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Food Reformulation Task Force: Nutritional Characteristics of Priority Food Categories for Reformulation in Ireland (version 1)

Energy (calorie), Target Nutrient and Recommended Serving Size of a Sample of Commonly Eaten Food Products from Forty Priority Food Categories for Food Reformulation.



Food Reformulation Task Force: Nutritional Characteristics of Priority Food Categories for Reformulation in Ireland V1: Energy (calorie), Target Nutrient and Recommended Serving Size of a Sample of Commonly Eaten Food Products from Forty Priority Food Categories for Food Reformulation

Based on an analysis completed by the Dietary Surveys team in University College Dublin.

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1. Introduction

1.1 Background

'The Obesity Policy and Action Plan – A Healthy Weight for Ireland' published in 2016, outlines ten steps to be taken within a 10-year time frame to prevent overweight and obesity in Ireland ¹. Step three of the plan relates to food reformulation. It aims to 'secure appropriate support from the commercial sector to play its part in obesity prevention and agree food industry reformulation targets and review progress'. To achieve this a Food Reformulation Subgroup of the Obesity Policy Implementation Oversight Group developed a [Roadmap for Food Product Reformulation in Ireland](#) ².

In order to deliver the **Roadmap**, the Food Reformulation Task Force, a strategic partnership between Healthy Ireland and the Food Safety Authority of Ireland (FSAI), was established in 2021. The Food Reformulation Task Force will implement the **Roadmap** and monitor progress made in reducing energy (calories), saturated fat, sugar and salt in processed packaged food.

1.2 Targets

When referred to in the context of the **Roadmap for Food Product Reformulation in Ireland**, food reformulation means **improving** the nutritional content of commonly consumed processed foods and drinks. This is achieved by **reducing** energy (calories) and target nutrients (saturated fat, sugar and salt) to ensure a healthier food supply. Specifically, the Roadmap sets targets for the reduction of energy (calories) and sugar by 20% and salt and saturated fat by 10% between 2015 and 2025, see Figure 1.

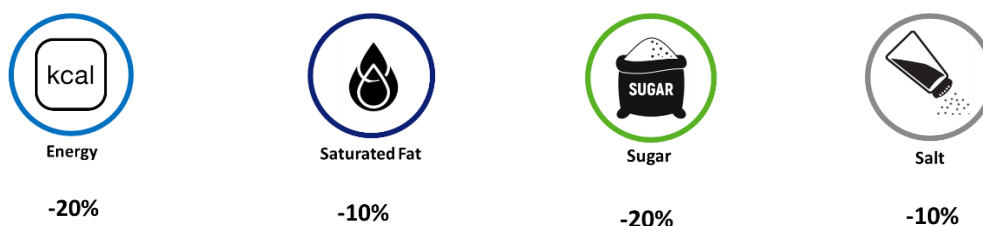


Figure 1 Reformulation targets for Ireland 2015 - 2025

As well as the above, targets will be scoped for product ranges explicitly produced for babies and young children in 2022.

1.3 Priority food categories for food reformulation in Ireland

In order to identify and select a list of priority food categories for reformulation in Ireland a review was undertaken. The objective of this review was to identify the food categories which met with all of the following criteria:

- Contribute most to the intakes of calories, saturated fat, total sugar, and sodium in foods and drinks consumed by the Irish population. This was based on the Irish University Nutrition Alliance (IUNA) dietary surveys (primary school aged children, adolescents, adults, and older adults)
- Are targeted by the Public Health England (PHE)^a Sugar (2017) and Salt (2020) reformulation programmes
- Are top shelf foods in the food pyramid
- Are monitored in the Joint Action of the European Union Best-ReMaP Healthy Food for a Healthy Future project
- Are included in the World Health Organisation (WHO) Global Sodium Benchmarks
- Have potential for reformulation or portion size reduction.

Based on this review a final list of forty priority food categories for reformulation in Ireland was developed and is listed in [Table 1, Appendix 1](#). How the food categories were selected is outlined in 'Priority Food Categories for Reformulation in Ireland' available [here](#).

1.4 Data source for determining the nutritional characteristics and recommended serving size of pre-packaged foods within the forty priority food categories

The Irish National Food Ingredient Database (INFID) is a multi-faceted database collated from foods consumed in Irish food consumption surveys. INFID lists detailed pre – packaged food product information (e.g. ingredient and nutrient information)³. Participants in all food consumption surveys were asked to collect the packaging of the foods they consumed within the survey period, (if required food product label information was collected by a field worker). Information declared on the packaging was recorded including energy (calories), sugar, saturated fat and salt content as well as product recommended serving size.

^a Now known as Office for Health Improvement and Disparities (OHID)

2. Objective

The objective of this report was to establish the energy (calorie), saturated fat, sugar and salt content and recommended serving size of commonly eaten food products from forty priority food categories for reformulation in Ireland.

The aims were to

- Identify the commonly consumed pre-packaged food products^b by participants of Irish national dietary surveys and recorded in INFID versions 5 (2017 – 2018) and 6 (2019 – 2020) that fall within the forty priority food categories for food reformulation in Ireland
- Define the average recommended serving size of pre-packaged food products in each of the forty food categories according to manufacturer information
- Define the mean and median energy (calorie), saturated fat, sugar and salt content per 100g and per recommended serving of the pre-packaged food products in each of the forty food categories
- Develop a list of products per food category which have an energy (calorie), saturated fat, sugar and salt content on or above the 75th percentile. The 75th percentile was chosen as a pragmatic cut off point between foods with lower and higher macro nutrient content
- Identify the manufacturers of pre-packaged food products with an energy (calorie), saturated fat, sugar or salt content on or above the 75th percentile who supply the Irish market.

3. Methods

The study methodology is outlined in Figure 2 and summarised below.

3.1 Identification of commonly consumed pre-packaged food products in forty priority food categories for reformulation in Ireland

A review of commonly consumed pre-packaged food products listed in the INFID versions 5 (2017 – 2018) and 6 (2019 – 2020) was undertaken. Pre-packaged food products from each of the forty priority food categories for food reformulation (identified in a previous analysis of national dietary

^b Including both brand and own brand. Own brand (which is sometimes also referred to as private label) foods are considered as foods which are produced by retailers and carry the retailer's name so would be clearly obvious to the consumer that they are own brand.

surveys for all population groups age 5-90 years) were identified and listed by their year of data collection.

3.2 Identification of nutrient composition per 100g and recommended serving size of pre-packaged foods

Food category mean and median energy (calorie), saturated fat, sugar and salt content **per 100g** were calculated for the commonly consumed pre-packaged food products in each of the forty priority food categories. An **average recommended serving size** of the commonly consumed pre-packaged food products in each of the forty priority food categories was calculated based on available manufacturer data.

3.3 Ranking of pre-packaged food products per food category by nutritional composition

The food products in each of the forty priority food categories were ranked highest to lowest for each single nutrient including energy (calories), saturated fat, sugar and salt content **per 100g and per recommended serving size**. Pre-packaged food products within each of the forty priority food categories which contained any of energy (calorie), saturated fat, sugar and salt above the 75th percentile was listed.

This list was further organised using nutrition claim thresholds for low saturated fat, low sugar and low salt nutrition claims from Regulation (EC) No 1924/2006 on nutrition and health claims made on food (see [Table 2, Appendix 2](#)). Each food product was coded as 0 if under the threshold or 1 if above the threshold for each of saturated fat, sugar and salt. Food products could score a minimum score of 0 and a maximum score of 3 available for a food product ⁴.

3.3 Identification of manufacturers of pre-packaged food products

Based on manufacturer's details provided on food product labels, a list of food products supplying the Irish market was created.

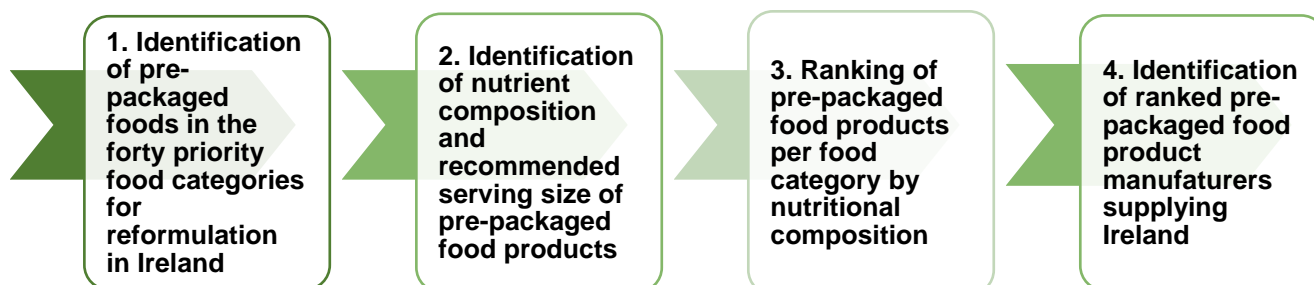


Figure 2 Method for identification of energy (calorie), target nutrient and recommended serving size and manufacturers of a sample of commonly eaten food products from forty priority food categories for food reformulation in Ireland

4. Results

4.1 Identification of commonly consumed food products in forty priority food categories for reformulation in Ireland

In total, 4450 food products were identified in INFID (version 5 and 6) which fell into the forty priority food categories.

The number of products per food category is summarised in [Table 3, Appendix 3](#).

4.2 Identification of nutrient composition per 100g and recommended serving size in forty priority food categories for reformulation in Ireland

The **mean and median** energy (calorie), saturated fat, sugar and salt content **per 100g** of the priority food categories for food reformulation is shown in [Table 3 and Table 4 in Appendix 3](#). The **mean and median** energy (calorie), saturated fat, sugar and salt content **per recommended serving size** of the priority food categories is shown in [Tables 5 and Table 6 in Appendix 4](#).

4.3 Ranking by nutritional composition of commonly consumed pre-packaged food products in forty priority food categories for reformulation

Ranking based on energy (calorie), saturated fat, sugar and salt content per 100g

A summary of the ranking of products in each food category is shown in [Table 7 in Appendix 5](#). A total of 2865 pre-packaged products, across the forty priority food categories, had an energy (calorie), saturated fat, sugar or salt content per 100g above the 75th percentile. Food categories with the most pre-packaged food products above the 75th percentile for at least one nutrient of concern were biscuits including crackers (8.3%, n=239) and chocolate confectionery (7.4%, n=212). This list is called the pre-packaged **food product target list** per 100g.

[Table 8 in Appendix 5](#), outlines the percentage of pre-packaged food products in the **food product target list** per 100g which exceeded nutrient thresholds* for saturated fat, sugar and salt. Of the 2865 pre-packaged products included in the **food product target list** per 100g, 1.9% (n=54) exceeded all three target nutrient thresholds (thresholds for saturated fat, sugar and salt), 18% (n=506) exceeded two out of three nutrient thresholds, and 57% (n=1639) products exceeded only one nutrient threshold.

Ranking based on energy (calorie), saturated fat, sugar and salt content per recommended serving size

The ranking of products based on energy (calorie), saturated fat, sugar and salt content per recommended serving size in each category is shown in [Table 7 in Appendix 5](#). Across the forty priority food categories for reformulation, a total of 1929 pre-packaged products had an energy (calorie), saturated fat, sugar or salt content per recommended serving size above the 75th percentile. Food categories with the most pre-packaged food products above the 75th percentile for at least one target nutrient, were biscuits including crackers (7.8%, n=151) and soups, sauces and miscellaneous food (7.6%, n=147).

4.4 Identification of manufacturers of pre-packaged food products supplying Ireland

From the pre-packaged **food product target list**, a list of over 300 manufacturers supplying the Irish market was developed.

* nutrient threshold based on the conditions applying to nutrition claims from the Annex to Regulation (EC) No 1924/2006 on nutrition and health claims made on foods (also outlined in [Appendix 2, Table 2](#)).

5. Conclusion and next steps

This report outlines energy (calorie), target nutrient and recommended serving sizes of commonly consumed pre-packaged food products in the forty priority food categories for food reformulation in Ireland. The energy and nutrient averages per 100g and per recommended serving size of the forty priority food categories for reformulation in Ireland has been used to model a 2015 baseline to monitor reformulation progress against. The approach to establishing a baseline for food reformulation monitoring in Ireland report can be found [here](#).

The report further goes on to identify food products within the forty priority food categories for reformulation in Ireland which are above the 75th percentile in each food category for energy (calories), saturated fat, sugar and salt. This list will be utilised by the Food Reformulation Task Force to prioritise the stakeholders to engage with on food product reformulation.

6. References

1. Department of Health. A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016 – 2025. In: Health Do, ed. Dublin: The Stationery Office; 2016.
2. Department of Health. Roadmap for Food Product Reformulation in Ireland In:2021.
3. Gilsean MB, Lambe J, Gibney MJ. Irish National Food Ingredient Database: application for assessing patterns of additive usage in foods. *Food Additives & Contaminants*. 2002;19(12):1105-1115.
4. European Parliament and the Council Regulation. EC) No 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods. In: J. Eur. Union L 2006, 9–25., ed2006.

Appendix 1

Table 1 Forty priority food categories description and examples

IUNA Food Categories	Description	Examples* of foods contained in categories
Bacon & ham	Bacon and ham	Bacon rashers grilled, gammon steaks fried, ham
Beef & veal	Beef and Veal	Fillet steak fried, mince beef, roast beef
Beef & veal ready meals	Beef and veal dishes	Beef stew, lasagne, beef curry
Biscuits including crackers	Biscuits including crackers	Rich tea, boudoir biscuit, crispbread
Burgers	Burgers	Beef burger, lamb burger, takeaway burger
Butter (over 80% fat)	Butter	Butter, garlic butter, unsalted butter
Cakes, pastries & buns	All cakes, pastries and buns	Apple slices, custard slices, brownies
Carbonated beverages	Carbonated beverages	Cola, orange, other fizzy drinks
Cheeses	Hard, soft and semi-soft cheeses	Brie, cheese spread, processed single serve cheeses
Chicken, turkey & game	Chicken, turkey and game	Chicken breast fried, turkey leg grilled, roasted duck
Chipped, fried & roasted potatoes	Chipped, fried and roasted potatoes	Chips, wedges, roast potatoes
Chocolate confectionery	Chocolate confectionery	Milk chocolate, truffles, chocolate bars, chocolate covered confectionery
Desserts	Desserts	Tiramisu, apple crumble, sponge pudding
Fish & fish products	Fish and fish products	Cod baked, haddock breaded, fish fingers
Fruit juices & smoothies	Fruit juices and smoothies	Mixed fresh juice, fresh apple juice, banana smoothie
Ice-creams	Ice-creams	Flavoured ice-cream, ice – cream with cone, ice – lollies and pops
Meat pies & pastries	Meat pies and pastries	Sausage rolls, pork pies, chicken pies
Meat products	Meat products	Black pudding, chicken in batter, chicken Kiev
Non-chocolate confectionery	Non-chocolate confectionery	Lollipops, fruit gums, chewy sweets
Nuts & seeds, herbs & spices	Nuts, seeds, herbs and spices	Ginger, basil, cinnamon, cashew nuts (salted)
Other beverages	Other beverages	Cocoa with milk prepared for consumption, malt-based drink

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Other breads	All other breads	Garlic bread, malt bread, scones
Other breakfast cereals	All other breakfast cereal not classified as RTE	Porridge, cereal requiring cooking
Other fat spreads (40-80% fat)	Other fat spreads	Vegetable oil spreads, soya spread, dairy based spreads
Alternatives to milk & milk-based beverages	All other milks and milk-based beverages	Flavoured milk, evaporated milk, plant-based drinks
Peas, beans & lentils	Peas, beans and lentils	Baked beans, chickpeas (canned), mushy peas
Poultry & game dishes	Poultry and game dishes	Chicken stir-fry, chicken pasta, turkey curry
Processed & homemade potato products	Processed and homemade potato products	Hash potatoes, potato croquettes, garlic potatoes
Rice puddings & custard	Rice puddings and custard	Rice pudding, canned, custard ready to eat, custard made with whole milk
RTEBC	Ready to eat breakfast cereal	Cornflakes, crispies, muesli
Sausages	Sausages	Pork sausages, beef sausages, frankfurters
Savouries	All savoury food products such as pizza, pancakes, sandwiches	Deep pan pizza, savoury pancakes (frozen), quiche
Savoury snacks	Savoury snacks	Popcorn, crisps, maize snacks
Soups, sauces & miscellaneous foods	Soups, sauces, dressings and condiments	Vegetable soup, tomato sauce, mayonnaise
Squashes, cordials & fruit juice drinks	Squashes, cordials and fruit juice drinks	Fruit drink prepared for consumption, fruit juice drink, ready to drink
Sugars, syrups, preserves & sweeteners	Sugars, syrups, preserves and sweeteners	Sugar, honey, sweetener, fruit jam
Vegetable & pulse dishes	Vegetable and pulse dishes	Garlic mushrooms, vegetable spring rolls, lentil salad
White sliced bread & rolls	White breads and rolls	White sliced bread, white rolls, crusty, ciabatta
Wholemeal & brown bread & rolls	Wholemeal, wholegrain and brown bread	Brown rolls, multigrain bagels, granary bread
Yoghurts	Yoghurt	Full fat fruit yogurt, 0% fat yogurt, twin pot yogurt

*Examples only, not exhaustive

Appendix 2

Table 2 Nutrition claim and condition of use as per Regulation 1924/2006 on nutrition and health claims made on food

Claim	Condition of Use*
Low saturated fat	A claim that a food is low in saturated fat, and any claim likely to have the same meaning for the consumer, may only be made if the sum of saturated fatty acids and trans-fatty acids in the product does not exceed 1.5 g per 100g for solids or 0.75 g/100 ml for liquids and in either case the sum of saturated fatty acids and trans-fatty acids must not provide more than 10 % of energy.
Low sugar	A claim that a food is low in sugars, and any claim likely to have the same meaning for the consumer, may only be made where the product contains no more than 5 g of sugars per 100 g for solids or 2.5 g of sugars per 100 ml for liquids.
Low salt	A claim that a food is low in sodium/salt, and any claim likely to have the same meaning for the consumer, may only be made where the product contains no more than 0.12 g of sodium, or the equivalent value for salt, per 100 g or per 100 ml. For waters, other than natural mineral waters falling within the scope of Directive 80/777/EEC, this value should not exceed 2 mg of sodium per 100 ml.

*European Parliament and the Council Regulation. EC) No 1924/2006 of the European Parliament and of the Council of 20 December 2006 on nutrition and health claims made on foods. In: J. Eur. Union L 2006, 9–25., ed2006.

Appendix 3

Table 3 Food category mean energy (calories), saturated fat, sugar and salt content of priority food categories for food reformulation per 100g

Food Categories	No of Products (n)	Nutrient Composition per 100g							
		Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Bacon and ham	182	156	65	2.7	2.6	0.7	0.8	2.3	0.7
Beef & veal	51	164	43	3.7	2.5	0.2	0.3	0.3	0.3
Beef & veal ready meals	9	139	53	2.8	2.3	1.9	1.3	0.8	0.4
Biscuits including crackers	346	457	62	8.3	5.4	22.7	14.4	0.7	0.6
Burgers	16	225	56	6.5	2.9	0.7	0.4	0.8	0.2
Butter (over 80% fat)	27	702	92	46.6	11.8	0.5	0.2	1.3	0.6
Cakes, pastries and buns	135	383	64	5.8	3.9	31.6	14.9	0.6	0.4
Carbonated beverages	53	29	16	0.0	0.0	6.3	4.1	0.0	0.1
Cheese	199	334	75	16.8	4.9	1.2	2.3	1.7	0.6
Chicken, turkey & game	106	155	51	1.4	1.3	0.6	0.9	0.6	0.5
Chipped, fried and roast potatoes	60	176	41	1.0	0.9	0.8	1.1	0.3	0.2
Chocolate confectionary	285	501	61	14.7	5.8	49.9	27.1	0.3	0.2
Desserts	50	192	105	3.1	4.1	16.3	6.4	0.4	0.5
Fish and fish products (canned fish)	112	164	59	1.1	1.0	0.5	0.5	1.0	1.5

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Food Categories	No of Products (n)	Nutrient Composition per 100g							
		Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Fruit juices & smoothies	132	42	12	0.1	0.1	8.9	2.7	0.0	0.0
Ice creams	114	212	80	7.6	4.2	20.9	6.3	0.2	0.1
Meat pies & pastries	25	292	58	6.9	2.8	1.9	1.7	1.0	0.2
Meat products	82	249	83	5.2	4.5	1.0	1.2	1.6	1.0
Milk Puddings	22	109	62	1.1	0.4	10.3	2.6	0.1	0.0
Non chocolate confectionary	184	366	100	2.9	4.1	50.6	25.2	0.3	0.5
Nuts & seeds, herbs & spices	82	475	183	5.1	4.4	7.9	9.8	5.3	13.3
Other beverages	90	42	110	0.4	1.2	6.8	18.4	0.1	0.3
Other breads	116	299	50	2.5	3.1	5.0	4.6	1.0	0.5
Other breakfast cereals	32	345	74	0.9	0.3	3.2	5.4	0.0	0.1
Other fat spreads	38	549	92	18.8	7.8	0.6	0.4	1.3	0.4
Alternatives to milk & milk-based beverages	47	63	55	1.6	3.6	4.6	7.2	0.1	0.0
Peas, beans and lentils	57	89	43	0.1	0.1	2.7	1.8	0.4	0.3
Poultry & game ready meals	64	209	56	1.8	1.3	1.0	0.9	0.8	0.4
Processed potato products	53	171	39	1.3	1.3	1.2	1.7	0.6	0.3
Ready to eat breakfast cereal	157	397	38	1.7	2.4	18.4	8.1	0.5	0.3
Sausages	72	334	81	10.3	3.5	1.6	1.3	2.5	1.1
Savouries	151	222	78	3.4	2.6	2.7	1.5	0.9	0.4

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Food Categories	No of Products (n)	Nutrient Composition per 100g							
		Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Savoury snacks	204	469	81	3.7	3.4	3.9	5.4	1.7	0.8
Soups, sauces & miscellaneous foods	332	160	157	1.8	2.6	8.5	10.1	2.8	4.4
Squashes, cordials and fruit juice drinks	93	14	20	0.0	0.1	2.4	4.6	0.1	0.2
Syrups and preserves	124	331	137	1.5	3.1	54.0	28.4	0.2	0.3
Vegetable & pulse dishes	40	156	71	1.4	1.0	3.1	2.1	0.9	0.6
White sliced bread and rolls	148	256	29	0.8	0.9	3.7	2.1	1.1	0.3
Wholemeal & brown bread and rolls	121	241	26	0.7	0.7	2.9	1.2	1.2	0.3
Yogurts	239	94	34	1.9	1.7	10.6	4.0	0.1	0.1

Data provided as mean and standard Deviation (SD)

Table 4 Food category median energy (calories), saturated fat, sugar and salt content of priority food categories for food reformulation per 100g

Food Categories	No of Products (n)	Nutrient Composition per 100g							
		Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
		Median	IQR	Median	IQR	Median	IQR	Median	IQR
Bacon and ham	182	129	111-194	1.3	0.8-4.9	0.5	0.4-0.9	2.1	1.8-2.7
Beef & veal	51	155	129-183	2.8	1.6-4.8	0.0	0.0-0.4	0.2	0.1-0.2
Beef & veal ready meals	9	131	109-171	1.9	1.4-3.8	1.4	0.6-3.3	0.9	0.5-0.9
Biscuits including crackers	346	475	433-495	8.7	3.3-13	27.0	7.2-34	0.6	0.3-0.9
Burgers	16	245	181-257	7.5	4.6-8.7	0.5	0.5-0.9	0.8	0.7-0.9
Butter (over 80% fat)	27	739	723-744	52.0	49-53	0.6	0.3-0.7	1.6	1.3-1.8
Cakes, pastries and buns	135	392	349-423	4.8	3.2-8.5	31.0	22-38	0.6	0.4-0.8
Carbonated beverages	53	28	19-43	0.0	0.0-0.0	4.9	4.5-10	0.0	0.0-0.1
Cheese	199	347	298-390	18.0	14-21	0.5	0.1-0.7	1.8	1.6-1.9
Chicken, turkey & game	106	137	112-194	0.8	0.5-2.0	0.5	0.1-0.6	0.6	0.2-0.9
Chipped, fried and roast potatoes	60	174	145-204	0.7	0.5-1.1	0.5	0.4-0.7	0.4	0.2-0.5
Chocolate confectionary	285	515	477-537	15.0	10-18	52.0	43-58	0.3	0.2-0.4
Desserts	50	185	80-274	1.4	0.4-4.2	17.0	11-19	0.2	0.1-0.7
Fish and fish products (canned fish)	112	180	111-207	0.8	0.4-1.5	0.5	0.1-0.7	0.7	0.4-1.0
Fruit juices & smoothies	132	44	41-48	0.1	0.0-0.1	9.8	8.4-10	0.0	0.0-0.0

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Ice creams	114	219	148-276	6.8	4.3-11	22.0	18-26	0.1	0.1-0.2
Meat pies & pastries	25	284	244-327	7.3	5.7-9.1	1.5	0.5-2.1	1.0	0.9-1.2
Meat products	82	241	192-285	4.0	1.7-7.2	0.8	0.5-1.1	1.4	0.8-2.0
Milk Puddings	22	96	90-102	1.3	0.9-1.5	10.8	9.8-12	0.1	0.1-0.1
Non chocolate confectionary	184	388	342-412	1.7	0.1-4.4	51.2	29-69	0.1	0.0-0.4
Nuts & seeds, herbs & spices	82	554	336-621	4.6	2.1-7.3	4.8	3.1-7.7	0.4	0.0-1.8
Other beverages	90	1	0-18	0.0	0.0-0.1	0.0	0.0-2.6	0.0	0.0-0.1
Other breads	116	284	268-323	1.2	0.4-3.3	3.5	2.2-6.7	0.9	0.8-1.0
Other breakfast cereals	32	370	359-371	0.9	0.8-1.1	1.1	0.9-1.6	0.0	0.0-0.1
Other fat spreads	38	537	490-615	17.0	14-22	0.5	0.5-0.7	1.3	1.1-1.6
Alternatives to milk & milk-based beverages	47	46	33-65	0.3	0.2-0.9	2.6	2.0-4.8	0.1	0.1-0.1
Peas, beans and lentils	57	80	74-93	0.1	0.1-0.2	2.3	1.2-4.7	0.4	0.0-0.6
Poultry & game ready meals	64	214	166-257	1.6	0.8-2.2	0.8	0.5-1.4	0.8	0.6-1.0
Processed potato products	53	180	143-202	0.9	0.6-1.3	0.7	0.5-1.4	0.6	0.4-0.8
Ready to eat breakfast cereal	157	386	371-419	0.9	0.4-2.6	18.4	13-24	0.6	0.2-0.7
Sausages	72	326	280-350	9.5	8.2-11	1.3	0.6-2.2	2.0	1.7-3.5
Savouries	151	248	158-271	3.1	1.1-4.9	2.7	1.8-3.3	0.9	0.6-1.2
Savoury snacks	204	494	444-519	2.6	2.0-3.6	2.6	1.2-4.3	1.6	1.3-2.3
Soups, sauces & miscellaneous foods	332	98	51-236	0.6	0.1-2.5	5.4	2.2-10	1.0	0.7-1.9

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Squashes, cordials and fruit juice drinks	93	7	2-20	0.0	0.0-0.1	0.8	0.2-2.0	0.1	0.0-0.2
Syrups and preserves	124	285	246-400	0.1	0.0-0.4	54.2	42-75	0.1	0.0-0.1
Vegetable & pulse dishes	40	159	99-219	1.2	0.5-2.2	3.0	1.2-4.6	0.8	0.5-1.2
White sliced bread and rolls	148	254	233-270	0.4	0.3-0.8	3.4	2.5-4.2	1.0	0.9-1.1
Wholemeal & brown bread and rolls	121	235	222-256	0.6	0.3-0.9	2.7	2.2-3.6	1.1	1.0-1.3
Yogurts	239	90	69-110	1.7	0.7-2.4	11.0	7.0-13	0.1	0.1-0.2

Data provided as median and interquartile Range (IQR)

Appendix 4

Table 5: Food category mean energy (calories), saturated fat, sugar and salt content of priority food categories for food reformulation per recommended serving size

Food Categories	No of Products	Recommended Serving Size		Nutrient Composition per recommended serving size							
		Mean	Min-Max	Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
				Mean	SD	Mean	SD	Mean	SD	Mean	SD
Bacon and ham	137	29	10-100	45	36	0.8	1.1	0.2	0.1	0.7	0.5
Beef & veal	14	133	20-250	221	136	4.9	3.9	0.1	0.2	0.4	0.3
Beef & veal ready meals	6	305	30-500	400	239	7.4	5.3	6.7	5.8	2.0	1.2
Biscuits including crackers	315	18	3-65	81	51	1.5	1.4	4.4	3.9	0.1	0.1
Burgers	11	93	50-130	201	52	5.6	2.8	0.6	0.4	0.7	0.2
Butter (over 80% fat)	15	9	5-10	62	18	4.0	1.6	0.0	0.0	0.1	0.1
Cakes, pastries and buns	109	46	11-100	173	77	2.6	2.3	13.7	8.6	0.3	0.2
Carbonated beverages	48	339	210-750	100	68	0.0	0.1	21.6	15.9	0.2	0.3
Cheese	163	25	15-88	81	33	4.0	1.5	0.4	1.0	0.4	0.2
Chicken, turkey & game	63	76	13-250	136	110	1.3	1.8	0.4	0.7	0.5	0.4
Chipped, fried and roast potatoes	54	131	52-200	233	95	1.3	1.2	1.0	1.2	0.4	0.3
Chocolate confectionary	234	28	7-90	136	50	3.8	1.9	13.7	12.8	0.1	0.1
Desserts	45	79	19-190	134	75	2.3	3.0	12.4	6.4	0.2	0.2

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Food Categories	No of Products	Recommended Serving Size		Nutrient Composition per recommended serving size							
				Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
		Mean	Min-Max	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Fish and fish products (canned fish)	84	99	30-200	167	82	1.1	1.1	0.6	0.6	0.8	0.6
Fruit juices & smoothies	128	190	5-1000	79	41	0.1	0.1	16.8	8.8	0.0	0.0
Ice creams	106	75	23-135	157	70	5.6	3.2	15.4	5.9	0.1	0.1
Meat pies & pastries	23	91	19-250	246	153	5.8	4.0	1.5	1.3	0.9	0.6
Meat products	62	60	5-250	147	124	2.4	2.4	0.8	1.8	0.7	0.5
Milk Puddings	22	152	50-208	153	37	1.8	0.8	16.2	5.2	0.2	0.1
Non chocolate confectionary	137	30	1-116	102	57	0.9	1.5	12.6	8.5	0.1	0.1
Nuts & seeds, herbs & spices	64	28	3-295	143	121	1.4	1.1	1.8	2.8	0.7	3.5
Other beverages	59	369	10-1000	55	128	0.4	1.3	8.3	21.4	0.1	0.3
Other breads	101	62	8-150	178	75	1.2	1.4	3.2	2.9	0.6	0.3
Other breakfast cereals	29	38	57-314	131	36	0.3	0.1	1.4	2.2	0.0	0.0
Other fat spreads	34	10	10-10	54	9	1.8	0.6	0.1	0.0	0.1	0.0
Alternatives to milk & milk-based beverages	28	218	100-500	109	61	1.7	2.6	9.3	8.2	0.3	0.1
Peas, beans and lentils	50	139	60-250	111	45	0.2	0.1	4.1	3.5	0.6	0.5
Poultry & game ready meals	50	144	25-500	276	142	2.5	2.4	1.9	2.9	1.0	0.7
Processed potato products	44	119	29-250	202	95	2.0	2.8	1.5	1.5	0.7	0.5
Ready to eat breakfast cereal	151	35	25-50	142	36	0.6	0.8	6.5	3.0	0.2	0.1

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Food Categories	No of Products	Recommended Serving Size		Nutrient Composition per recommended serving size							
		Mean	Min-Max	Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
				Mean	SD	Mean	SD	Mean	SD	Mean	SD
Sausages	49	40	6-141	127	66	3.8	2.1	0.7	0.8	0.9	0.5
Savouries	148	159	16-450	339	194	5.2	4.4	4.2	3.0	1.4	0.9
Savoury snacks	191	30	2-75	138	56	1.2	1.4	1.2	2.0	0.5	0.3
Soups, sauces & miscellaneous foods	256	82	3-450	76	70	1.1	1.6	4.4	4.6	1.5	3.3
Squashes, cordials and fruit juice drinks	84	88	3-500	14	33	0.0	0.0	2.8	7.3	0.1	0.8
Syrups and preserves	66	13	1-25	45	25	0.2	0.5	6.9	4.1	0.0	0.0
Vegetable & pulse dishes	35	107	32-400	136	55	1.2	1.1	3.7	3.4	0.7	0.5
White sliced bread and rolls	134	55	26-150	143	55	0.4	0.6	2.1	1.4	0.6	0.3
Wholemeal & brown bread and rolls	103	48	24-135	115	52	0.3	0.4	1.4	1.0	0.5	0.2
Yogurts	217	112	40-250	108	55	2.3	2.2	12.0	6.0	0.2	0.2

Data provided as mean and standard Deviation (SD)

Table 6 Food category median energy (calories), saturated fat, sugar and salt content of priority food categories for food reformulation per recommended serving size.

Food Categories	No of Products (n)	Nutrient Composition per recommended serving size							
		Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
		Median	IQR	Median	IQR	Median	IQR	Median	IQR
Bacon and ham	137	28	21-62	0.2	0.1-1.3	0.2	0.1-0.3	0.4	0.4-0.9
Beef & veal	14	206	113-371	4.7	1.3-8.5	0.0	0.0-0.0	0.4	0.3-0.5
Beef & veal ready meals	6	517	107-581	8.1	1.8-12	5.8	1.5-13	2.2	1.0-3.2
Biscuits including crackers	315	73	42-111	1.3	0.4-2.4	4.0	0.8-6.7	0.1	0.0-0.1
Burgers	11	192	161-245	4.6	3.8-7.7	0.6	0.4-0.9	0.6	0.6-0.8
Butter (over 80% fat)	15	73	52-74	5.1	2.4-5.3	0.1	0.0-0.1	0.1	0.1-0.2
Cakes, pastries and buns	109	145	119-220	2.1	1.1-3.2	11.4	7.5-19	0.3	0.2-0.4
Carbonated beverages	48	95	51-138	0.0	0.0-0.0	17.3	12-27	0.1	0.0-0.3
Cheese	163	78	61-92	4.0	2.8-4.8	0.1	0.0-0.2	0.4	0.3-0.5
Chicken, turkey & game	63	100	37-217	0.3	0.2-2.1	0.2	0.0-0.5	0.4	0.3-0.8
Chipped, fried and roast potatoes	54	210	156-278	0.9	0.6-1.4	0.6	0.4-1.0	0.4	0.2-0.6
Chocolate confectionary	234	128	99-175	3.7	2.4-4.9	12.5	8.5-17	0.1	0.0-0.1
Desserts	45	110	83-172	1.0	0.2-3.3	11.0	7.4-16	0.2	0.1-0.4
Fish and fish products (canned fish)	84	168	96-233	0.8	0.4-1.4	0.5	0.2-0.7	0.7	0.4-1.0

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Food Categories	No of Products (n)	Nutrient Composition per recommended serving size							
		Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
		Median	IQR	Median	IQR	Median	IQR	Median	IQR
Fruit juices & smoothies	128	74	62-94	0.1	0.0-0.2	16.3	13-20	0.0	0.0-0.0
Ice creams	106	139	93-219	5.0	2.8-8.1	13.7	11-21	0.1	0.1-0.2
Meat pies & pastries	23	215	114-408	4.5	2.6-9.0	0.9	0.4-2.3	0.9	0.4-1.3
Meat products	62	104	48-243	1.5	0.8-3.2	0.4	0.1-0.8	0.7	0.4-0.9
Milk Puddings	22	145	120-190	1.9	1.3-2.4	17.7	14-19	0.2	0.1-0.2
Non chocolate confectionary	137	89	62-126	0.6	0.0-1.1	11.5	7.2-15	0.0	0.0-0.1
Nuts & seeds, herbs & spices	64	145	73-185	1.4	0.6-2.1	1.2	0.5-1.8	0.0	0.0-0.3
Other beverages	59	8	0-70	0.0	0.0-0.3	0.5	0.0-14	0.0	0.0-0.2
Other breads	101	181	120-227	0.5	0.3-1.9	2.1	1.1-4.9	0.5	0.4-0.8
Other breakfast cereals	29	146	111-148	0.4	0.3-0.4	0.4	0.4-0.6	0.0	0.0-0.0
Other fat spreads	34	54	49-59	1.7	1.3-2.1	0.1	0.0-0.1	0.1	0.1-0.2
Alternatives to milk & milk-based beverages	28	103	71-132	0.8	0.3-2.2	6.6	3.2-13	0.2	0.1-0.4
Peas, beans and lentils	50	109	70-153	0.2	0.1-0.2	2.4	1.6-6.4	0.6	0.0-1.1
Poultry & game ready meals	50	258	187-350	1.7	1.3-2.8	0.9	0.4-1.5	0.8	0.5-1.4
Processed potato products	44	202	121-264	1.0	0.6-1.5	1.0	0.4-2.0	0.6	0.3-0.9
Ready to eat breakfast cereal	151	121	115-158	0.3	0.1-0.9	6.8	4.2-9.0	0.2	0.1-0.2
Sausages	49	108	86-161	3.3	2.6-4.7	0.4	0.2-1.0	0.8	0.6-1.2

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Food Categories	No of Products (n)	Nutrient Composition per recommended serving size							
		Calories (Kcal)		Saturated Fat (g)		Total Sugar (g)		Salt (g)	
		Median	IQR	Median	IQR	Median	IQR	Median	IQR
Savouries	148	316	192-459	4.4	1.1-8.3	4.1	1.7-5.9	1.3	0.6-1.9
Savoury snacks	191	131	109-151	0.8	0.5-1.2	0.8	0.3-1.2	0.5	0.3-0.6
Soups, sauces & miscellaneous foods	256	60	20-108	0.4	0.1-1.2	3.4	1.1-6.8	0.8	0.3-1.1
Squashes, cordials and fruit juice drinks	84	5	1-13	0.0	0.0-0.0	0.4	0.0-2.4	0.0	0.0-0.1
Syrups and preserves	66	38	28-57	0.0	0.0-0.1	7.7	4.0-10	0.0	0.0-0.0
Vegetable & pulse dishes	35	125	104-173	0.8	0.6-1.5	2.4	0.8-5.5	0.6	0.3-1.0
White sliced bread and rolls	134	133	94-187	0.2	0.1-0.5	1.6	1.2-2.9	0.5	0.4-0.7
Wholemeal & brown bread and rolls	103	93	84-128	0.2	0.1-0.4	1.1	0.9-1.7	0.4	0.4-0.6
Yogurts	217	90	68-130	1.6	0.7-2.9	10.4	7.6-16	0.2	0.1-0.2

Data provided as median and interquartile range (IQR)

Appendix 5

Table 7 Overview of the percentage of pre-packaged food products per 100g and per recommended serving size with nutritional content above the 75th percentile (**food product target list**) for each food category

Food Categories	Pre-packaged food product target list - per 100g		Pre-packaged food product target list - per average recommended serving size	
	n	%	n	%
Bacon and ham	100	3.5	61	3.2
Beef & veal	37	1.3	9	0.5
Beef & veal dishes	5	0.2	2	0.1
Biscuits including crackers	239	8.3	151	7.8
Burgers	11	0.4	7	0.4
Butter (over 80% fat)	19	0.7	9	0.5
Cakes, pastries and buns	94	3.3	56	2.9
Carbonated beverages	31	1.1	29	1.5
Cheese	155	5.4	88	4.6
Chicken, turkey & game	61	2.1	26	1.3
Chipped, fried and roast potatoes	41	1.4	30	1.6
Chocolate confectionary	212	7.4	110	5.7
Desserts	28	1.0	26	1.3
Fish and fish products	82	2.9	51	2.6

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Fruit juices & smoothies	101	3.5	92	4.8
Ice creams	68	2.4	46	2.4
Meat pies & pastries	18	0.6	9	0.5
Meat products	47	1.6	28	1.5
Milk puddings	18	0.6	11	0.6
Non chocolate confectionary	109	3.8	79	4.1
Nuts & seeds, herbs & spices	57	2.0	40	2.1
Other beverages	35	1.2	26	1.3
Other breads	76	2.7	56	2.9
Other breakfast cereals	28	1.0	21	1.1
Other fat spreads	21	0.7	18	0.9
Alternatives to milk & milk-based beverages	33	1.2	16	0.8
Peas, beans and lentils	43	1.5	28	1.5
Poultry & game dishes	44	1.5	23	1.2
Processed & homemade potato products	35	1.2	22	1.1
Ready to eat breakfast cereal	105	3.7	84	4.4
Sausages	43	1.5	18	0.9
Savouries	91	3.2	69	3.6
Savoury snacks	145	5.1	109	5.6
Soups, sauces & miscellaneous foods	187	6.5	147	7.6

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Squashes, cordials and fruit juice drinks	57	2.0	57	3.0
Sugars, syrups and preserves	72	2.5	29	1.5
Vegetable & pulse dishes	25	0.9	21	1.1
White sliced bread and rolls	88	3.1	69	3.6
Wholemeal & brown bread and rolls	73	2.5	50	2.6
Yogurts	131	4.6	107	5.5
Total Products	2865	100	1930	100

* Nutritional composition per 100g and per average recommended serving size of all pre-packaged food products was ranked based on highest to lowest nutritional content for energy (calories) and each single nutrient (saturated fat, total sugar and salt). All pre-packaged food products that were on or above the 75th percentile for either energy (calories) or the target nutrients were selected to be included on the Pre-packaged food product target list per 100g or per recommended serving size.

Table 8 Summary of the percentage of pre-packaged food products within the **food product target list/100g** exceeding nutrient thresholds in each food category

Food Categories	Number of Products (n)	% Exceeding Nutrient Threshold Score*			
		Exceeding Three Nutrients (%)	Exceeding Two Nutrients (%)	Exceeding One Nutrient (%)	Exceeding Non-Nutrient (%)
Bacon and ham	100	0	27	38	35
Beef & Veal	37	0	0	78	22
Beef & veal dishes	5	0	0	80	20
Biscuits including crackers	239	0	21	71	8
Burgers	11	0	0	91	9
Butter (over 80% fat)	19	0	26	21	53
Cakes, pastries and buns	94	1	20	69	10
Carbonated beverages	31	0	0	39	61
Cheese	155	0	10	67	23
Chicken, turkey & game	61	0	0	61	39
Chipped, fried and roast potatoes	41	0	2	54	44
Chocolate confectionary	212	1	11	79	9
Desserts	28	4	61	36	0
Fish and fish products	82	0	7	57	35
Fruit juices & smoothies	101	0	0	94	6
Ice creams	68	2	28	47	24

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Meat pies & pastries	18	0	11	89	0
Meat products	47	0	26	36	38
Milk puddings	18	0	0	33	67
Non chocolate confectionary	109	1	29	62	8
Nuts & seeds, herbs & spices	57	9	51	40	0
Other beverages	35	20	9	34	37
Other breads	76	0	22	65	13
Other breakfast cereals	28	0	0	11	89
Other fat spreads	21	0	29	38	33
Alternatives to milk & milk-based beverages	33	0	12	42	46
Peas, beans and lentils	43	0	0	37	63
Poultry & game dishes	44	0	2	59	39
Processed & homemade potato products	35	0	0	40	60
Ready to eat breakfast cereal	105	6	18	71	6
Sausages	43	0	30	35	35
Savouries	91	0	22	45	33
Savoury snacks	145	2	19	52	27
Soups, sauces & miscellaneous foods	187	11	39	49	1
Squashes, cordials and fruit juice drinks	57	0	0	53	47
Sugars, syrups and preserves	72	1	21	49	29
Vegetable & pulse dishes	25	0	12	68	20
White sliced bread and rolls	88	3	10	67	19

Wholemeal & brown bread and rolls	73	0	8	43	49
Yogurts	131	2	25	41	33

*Nutrient threshold score based on the macronutrient composition after applying the conditions of use for nutrition claims from the Annex to Regulation (EC) No 1924/2006 on nutrition and health claims made on foods (also outlined in [Appendix 2, Table 2](#)).



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