</sup>	0 <sup>1</sup>	5.52	0
3825	Hamburger bun coarse	0 <sup>1</sup>	0 <sup>1</sup>	6.74	0
6576	Flour mix sifted rye w/ wheat	0 <sup>1</sup>	0 <sup>1</sup>	1.1	0
6757	Bread w/ sifted rye app. 4% fibre e.g. rågkaka	0 <sup>1</sup>	0 <sup>1</sup>	2.64	0
6758	Sweet wheat bread e.g. cinnamon bun	0 <sup>1</sup>	0 <sup>2</sup>	3.77	1.46
6759	Bread wheat rye w/ seeds 24% wholegrain	0 <sup>1</sup>	0 <sup>1</sup>	1.58	0
6760	Pizza w/ tomato sauce cheese from restaurant	0 <sup>1</sup>	0	6.88	3.63
6761	Pizza dough heated chilled product	0 <sup>1</sup>	0 <sup>1</sup>	2.01	0
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain	0 <sup>1</sup>	0 <sup>1</sup>	1.2	0

Food id.	Food name	Vitamin D <sub>2</sub> (µg)	Vitamin D <sub>3</sub> (µg)	Vitamin K <sub>1</sub> (µg)	Vitamin K <sub>2</sub> (MK4) (µg)
6764	Granola breakfast cereal w/ fruit nuts	0 <sup>1</sup>	0 <sup>1</sup>	0	1.11
6765	Granola breakfast cereal w/ cocoa and raspberry	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	1.2
6766	Puffed maize cracker cheese flavour	0 <sup>1</sup>	0	0 <sup>2</sup>	1.54
6767	Puffed lentil cracker flavoured	0 <sup>1</sup>	0	0 <sup>2</sup>	1.57
6768	Biscuits for children wholegrain	0 <sup>1</sup>	0 <sup>1</sup>	2.11	0
6769	Gingerbread dough chilled product	0 <sup>1</sup>	0 <sup>1</sup>	5.49	0
6770	Croissant bake off	0 <sup>1</sup>	0 <sup>2</sup>	2.03	4.65
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	0 <sup>1</sup>	0 <sup>2</sup>	4.42	0
6780	Potato chips flavoured frozen product	0 <sup>1</sup>	0 <sup>1</sup>	1.4	0
6781	Breakfast cereal e.g. corn flakes	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0
6782	Sushi rice boiled	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>2</sup>	0
6786	Noodles egg noodles boiled w/o salt	0 <sup>1</sup>	0	0 <sup>2</sup>	0 <sup>2</sup>
6843	Potato chips wedges frozen product	0 <sup>1</sup>	0 <sup>1</sup>	6.3	0
6855	Rice pudding w/ sugar	0 <sup>1</sup>	0.37	0 <sup>2</sup>	0 <sup>2</sup>
6856	Rice pudding w/o sugar w/ artificial sweeteners	0 <sup>1</sup>	0.39	0 <sup>2</sup>	0 <sup>2</sup>

<sup>1</sup>Not analysed, assessed as logical zero. <sup>2</sup>Under the limit of quantification, trace.

Table 5. Analytical results for vitamin E per 100 g of edible part. Values in the table are rounded, full analytical values are presented in the Swedish Food Composition Database.

Food id.	Food name	$\alpha$ -toco- pherol (mg)	$\beta$ -toco- pherol (mg)	$\gamma$ -toco- pherol (mg)	$\delta$ -toco- pherol (mg)	$\alpha$ -toco- trienol (mg)	$\beta$ -toco- trienol (mg)	$\gamma$ -toco- trienol (mg)	$\delta$ -toco- trienol (mg)
188	Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre	1.54	0.34	0.25	0 <sup>1</sup>	0.17	1.58	n.a.	0
202	Bread white 3.5% fibre	1.11	0.45	1.59	0.05	0.06	1.09	n.a.	0
726	Breakfast cereal puffed wheat w/ honey fortified	1.06	0.18	0.05	0	0.20	1.5	n.a.	0
727	Breakfast cereal corn flakes w/ sugar fortified	0 <sup>1</sup>	0	0.11	0	0.12	0	n.a.	0.05
830	Bulgur cooked	0 <sup>1</sup>	0 <sup>1</sup>	0	0	0.06	0.69	n.a.	0
1633	Wafers plain	0.68	0.28	0.70	0.37	0.09	1.45	n.a.	0
1678	Sponge cake gingerbread	4.29	1.08	5.47	0.24	0.06	0.54	n.a.	0.07
1933	Corn flour yellow refined or polenta	0.53	0.08	2.31	0.17	0.44	0	n.a.	0.11
2294	Kebab meat from restaurant	1.19	0.13	0.35	0	0.08	0	n.a.	0
2658	Potato gratin chilled product	0.95	0.15	0.91	0.05	0 <sup>1</sup>	0	n.a.	0
3447	Oat crunches	1.5	0.24	3.49	1.75	1.34	0.60	n.a.	0
3791	Bread white app. 5% fibre e.g. formfranska	0.64	0.24	0.60	0	0.07	1.19	n.a.	0
3794	Bread wholegrain wheat rye app. 6% fibre	0.76	0.30	0.62	0	0.25	1.06	n.a.	0
3795	Bread white app. 5% fibre e.g. loaf	0.61	0.28	0.60	0 <sup>1</sup>	0.13	0.90	n.a.	0
3818	Hamburger bun	0.97	0.37	1.56	0 <sup>1</sup>	1.42	0.84	n.a.	0
3825	Hamburger bun coarse	1.02	0.42	1.09	0	0.19	1.71	n.a.	0
6576	Flour mix sifted rye w/ wheat	0.71	0.31	0.04	0	0.27	1.4	n.a.	0
6757	Bread w/ sifted rye app. 4% fibre e.g. rågekaka	0.25	0.17	0.31	0	0.06	0.65	n.a.	0
6758	Sweet wheat bread e.g. cinnamon bun	1.60	0.37	1.02	0.06	0.39	0.89	n.a.	0.63
6759	Bread wheat rye w/ seeds 24% wholegrain	2.30	0.45	0.45	0	0.11	0.95	n.a.	0
6760	Pizza w/ tomato sauce cheese from restaurant	1.43	0.4	1.11	0 <sup>1</sup>	0.06	0.59	0 <sup>1</sup>	0
6761	Pizza dough heated chilled product	1.06	0.10	0.16	0	0.06	1.29	n.a.	0

Food id.	Food name	$\alpha$ -toco- pherol (mg)	$\beta$ -toco- pherol (mg)	$\gamma$ -toco- pherol (mg)	$\delta$ -toco- pherol (mg)	$\alpha$ -toco- trienol (mg)	$\beta$ -toco- trienol (mg)	$\gamma$ -toco- trienol (mg)	$\delta$ -toco- trienol (mg)
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain	0.37	0.15	0.23	0	0.18	1.19	n.a.	0 <sup>1</sup>
6764	Granola breakfast cereal w/ fruit nuts	6.36	2.78	0.58	0.12	0.96	0.13	0 <sup>1</sup>	0
6765	Granola breakfast cereal w/ cocoa and raspberry	2.52	0.75	3.4	0.27	1.07	0.32	n.a.	0
6766	Puffed maize cracker cheese flavour	5.18	1.15	6.27	0.26	0.25	0	n.a.	0.05
6767	Puffed lentil cracker flavoured	3.75	0.78	5.35	0.20	0.08	0	n.a.	0
6768	Biscuits for children wholegrain	5.09	0.49	0.05	0	0.24	1.94	n.a.	0
6769	Gingerbread dough chilled product	1.43	0.33	0.76	0	0.70	0.94	n.a.	0.54
6770	Croissant bake off	0.73	0.16	0.15	0	0.12	0.74	0.12	0 <sup>1</sup>
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	1.53	0.42	1.17	0.06	0.25	1.10	n.a.	0.10
6780	Potato chips flavoured frozen product	2.13	0.15	0.09	0	0 <sup>1</sup>	0	n.a.	0
6781	Breakfast cereal e.g. corn flakes	0.09	0 <sup>1</sup>	0.27	0	0.24	0	n.a.	0.06
6782	Sushi rice boiled	0 <sup>1</sup>	0	0	0	0.07	0	n.a.	0
6786	Noodles eggnoodles boiled w/o salt	0.21	0.09	0 <sup>1</sup>	0	0.07	0.66	n.a.	0
6843	Potato chips wedges frozen product	1.17	0.23	1.3	0.09	0	0	n.a.	0
6855	Rice pudding w/ sugar	0.12	0	0	0	0 <sup>1</sup>	0	n.a.	0
6856	Rice pudding w/o sugar w/ artificial sweeteners	0.12	0	0	0	0 <sup>1</sup>	0	n.a.	0

<sup>1</sup>Under the limit of quantification, trace. n.a., nutrient or food not analysed in this project.

Table 6. Analytical results for water-soluble vitamins per 100 g of edible part. Values in the table are rounded, full analytical values are presented in the Swedish Food Composition Database.

Food id.	Food name	Thiamin (mg)	Riboflavin (mg)	Niacin (mg)	Vitamin B <sub>6</sub> (mg)	Vitamin B <sub>6</sub> free (mg)	Vitamin B <sub>12</sub> (µg)	Folate (µg)	Vitamin C (mg)
188	Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre	0.23	0.12	1.62	0,14	0,11	0 <sup>1</sup>	74.2	0
202	Bread white 3.5% fibre	0.18	0.07	0.90	0,06 <sup>2</sup>	0,05 <sup>2</sup>	0 <sup>1</sup>	41.08	0.43
726	Breakfast cereal puffed wheat w/ honey fortified	1.23	1.26	n.a.	0,13	0,09 <sup>2</sup>	0 <sup>1</sup>	20.5	0
727	Breakfast cereal corn flakes w/ sugar fortified	0 <sup>3</sup>	0 <sup>3</sup>	0.34	0,04 <sup>2</sup>	0,03 <sup>2</sup>	0 <sup>1</sup>	6.31	0
830	Bulgur cooked	0.08	0.11	1.73	0,09 <sup>2</sup>	0,04 <sup>2</sup>	0 <sup>1</sup>	11.7	0
1633	Wafers plain	0.23	0.03	0.75	0,08 <sup>2</sup>	0,05 <sup>2</sup>	0 <sup>1</sup>	18.4	0
1678	Sponge cake gingerbread	0.06	0.10	0.31	0,03 <sup>2</sup>	0,02 <sup>2</sup>	0 <sup>3</sup>	6.45	0
1933	Corn flour yellow refined or polenta	0.23	0.05	1.27	0,26	0,26	0 <sup>1</sup>	19.9	0
2294	Kebab meat from restaurant	0.06	0.12	0.38	0,06 <sup>2</sup>	0,06 <sup>2</sup>	1.55	12	0
2658	Potato gratin chilled product	0.03	0.05	0.72	0,15	0,09 <sup>2</sup>	0.14	11.1	0.64
3447	Oat crunches	0.17	0.08	1.6	0,13	0,09 <sup>2</sup>	0 <sup>1</sup>	46.3	0
3791	Bread white app. 5% fibre e.g. formfranska	0.13	0.07	0.99	0,05 <sup>2</sup>	0,04 <sup>2</sup>	0 <sup>1</sup>	37.09	0
3794	Bread wholegrain wheat rye app. 6% fibre	0.18	0.09	1.13	0,11	0,08	0 <sup>1</sup>	33.13	0
3795	Bread white app. 5% fibre e.g. loaf	0.17	0.07	1.00	0,07 <sup>2</sup>	0,06 <sup>2</sup>	0 <sup>1</sup>	34.78	0.60
3818	Hamburger bun	0.11	0.05	0.77	0,05 <sup>2</sup>	0,05 <sup>2</sup>	0 <sup>1</sup>	28.34	0
3825	Hamburger bun coarse	0.18	0.09	2.10	0,11	0,08	0 <sup>1</sup>	42.37	0
6576	Flour mix sifted rye w/ wheat	0.26	0.05	0.76	0,09 <sup>2</sup>	0,07 <sup>2</sup>	0 <sup>1</sup>	28.3	1.15
6757	Bread w/ sifted rye app. 4% fibre e.g. rågkaka	0.18	0.05	0.87	0,07 <sup>2</sup>	0,04 <sup>2</sup>	0 <sup>1</sup>	31.04	0.68
6758	Sweet wheat bread e.g. cinnamon bun	0.12	0.07	0.72	0,04 <sup>2</sup>	0,04 <sup>2</sup>	0.11	28.60	0.49
6759	Bread wheat rye w/ seeds 24% wholegrain	0.25	0.11	2.08	0,15	0,11	0 <sup>1</sup>	53.8	0
6760	Pizza w/ tomato sauce cheese from restaurant	0.07	0.15	3.03	0,19	0,17	0.78	20.5	0
6761	Pizza dough heated chilled product	0.02	0 <sup>3</sup>	0.40	0,02 <sup>2</sup>	0,02 <sup>2</sup>	0 <sup>1</sup>	7.63	0

Food id.	Food name	Thiamin (mg)	Riboflavin (mg)	Niacin (mg)	Vitamin B <sub>6</sub> (mg)	Vitamin B <sub>6</sub> free (mg)	Vitamin B <sub>12</sub> (µg)	Folate (µg)	Vitamin C (mg)
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain	0.16	0.07	2.03	0,13	0,07 <sup>2</sup>	0 <sup>1</sup>	27.2	0
6764	Granola breakfast cereal w/ fruit nuts	0.41	0.07	1.18	0,16	0,07 <sup>2</sup>	0 <sup>1</sup>	46.2	3.12
6765	Granola breakfast cereal w/ cocoa and raspberry	0.29	0.05	0.85	0,09 <sup>2</sup>	0,07 <sup>2</sup>	0 <sup>1</sup>	34.5	2.13
6766	Puffed maize cracker cheese flavour	0.05	0.17	0.96	0,21	0,19	0.15	21.9	1.73
6767	Puffed lentil cracker flavoured	0.19	0.19	1.3	0,27	0,14	0.2	48.3	0
6768	Biscuits for children wholegrain	0.16	0.06	2.01	0,1 <sup>2</sup>	0,05 <sup>2</sup>	0 <sup>1</sup>	27.3	0.81
6769	Gingerbread dough chilled product	0.06	0 <sup>3</sup>	0.33	0,04 <sup>2</sup>	0,03 <sup>2</sup>	0 <sup>1</sup>	6.01	0
6770	Croissant bake off	0.16	0.07	0.65	0,05 <sup>2</sup>	0,05 <sup>2</sup>	0 <sup>3</sup>	34.33	0
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	0.16	0.07	0.90	0,05 <sup>2</sup>	0,04 <sup>2</sup>	0 <sup>3</sup>	39.49	0.57
6780	Potato chips flavoured frozen product	0.09	0.03	1.17	0,21	0,10 <sup>2</sup>	0 <sup>1</sup>	17.6	3.6
6781	Breakfast cereal e.g. corn flakes	0.01	0.04	0.76	0,11	0,08 <sup>2</sup>	0 <sup>1</sup>	10.4	0
6782	Sushi rice boiled	0.01	0 <sup>3</sup>	0.13	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>1</sup>	1.67	0
6786	Noodles egg noodles boiled w/o salt	0.02	0 <sup>3</sup>	0.46	0,04 <sup>2</sup>	0,02 <sup>2</sup>	0 <sup>3</sup>	6.12	0
6843	Potato chips wedges frozen product	0.09	0 <sup>3</sup>	0.93	0,25	0,16	0 <sup>1</sup>	21.9	2.75
6855	Rice pudding w/ sugar	0.03	0.12	0.15	0,04 <sup>2</sup>	0,04 <sup>2</sup>	0 <sup>3</sup>	1.26	0
6856	Rice pudding w/o sugar w/ artificial sweeteners	0.03	0.11	0.10	0,04 <sup>2</sup>	0,04 <sup>2</sup>	0 <sup>3</sup>	0.79	0

<sup>1</sup>Not analysed, assessed as logical zero. <sup>2</sup>Values between 0.02-0.1 are not within the accredited method. <sup>3</sup>Under the limit of quantification, trace. n.a. nutrient or food not analysed in this project.



Table 7. Analytical results for minerals per 100 g of edible part, part 1. The values in the table are rounded, full analytical values are presented in the Swedish Food Composition Database.

Food id.	Food name	Lead (µg)	Phosphorus (mg)	Iodine (µg)	Iron (mg)	Cadmium (µg)	Calcium (mg)	Potassium (mg)	Cobalt (µg)	Copper (mg)
188	Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre	0	180	1	1.63	2.42	65	280	1.87	0.23
202	Bread white 3.5% fibre	0 <sup>1</sup>	90.38	2.46	0.84	1.92	73.94	147.89	1.73	0.14
726	Breakfast cereal puffed wheat w/ honey fortified	0	170	0	9.54	2.73	23	230	0 <sup>1</sup>	0.23
727	Breakfast cereal corn flakes w/ sugar fortified	0	25	2	0.13	0	3.9	74	0 <sup>1</sup>	0.04
830	Bulgur cooked	0.19	72	16	0.60	0.28	12	120	0.69	0.18
1633	Wafers plain	0 <sup>1</sup>	150	2	0.97	2.72	24	230	0 <sup>1</sup>	0.15
1678	Sponge cake gingerbread	0 <sup>1</sup>	140	12	0.72	1.67	52	170	0 <sup>1</sup>	0.05
1933	Corn flour yellow refined or polenta	0 <sup>1</sup>	160	0	1.57	0 <sup>1</sup>	3.8	240	0	0.12
2294	Kebab meat from restaurant	1.06	240	39	2.23	0.45	30	410	0.70	0.09
2658	Potato gratin chilled product	0 <sup>1</sup>	61	3	0.28	0.86	29	250	0.54	0.06
3447	Oat crunches	0	440	3	4.31	2.87	58	740	2.27	0.45
3791	Bread white app. 5% fibre e.g. formfranska	0	80.64	2.20	0.73	2.42	43.25	131.96	0.87	0.11
3794	Bread wholegrain wheat rye app. 6% fibre	0 <sup>1</sup>	123.55	2.32	1.16	2.19	51.74	208.49	1.13	0.15
3795	Bread white app. 5% fibre e.g. loaf	0 <sup>1</sup>	91.54	2.29	0.93	2.03	22.88	175.44	1.89	0.14
3818	Hamburger bun	0	85.40	1.55	0.74	2.99	37.27	116.46	0.52	0.13
3825	Hamburger bun coarse	0	158.1	2.37	1.49	2.94	37.94	221.34	1.07	0.19
6576	Flour mix sifted rye w/ wheat	0	110	0	1.06	2.57	22	210	0 <sup>1</sup>	0.17
6757	Bread w/ sifted rye app. 4% fibre e.g. rågkaka	0 <sup>1</sup>	82.88	0 <sup>1</sup>	0.98	1.88	70.08	158.24	2.28	0.14
6758	Sweet wheat bread e.g. cinnamon bun	0 <sup>1</sup>	83.78	3.39	0.89	1.84	39.78	126.95	1.65	0.12
6759	Bread wheat rye w/ seeds 24% wholegrain	1.08	169.32	4.03	1.66	5.96	33.06	258.02	2.43	0.37
6760	Pizza w/ tomato sauce cheese from restaurant	0.41	260	15	0.54	1.39	350	160	0.22	0.10
6761	Pizza dough heated chilled product	0 <sup>1</sup>	234.44	0.87	0.32	1.86	37.34	269.17	0 <sup>1</sup>	0.08
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain	1.67	200	0	5.36	3.24	34	540	23.1 <sup>3</sup>	0.42

Food id.	Food name	Lead (µg)	Phosphorus (mg)	Iodine (µg)	Iron (mg)	Cadmium (µg)	Calcium (mg)	Potassium (mg)	Cobalt (µg)	Copper (mg)
6764	Granola breakfast cereal w/ fruit nuts	0.71	330	1	3.2	5.15	60	410	3.84	0.49
6765	Granola breakfast cereal w/ cocoa and raspberry	1.07	260	2	3.36	3.87	49	450	2.76	0.31
6766	Puffed maize cracker cheese flavour	0	150	13	0.48	0 <sup>1</sup>	47	220	0.89	0.06
6767	Puffed lentil cracker flavoured	0 <sup>1</sup>	300	12	3.44	0 <sup>1</sup>	68	550	3.81	0.38
6768	Biscuits for children wholegrain	0.74	170	2	1.95	3.38	23	240	0.73	0.22
6769	Gingerbread dough chilled product	0 <sup>1</sup>	48	6	0.60	2.04	30	120	0.73	0.08
6770	Croissant bake off	0	94.16	3.42	0.83	1.10	21.4	102.72	0 <sup>1</sup>	0.09
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	0	87.40	3.18	0.75	1.64	38.93	135.07	0.81	0.10
6780	Potato chips flavoured frozen product	0.27	82	0	0.60	2.73	11	380	0.52	0.11
6781	Breakfast cereal e.g. corn flakes	0	50	0	0.24	0	3.1	91	0	0.07
6782	Sushi rice boiled	0 <sup>1</sup>	30	22	0.05	0.59	6	23	0 <sup>1</sup>	0.07
6786	Noodles eggnoodles boiled w/o salt	0.3	70	2	0.78	1.42	17	38	0 <sup>1</sup>	0.19
6843	Potato chips wedges frozen product	0 <sup>1</sup>	69	0	0.53	4.26	10	380	0.45	0.08
6855	Rice pudding w/ sugar	0 <sup>1</sup>	86	9	0.03	0.13	90	140	0 <sup>1</sup>	0.03
6856	Rice pudding w/o sugar w/ artificial sweeteners	0 <sup>1</sup>	89	11	0.03	0	96	140	0 <sup>1</sup>	0.03

<sup>1</sup>Under the limit of quantification, trace.

Table 8. Analytical results minerals per 100 g edible part, part 2. The values in the table are rounded, full analytical values are presented in the Swedish Food Composition Database.

Food id.	Food name	Magnesium (mg)	Manganese (mg)	Molybdenum (µg)	Sodium (mg)	Selenium (µg)	Zinc (mg)
188	Breadcrumbs grounded crisp bread wholegrain wheat rye sugar app. 5% fibre	56	1.19	31.6	440	2	1.37
202	Bread white 3.5% fibre	23	0.46	14.21	287.56	0.82	0.75
726	Breakfast cereal puffed wheat w/ honey fortified	52	1.25	23.6	5	4	1.58
727	Breakfast cereal corn flakes w/ sugar fortified	7.4	0.04	11.2	320	2	0 <sup>1</sup>
830	Bulgur cooked	25	0.56	9.66	110	2	0.66
1633	Wafers plain	30	0.80	26.3	350	4	0.93
1678	Sponge cake gingerbread	16	0.51	8.04	370	3	0.33
1933	Corn flour yellow refined or polenta	62	0.26	14.9	0 <sup>1</sup>	2	1.07
2294	Kebab meat from restaurant	30	0.28	13.5	880	7	2.96
2658	Potato gratin chilled product	16	0.09	5.52	440	2	0.29
3447	Oat crunches	130	3.96	85.3	340	8	3.3
3791	Bread white app. 5% fibre e.g. formfranska	19.06	0.36	13.78	417.87	2.19	0.68
3794	Bread wholegrain wheat rye app. 6% fibre	36.29	0.84	26.02	308.88	1.54	1.03
3795	Bread white app. 5% fibre e.g. loaf	25.17	0.63	18.84	350.89	3.05	0.90
3818	Hamburger bun	22.52	0.39	14.29	302.80	1.55	0.70
3825	Hamburger bun coarse	58.50	1.01	20.16	339.92	1.58	1.09
6576	Flour mix sifted rye w/ wheat	32	0.75	32	0 <sup>1</sup>	2	1.03
6757	Bread w/ sifted rye app. 4% fibre e.g. rågkaka	24.87	0.54	22.45	452.1	1.51	0.81
6758	Sweet wheat bread e.g. cinnamon bun	21.16	0.79	10.07	186.19	3.39	0.68
6759	Bread wheat rye w/ seeds 24% wholegrain	62.09	0.98	23.79	419.28	1.61	1.53
6760	Pizza w/ tomato sauce cheese from restaurant	29	0.25	12.9	600	5	1.79
6761	Pizza dough heated chilled product	10.42	0.15	17.28	816.20	3.47	0.30
6763	Breakfast cereal puffed wheat w/ chocolate wholegrain	85	1.94	25.3	180	2	1.54

Food id.	Food name	Magnesium (mg)	Manganese (mg)	Molybdenum (µg)	Sodium (mg)	Selenium (µg)	Zinc (mg)
6764	Granola breakfast cereal w/ fruit nuts	120	2.88	48.4	160	4	2.43
6765	Granola breakfast cereal w/ cocoa and raspberry	91	2.9	46	210	3	2.12
6766	Puffed maize cracker cheese flavour	31	0.28	16	500	3	0.63
6767	Puffed lentil cracker flavoured	57	0.56	136	560	20	2.21
6768	Biscuits for children wholegrain	61	1.37	22.6	310	2	1.29
6769	Gingerbread dough chilled product	14	0.76	10.4	660	3	0.34
6770	Croissant bake off	17.12	0.40	9.42	402.32	2.57	0.60
6771	Sweet wheat bread w/ saffron w/o raisins e.g. lussebulle	21.45	0.41	11.92	190.68	2.38	0.68
6780	Potato chips flavoured frozen product	21	0.15	9.75	300	1	0.35
6781	Breakfast cereal e.g. corn flakes	15	0.09	25	450	10	0.32
6782	Sushi rice boiled	6.2	0.27	20.1	280	1	0.44
6786	Noodles eggnoodles boiled w/o salt	24	0.34	5	55	4	0.54
6843	Potato chips wedges frozen product	19	0.11	4.95	26	0.3	0.28
6855	Rice pudding w/ sugar	11	0.09	8.38	64	2	0.41
6856	Rice pudding w/o sugar w/ artificial sweeteners	12	0.08	7.23	72	1	0.45

<sup>1</sup>Under the limit of quantification, trace.

Table 9a and 9b. Fatty acid analysis results per 100 g of edible part. Values in the table are rounded, full analytical values are presented in the Swedish Food Composition Database. All samples have been run as duplicate analyses.

Food name	Breadcrumbs	Bread white	Breakfast cereal w/ honey	Corn flakes w/ sugar	Bulgur cooked	Wafers plain	Sponge cake	Corn flour	Kebab meat	Potato gratin	Oat crunches	Formfranska	Bread wholegrain	Loaf	Hamburger bun	Hamburger bun coarse	Flour mix	Bread w/ sifted rye	Cinnamon bun
Food id.	188	202	726	727	830	1633	1678	1933	2294	2658	3447	3791	3794	3795	3818	3825	6576	6757	6758
Fatty acid 4:0 (g)	0	0	0	n.a.	0	0	0	0	0	0.16	0	0	0	0	0	0	0	0	0.07
Fatty acid 6:0 (g)	0	0	0	n.a.	0	0.01	0	0	0	0.08	0	0	0	0	0	0	0	0	0.04
Fatty acid 8:0 (g)	0	0	0	n.a.	0	0.15	0.04	0	0	0.06	0	0 <sup>1</sup>	0.01	0 <sup>1</sup>	0	0	0	0	0.05
Fatty acid 10:0 (g)	0	0	0	n.a.	0	0.13	0.04	0	0	0.15	0	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0	0	0	0	0.09
Fatty acid 10:1 (g)	0	0	0	n.a.	0	0	0	0	0	0.19	0	0	0	0	0	0	0	0	0 <sup>1</sup>
Fatty acid 11:0 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 12:0 (g)	0	0	0 <sup>1</sup>	n.a.	0 <sup>1</sup>	1.16	0	0	0.03	0.17	0	0	0	0	0	0	0	0	0.17
Fatty acid 12:1 (g)	0	0	0	n.a.	0	0	0	0	0	0.14	0	0	0	0	0	0	0	0	0
Fatty acid 13:0 (g)	0	0	0	n.a.	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0
Fatty acid 14:0 i (g)	0	0	0	n.a.	0	0	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0	0	0	0	0	0	0 <sup>1</sup>	0	0
Fatty acid 14:0 (g)	0	0	0 <sup>1</sup>	n.a.	0 <sup>1</sup>	0.48	0 <sup>1</sup>	0	0.69	0.53	0.01	0	0 <sup>1</sup>	0 <sup>1</sup>	0	0 <sup>1</sup>	0	0 <sup>1</sup>	0.36
Fatty acid 14:1 (g)	0	0	0	n.a.	0	0	0	0	0.19	0.05	0	0	0	0	0	0	0	0	0.03
Fatty acid 15:0 i (g)	0	0	0	n.a.	0	0	0	0	0.05	0.01	0	0	0	0	0	0	0	0	0 <sup>1</sup>
Fatty acid 15:0 ai (g)	0	0	0	n.a.	0	0	0	0	0.05	0.02	0	0	0	0	0	0	0	0	0.01
Fatty acid 15:0 (g)	0	0	0 <sup>1</sup>	n.a.	0 <sup>1</sup>	0	0	0	0.11	0.04	0	0	0	0	0	0	0 <sup>1</sup>	0	0.03
Fatty acid 15:1 (g)	0	0	0	n.a.	0	0	0	0	0.05	0	0	0	0	0	0	0	0	0	0
Fatty acid 16:0 i (g)	0	0	0	n.a.	0	0	0	0	0 <sup>1</sup>	0.01	0	0	0	0	0	0	0	0	0
Fatty acid 16:0 ai (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 16:0 (g)	0.56	0.3	0.43	n.a.	0.13	0.65	0.78	0.34	5.59	1.57	1.01	0.15	0.23	0.15	0.32	0.24	0.16	0.15	2.46

Food name	Breadcrumbs	Bread white	Breakfast cereal w/ honey	Corn flakes w/ sugar	Bulgur cooked	Wafers plain	Sponge cake	Corn flour	Kebab meat	Potato gratin	Oat crunches	Formfranska	Bread wholegrain	Loaf	Hamburger bun	Hamburger bun coarse	Flour mix	Bread w/ sifted rye	Cinnamon bun
Food id.	188	202	726	727	830	1633	1678	1933	2294	2658	3447	3791	3794	3795	3818	3825	6576	6757	6758
Fatty acid 16:1 (g)	0.01	0.01	0 <sup>1</sup>	n.a.	0 <sup>1</sup>	0	0.05	0 <sup>1</sup>	0.91	0.08	0.01	0.01	0.01	0.01	0.01	0.01	0 <sup>1</sup>	0 <sup>1</sup>	0.06
Fatty acid 16:2 n-4 (g)	0	0	0	n.a.	0	0	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0
Fatty acid 16:3 (g)	0	0	0	n.a.	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0
Fatty acid 16:4 n-3 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 17:0 i (g)	0	0	0	n.a.	0	0	0	0	0.10	0.02	0	0	0	0	0	0	0	0	0.01
Fatty acid 17:0 ai (g)	0	0	0	n.a.	0	0	0	0	0.14	0.01	0	0	0	0	0	0	0	0	0 <sup>1</sup>
Fatty acid 17:0 (g)	0	0	0 <sup>1</sup>	n.a.	0 <sup>1</sup>	0	0	0 <sup>1</sup>	0.21	0.02	0	0 <sup>1</sup>	0	0	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0.01
Fatty acid 17:1 (g)	0	0 <sup>1</sup>	0	n.a.	0 <sup>1</sup>	0	0 <sup>1</sup>	0	0.17	0.01	0	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0	0	0 <sup>1</sup>
Fatty acid 18:0 i (g)	0	0	0	n.a.	0	0	0	0	0.03	0	0	0	0	0	0	0	0	0	0
Fatty acid 18:0 ai (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 18:0 (g)	0.21	0.19	0.17	n.a.	0.01	0.35	0.24	0.06	3.27	0.5	0.21	0.03	0.04	0.03	0.12	0.13	0.01	0.35	0.5
Fatty acid 18:1 (g)	5.04	2.86	1.08	n.a.	0.14	0.35	8.63	0.9	8.9	2.2	2.44	1.15	1.56	1.05	2.85	2.07	0.11	0.8	3.61
Fatty acid 18:2 (g)	2.24	1.19	1.08	n.a.	0.47	1.2	2.57	1.57	0.93	0.49	2.64	0.58	0.86	0.57	1.29	0.96	0.58	0.48	1.24
Fatty acid 18:2 cis n-6 (g)	2.24	1.19	1.08	n.a.	0.47	1.2	2.57	1.57	0.73	0.45	2.64	0.58	0.86	0.57	1.29	0.96	0.58	0.48	1.24
Fatty acid 18:2 konj (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 18:3 n-3 (g)	0.06	0.38	0.07	n.a.	0.02	0.09	0.83	0.04	0.12	0.15	0.09	0.15	0.22	0.15	0.34	0.29	0.05	0.11	0.25
Fatty acid 18:3 n-6 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 18:4 n-3 (g)	0	0	0	n.a.	0	0	0	0	0.13	0.02	0	0	0	0	0	0	0	0	0.01
Fatty acid 20:0 (g)	0.02	0.02	0.01	n.a.	0 <sup>1</sup>	0.01	0.07	0.01	0.03	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0 <sup>1</sup>	0.01	0.03
Fatty acid 20:1 (g)	0.02	0.05	0.01	n.a.	0 <sup>1</sup>	0.01	0.15	0.01	0.08	0.03	0.05	0.02	0.03	0.02	0.05	0.04	0.01	0.02	0.03
Fatty acid 20:2 n-6 (g)	0	0 <sup>1</sup>	0	n.a.	0	0	0 <sup>1</sup>	0	0	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0

Food name	Breadcrumbs	Bread white	Breakfast cereal w/ honey	Corn flakes w/ sugar	Bulgur cooked	Wafers plain	Sponge cake	Corn flour	Kebab meat	Potato gratin	Oat crunches	Formfranska	Bread wholegrain	Loaf	Hamburger bun	Hamburger bun coarse	Flour mix	Bread w/ sifted rye	Cinnamon bun
Food id.	188	202	726	727	830	1633	1678	1933	2294	2658	3447	3791	3794	3795	3818	3825	6576	6757	6758
Fatty acid 20:3 n-3 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 20:3 n-6 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 20:4 n-3 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 20:4 n-6 (g)	0	0	0	n.a.	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0 <sup>1</sup>
Fatty acid 20:5 n-3 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 21:5 n-3 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 22:0 (g)	0.05	0.01	0.01	n.a.	0 <sup>1</sup>	0.01	0.03	0 <sup>1</sup>	0	0	0	0.01	0.01	0 <sup>1</sup>	0.01	0.01	0 <sup>1</sup>	0.01	0.01
Fatty acid 22:1 (g)	0.02	0	0	n.a.	0	0.02	0.02	0 <sup>1</sup>	0	0	0.01	0	0 <sup>1</sup>	0 <sup>1</sup>	0	0 <sup>1</sup>	0 <sup>1</sup>	0	0
Fatty acid 22:2 n-6 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 22:4 n-3 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 22:4 n-6 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 22:5 n-3 (g)	0	0	0	n.a.	0	0	0	0.01	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 22:5 n-6 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 22:6 n-3 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 23:0 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 24:0 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 24:1 n-9 (g)	0	0	0	n.a.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatty acid 14:1 t (g)	0	0	0	n.a.	0	0	0	0	0.04	0.01	0	0	0	0	0	0	0	0	0
Fatty acid 16:1 t (g)	0	0	0	n.a.	0	0 <sup>1</sup>	0	0	0.10	0.01	0	0	0	0 <sup>1</sup>	0	0	0	0	0 <sup>1</sup>
Fatty acid 18:1 t (g)	0	0 <sup>1</sup>	0 <sup>1</sup>	n.a.	0	0	0.02	0	0.59	0.07	0	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0.01	0.01	0	0 <sup>1</sup>	0.04
Fatty acid 20:1 t (g)	0	0	0	n.a.	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0 <sup>1</sup>

Food name	Breadcrumbs	Bread white	Breakfast cereal w/ honey	Corn flakes w/ sugar	Bulgur cooked	Wafers plain	Sponge cake	Corn flour	Kebab meat	Potato gratin	Oat crunches	Formfranska	Bread wholegrain	Loaf	Hamburger bun	Hamburger bun coarse	Flour mix	Bread w/ sifted rye	Cinnamon bun
Food id.	188	202	726	727	830	1633	1678	1933	2294	2658	3447	3791	3794	3795	3818	3825	6576	6757	6758
Fatty acid 18:3 t (g)	0	0 <sup>1</sup>	0	n.a.	0	0	0.02	0	0	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0.01	0	0	0
Fatty acid 18:2 t (g)	0	0	0 <sup>1</sup>	n.a.	0 <sup>1</sup>	0	0 <sup>1</sup>	0	0.19	0.03	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0	0
Sum saturated fatty acids <sup>2</sup> (g)	0.84	0.52	0.62	n.a.	0.14	2.95	1.20	0.41	10.30	3.37	1.24	0.20	0.30	0.19	0.47	0.40	0.17	0.52	3.84
Sum monounsaturated fatty acids <sup>2</sup> (g)	5.09	2.92	1.09	n.a.	0.14	0.38	8.85	0.91	10.30	2.70	2.51	1.18	1.60	1.08	2.91	2.12	0.12	0.82	3.73
Sum polyunsaturated fatty acids <sup>2</sup> (g)	2.30	1.57	1.15	n.a.	0.49	1.29	3.40	1.62	1.18	0.66	2.73	0.73	1.08	0.72	1.63	1.25	0.63	0.59	1.50
Summa trans fatty acids <sup>2</sup> (g)	0	0	0	n.a.	0	0	0.04	0	0.92	0.12	0	0	0	0	0.01	0.02	0	0	0.07
Sum n-3 fatty acids <sup>2</sup> (g)	0.06	0.38	0.7	n.a.	0.02	0.09	0.83	0.04	0.25	0.17	0.09	0.15	0.22	0.15	0.34	0.29	0.05	0.11	0.26
Sum long-chain n-3 fatty acids <sup>2</sup> (g)	0	0	0	n.a.	0	0	0.00	0.01	0	0	0	0	0	0	0	0	0	0	0
Sum n-6 fatty acids <sup>2</sup> (g)	2.24	1.19	1.08	n.a.	0.47	1.20	2.57	1.57	0.73	0.45	2.64	0.58	0.86	0.57	1.29	0.96	0.58	0.48	1.24
Cholesterol (mg)	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	27.2	0 <sup>3</sup>	58.4	13.3	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	18.5

<sup>1</sup> Under the quantification limit, trace. <sup>2</sup>Calculated from analysed values. <sup>3</sup>Not analysed, assessed as logical zero.



Food name	Bread wheat rye w/ seeds	Pizza	Pizza dough	Breakfast cereal w/ chocolate	Granola w/ fruit nuts	Granola w/ cocoa and raspberry	Puffed maize cracker	Puffed lentil cracker	Biscuits for children	Gingerbread dough	Croissant	Lussebulle	Potato chips flavoured	Corn flakes	Sushi rice	Eggnoodies boiled w/o salt	Potato chips wedges	Rice pudding w/ sugar	Rice pudding w/o sugar
Food id.	6759	6760	6761	6763	6764	6765	6766	6767	6768	6769	6770	6771	6780	6781	6782	6786	6843	6855	6856
Fatty acid 4:0 (g)	0	0.47	0	0	0	0	0	0	0	0	0.45	0	0	0	0 <sup>3</sup>	0	0	0.13	0.12
Fatty acid 6:0 (g)	0	0.23	0	0	0	0	0	0	0	0	0.22	0	0	0	0 <sup>3</sup>	0	0	0.06	0.06
Fatty acid 8:0 (g)	0	0.18	0	0	0	0.10	0	0.01	0	0.04	0.17	0.02	0 <sup>1</sup>	0	0 <sup>3</sup>	0	0	0.05	0.05
Fatty acid 10:0 (g)	0	0.45	0	0	0	0.09	0 <sup>1</sup>	0.02	0	0.04	0.42	0.02	0	0	0 <sup>3</sup>	0	0	0.13	0.12
Fatty acid 10:1 (g)	0	0.2	0	0	0	0	0	0	0	0	0.21	0	0	0	0 <sup>3</sup>	0	0	0.26	0.25
Fatty acid 11:0 (g)	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0 <sup>3</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>
Fatty acid 12:0 (g)	0	0.55	0	0 <sup>1</sup>	0	0.74	0.02	0.02	0	0.51	0.52	0.13	0	0 <sup>1</sup>	0 <sup>3</sup>	0	0	0.15	0.14
Fatty acid 12:1 (g)	0	0.16	0	0	0	0	0	0	0	0	0.16	0	0	0	0 <sup>3</sup>	0	0	0.19	0.19
Fatty acid 13:0 (g)	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0 <sup>3</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>
Fatty acid 14:0 i (g)	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0 <sup>3</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>
Fatty acid 14:0 (g)	0 <sup>1</sup>	1.61	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0.29	0.06	0.05	0	0.27	1.55	0.08	0 <sup>1</sup>	0	0 <sup>3</sup>	0 <sup>1</sup>	0	0.45	0.44
Fatty acid 14:1 (g)	0	0.15	0	0	0	0	0	0	0	0	0.16	0	0	0	0 <sup>3</sup>	0	0	0.04	0.04
Fatty acid 15:0 i (g)	0	0.03	0	0	0	0	0	0	0	0	0.03	0	0	0	0 <sup>3</sup>	0	0	0.01	0.01
Fatty acid 15:0 ai (g)	0	0.05	0	0	0	0	0	0	0	0	0.05	0	0	0	0 <sup>3</sup>	0	0	0.01	0.01
Fatty acid 15:0 (g)	0	0.14	0	0 <sup>1</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0	0	0.14	0	0	0	0 <sup>3</sup>	0 <sup>1</sup>	0	0.04	0.04
Fatty acid 15:1 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 16:0 i (g)	0	0.02	0	0	0	0	0	0	0	0	0.02	0	0	0	0 <sup>3</sup>	0	0	0.01	0.01
Fatty acid 16:0 ai (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 16:0 (g)	0.31	4.63	0.39	0.52	1.24	1.02	0.82	0.66	0.58	4.24	5.14	1.4	0.46	0.11	0 <sup>3</sup>	0.1	0.21	1.23	1.21
Fatty acid 16:1 (g)	0.01	0.24	0.02	0 <sup>1</sup>	0.03	0.03	0.03	0.03	0.01	0.02	0.24	0.01	0.01	0 <sup>1</sup>	0 <sup>3</sup>	0.01	0.01	0.06	0.06
Fatty acid 16:2 n-4 (g)	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0.02	0	0	0	0 <sup>3</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>

Food name	Bread wheat rye w/ seeds	Pizza	Pizza dough	Breakfast cereal w/ chocolate	Granola w/ fruit nuts	Granola w/ cocoa and raspberry	Puffed maize cracker	Puffed lentil cracker	Biscuits for children	Gingerbread dough	Croissant	Lussebulle	Potato chips flavoured	Corn flakes	Sushi rice	Egg noodles boiled w/o salt	Potato chips wedges	Rice pudding w/ sugar	Rice pudding w/o sugar
Food id.	6759	6760	6761	6763	6764	6765	6766	6767	6768	6769	6770	6771	6780	6781	6782	6786	6843	6855	6856
Fatty acid 16:3 (g)	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>
Fatty acid 16:4 n-3 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 17:0 i (g)	0	0.06	0	0	0	0	0	0	0	0	0.06	0	0	0	0 <sup>3</sup>	0	0	0.01	0.01
Fatty acid 17:0 ai (g)	0	0.05	0	0	0	0	0	0	0	0	0.05	0	0	0	0 <sup>3</sup>	0	0	0.01	0.01
Fatty acid 17:0 (g)	0	0.06	0 <sup>1</sup>	0 <sup>1</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0	0 <sup>1</sup>	0.07	0 <sup>1</sup>	0	0 <sup>1</sup>	0 <sup>3</sup>	0 <sup>1</sup>	0	0.02	0.02
Fatty acid 17:1 (g)	0	0.03	0 <sup>1</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0	0	0.03	0	0	0	0 <sup>3</sup>	0 <sup>1</sup>	0 <sup>1</sup>	0.01	0.01
Fatty acid 18:0 i (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 18:0 ai (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 18:0 (g)	0.15	1.45	0.43	0.4	0.5	0.33	0.25	0.21	0.31	0.74	1.44	0.38	0.25	0.02	0 <sup>3</sup>	0.01	0.1	0.38	0.37
Fatty acid 18:1 (g)	1.57	5.13	1.75	0.58	10.44	9.41	8.46	6.8	8.23	5.14	3.27	2.8	3.11	0.32	0 <sup>3</sup>	0.11	4	0.82	0.79
Fatty acid 18:2 (g)	2.24	1.21	1.24	0.88	5.11	2.46	2.76	2.24	1.38	1.49	0.71	1.1	3.01	0.53	0 <sup>3</sup>	0.27	0.7	0.13	0.13
Fatty acid 18:2 cis n-6 (g)	2.24	1.13	1.24	0.88	5.11	2.46	2.76	2.24	1.38	1.47	0.64	1.1	3	0.53	0 <sup>3</sup>	0.27	0.7	0.11	0.11
Fatty acid 18:2 konj (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 18:3 n-3 (g)	0.24	0.33	0.04	0.07	1.03	0.34	0.95	0.8	0.04	0.21	0.10	0.26	0.02	0.02	0 <sup>3</sup>	0.02	0.23	0.02	0.02
Fatty acid 18:3 n-6 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 18:4 n-3 (g)	0	0.06	0	0	0	0	0	0	0	0	0.05	0	0	0	0 <sup>3</sup>	0	0	0.02	0.01
Fatty acid 20:0 (g)	0.01	0.04	0.01	0.01	0.06	0.06	0.07	0.05	0.03	0.05	0.02	0.03	0.02	0.01	0 <sup>3</sup>	0 <sup>1</sup>	0.03	0.01	0.01
Fatty acid 20:1 (g)	0.01	0.06	0.01	0.01	0.11	0.15	0.15	0.12	0.03	0.04	0.03	0.04	0.02	0 <sup>1</sup>	0 <sup>3</sup>	0 <sup>1</sup>	0.07	0.01	0.01
Fatty acid 20:2 n-6 (g)	0	0	0	0 <sup>1</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0	0	0	0	0	0	0 <sup>3</sup>	0 <sup>1</sup>	0	0	0
Fatty acid 20:3 n-3 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0

Food name	Bread wheat rye w/ seeds	Pizza	Pizza dough	Breakfast cereal w/ chocolate	Granola w/ fruit nuts	Granola w/ cocoa and raspberry	Puffed maize cracker	Puffed lentil cracker	Biscuits for children	Gingerbread dough	Croissant	Lussebulle	Potato chips flavoured	Corn flakes	Sushi rice	Eggnoodies boiled w/o salt	Potato chips wedges	Rice pudding w/ sugar	Rice pudding w/o sugar
Food id.	6759	6760	6761	6763	6764	6765	6766	6767	6768	6769	6770	6771	6780	6781	6782	6786	6843	6855	6856
Fatty acid 20:3 n-6 (g)	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0 <sup>3</sup>	0	0	0 <sup>1</sup>	0 <sup>1</sup>
Fatty acid 20:4 n-3 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 20:4 n-6 (g)	0	0 <sup>1</sup>	0	0	0	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0 <sup>3</sup>	0 <sup>1</sup>	0	0 <sup>1</sup>	0 <sup>1</sup>
Fatty acid 20:5 n-3 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0 <sup>1</sup>
Fatty acid 21:5 n-3 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 22:0 (g)	0.03	0	0.02	0 <sup>1</sup>	0.06	0.03	0.04	0.03	0.09	0.01	0	0.01	0.05	0 <sup>1</sup>	0 <sup>3</sup>	0	0.02	0	0
Fatty acid 22:1 (g)	0	0	0	0	0.06	0.03	0.02	0.02	0	0	0	0	0	0	0 <sup>3</sup>	0	0.01	0	0
Fatty acid 22:2 n-6 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 22:4 n-3 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 22:4 n-6 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 22:5 n-3 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 22:5 n-6 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 22:6 n-3 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 23:0 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 24:0 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 24:1 n-9 (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 14:1 t (g)	0	0.02	0	0	0	0	0	0	0	0	0.03	0	0	0	0 <sup>3</sup>	0	0	0.01	0.01
Fatty acid 16:1 t (g)	0	0.04	0	0	0	0	0	0	0	0	0.05	0	0	0	0 <sup>3</sup>	0	0	0.01	0.01
Fatty acid 18:1 t (g)	0	0.26	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0.02	0.02	0 <sup>1</sup>	0.02	0.21	0.01	0.01	0	0 <sup>3</sup>	0 <sup>1</sup>	0.01	0.07	0.07
Fatty acid 20:1 t (g)	0	0	0	0	0	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0 <sup>3</sup>	0	0	0	0
Fatty acid 18:3 t (g)	0	0	0	0	0	0	0	0 <sup>1</sup>	0	0	0	0 <sup>1</sup>	0	0	0 <sup>3</sup>	0	0 <sup>1</sup>	0	0

Food name	Bread wheat rye w/ seeds	Pizza	Pizza dough	Breakfast cereal w/ chocolate	Granola w/ fruit nuts	Granola w/ cocoa and raspberry	Puffed maize cracker	Puffed lentil cracker	Biscuits for children	Gingerbread dough	Croissant	Lussebulle	Potato chips flavoured	Corn flakes	Sushi rice	Egg noodles boiled w/o salt	Potato chips wedges	Rice pudding w/ sugar	Rice pudding w/o sugar
Food id.	6759	6760	6761	6763	6764	6765	6766	6767	6768	6769	6770	6771	6780	6781	6782	6786	6843	6855	6856
Fatty acid 18:2 t (g)	0 <sup>1</sup>	0.1	0.01	0	0	0	0 <sup>1</sup>	0 <sup>1</sup>	0	0.02	0.09	0.01	0.02	0 <sup>1</sup>	0 <sup>3</sup>	0 <sup>1</sup>	0	0.03	0.03
Sum saturated fatty acids <sup>2</sup> (g)	0.50	10.04	0.85	0.93	1.86	2.66	1.26	1.05	1.01	5.90	10.35	2.07	0.78	0.14	0 <sup>3</sup>	0.11	0.36	2.70	2.63
Sum monounsaturated fatty acids <sup>2</sup> (g)	1.59	5.61	1.78	0.59	10.64	9.62	8.66	6.97	8.27	5.20	4.10	2.85	3.14	0.32	0 <sup>3</sup>	0.12	4.09	1.39	1.35
Sum polyunsaturated fatty acids <sup>2</sup> (g)	2.48	1.60	1.28	0.95	6.14	2.80	3.71	3.04	1.42	1.70	0.88	1.36	3.03	0.55	0 <sup>3</sup>	0.29	0.93	0.17	0.16
Summa trans fatty acids <sup>2</sup> (g)	0	0.42	0.01	0	0	0	0.02	0.02	0	0.04	0.38	0.02	0.03	0	0 <sup>3</sup>	0	0.01	0.12	0.11
Sum n-3 fatty acids <sup>2</sup> (g)	0.24	0.39	0.04	0.07	1.03	0.34	0.95	0.8	0.04	0.21	0.15	0.26	0.02	0.02	0 <sup>3</sup>	0.02	0.23	0.04	0.03
Sum long-chain n-3 fatty acids <sup>2</sup> (g)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 <sup>3</sup>	0	0	0	0
Sum n-6 fatty acids <sup>2</sup> (g)	2.24	1.13	1.24	0.88	5.11	2.46	2.76	2.24	1.38	1.47	0.64	1.1	3	0.53	0 <sup>3</sup>	0.27	0.7	0.11	0.11
Cholesterol (mg)	0 <sup>3</sup>	39	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	2.7	2.3	0 <sup>3</sup>	0 <sup>3</sup>	53.3	5.6	0 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	6.4	0 <sup>3</sup>	10.7	10.9

<sup>1</sup>Under the quantification limit, trace. <sup>2</sup>Calculated from analysed values. <sup>3</sup>Not analysed, assessed as logical zero.

