**Consistency of the initial and updated version of the Nutri-Score with food-based dietary guidelines: a French perspective**

Barthelemy Sarda et *al*

Supplementary Material 1: Computation of the Nutri-Score

1. **The 2017 Nutri-Score**

Points are allocated based on the nutritional content per 100g of foods or beverages.

Points are allocated for unfavourable elements (A points) and for favourable elements (C points) using the table below:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Component | A points | | | | C points | | |
| Points | Energy (kJ) | Saturated fat (g) | Sugars (g) | Sodium (mg) | Protein (g) | Fibre (g) | Fruits, vegetables, pulses, nuts(%)1 |
| 0 | ≤335 | ≤1 | ≤4.5 | ≤90 | ≤1.6 | ≤0.9 | ≤40% |
| 1 | >335 | >1 | >4.5 | >90 | >1.6 | >0.9 | >40% |
| 2 | >670 | >2 | >9 | >180 | >3.2 | >1.9 | >60% |
| 3 | >1005 | >3 | >13.5 | >270 | >4.8 | >2.8 |  |
| 4 | >1340 | >4 | >18 | >360 | >6.4 | >3.7 |  |
| 5 | >1675 | >5 | >22.5 | >450 | >8.0 | >4.7 | >80% |
| 6 | >2010 | >6 | >27 | >540 |  |  |  |
| 7 | >2345 | >7 | >31 | >630 |  |  |  |
| 8 | >2680 | >8 | >36 | >720 |  |  |  |
| 9 | >3015 | >9 | >40 | >810 |  |  |  |
| 10 | >3350 | >10 | >45 | >900 |  |  |  |

1 Olive, canola and walnut oil are included in the fruit and vegetable component

A points= Pointsenergy+ PointsSaturated fat+ PointsSugars+ PointsSalt

C points= PointsFiber+ PointsProtein+ PointsF,V,P

**In the general case:**

* If A points<11; Final nutritional score (FNS)=A points – C points
* If A≥11, FNS= A points – (PointsFiber + PointsF,V,P)

**Specific calculation rules:**

1. For cheeses:

Same calculations as in the general case except for the FNS

* FNS=A points – C points (regardless of the value of A)

1. For fats and oils:

Points are allocated for unfavourable elements (A points) and for favourable elements (C points) using the table below:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Component | A points | | | | C points | | |
| Points | Energy (kJ) | Ratio SFA/total fat (%) | Sugars (g) | Sodium (mg) | Protein (g) | Fibre (g) | Fruits, vegetables, pulses, nuts(%)1 |
| 0 | ≤335 | <10 | ≤4.5 | ≤90 | ≤1.6 | ≤0.9 | ≤40% |
| 1 | >335 | >10 | >4.5 | >90 | >1.6 | >0.9 | >40% |
| 2 | >670 | >16 | >9 | >180 | >3.2 | >1.9 | >60% |
| 3 | >1005 | >22 | >13.5 | >270 | >4.8 | >2.8 |  |
| 4 | >1340 | >28 | >18 | >360 | >6.4 | >3.7 |  |
| 5 | >1675 | >34 | >22.5 | >450 | >8.0 | >4.7 | >80% |
| 6 | >2010 | >40 | >27 | >540 |  |  |  |
| 7 | >2345 | >46 | >31 | >630 |  |  |  |
| 8 | >2680 | >52 | >36 | >720 |  |  |  |
| 9 | >3015 | >58 | >40 | >810 |  |  |  |
| 10 | >3350 | ≥64 | >45 | >900 |  |  |  |

1 Olive, canola and walnut oil are included in the fruit and vegetable component

A points= Pointsenergy+ PointsSaturated fat+ PointsSugars+ PointsSalt

C points= PointsFiber+ PointsProtein+ PointsF,V,P

* If A points<11; Final nutritional score (FNS)=A points – C points
* If A≥11, FNS= A points – (PointsFiber + PointsF,V,P)

1. Beverages

Points are allocated for unfavourable elements (A points) and for favourable elements (C points) using the table below:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Component | A points | | | | C points | | | |
| Points | Energy (kJ) | Saturated fat (g) | Sugars (g) | Sodium (mg) | | Protein (g) | Fibre (g) | Fruits, vegetables, pulses, nuts(%)1 |
| 0 | ≤0 | ≤1 | ≤0 | ≤90 | | ≤1.6 | ≤0.9 | ≤40% |
| 1 | >0 | >1 | >0 | >90 | | >1.6 | >0.9 | >40% |
| 2 | >30 | >2 | >1.5 | >180 | | >3.2 | >1.9 | >60% |
| 3 | >60 | >3 | >3 | >270 | | >4.8 | >2.8 |  |
| 4 | >90 | >4 | >4.5 | >360 | | >6.4 | >3.7 |  |
| 5 | >120 | >5 | >6 | >450 | | >8.0 | >4.7 | >80% |
| 6 | >150 | >6 | >7.5 | >540 | |  |  |  |
| 7 | >180 | >7 | >9 | >630 | |  |  |  |
| 8 | >210 | >8 | >10.5 | >720 | |  |  |  |
| 9 | >240 | >9 | >12 | >810 | |  |  |  |
| 10 | >270 | >10 | >13.5 | >900 | |  |  |  |

1 Olive, canola and walnut oil are included in the fruit and vegetable component

A points= Pointsenergy+ PointsSaturated fat+ PointsSugars+ PointsSalt

C points= PointsFiber+ PointsProtein+ PointsF,V,P

* If A points<11; Final nutritional score (FNS)=A points – C points
* If A≥11, FNS= A points – (PointsFiber + PointsF,V,P)

Nutri-Score allocation depending on the Final Nutritional score (table below):

|  |  |  |
| --- | --- | --- |
| FNS | | Class |
| All foods except beverages | Beverages |  |
| ≤-1 | Water | A |
| 0 to 2 | ≤1 | B |
| 3 to 10 | 2 to 5 | C |
| 11 to 18 | 6 to 9 | D |
| ≥19 | ≥19 | E |

1. **The 2023 Nutri-Score**

Points are allocated based on the nutritional content per 100g of foods or beverages.

Points are allocated for unfavorable elements (A points) and for favorable elements (C points) using the table below:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Component | A points | | | | C points | | |
| Points | Energy (kJ) | Saturated fat (g) | Sugars (g) | Salt (g) | Protein (g) | Fiber (g) | Fruits, vegetables, pulses (%) |
| 0 | ≤335 | ≤1 | ≤3.4 | ≤0.2 | ≤2.4 | ≤3 | ≤40% |
| 1 | >335 | >1 | >3.4 | >0.2 | >2.4 | >3 | >40% |
| 2 | >670 | >2 | >6.8 | >0.4 | >4.8 | >4.1 | >60% |
| 3 | >1005 | >3 | >10 | >0.6 | >7.2 | >5.2 |  |
| 4 | >1340 | >4 | >14 | >0.8 | >9.6 | >6.3 |  |
| 5 | >1675 | >5 | >17 | >1 | >12 | >7.4 | >80% |
| 6 | >2010 | >6 | >20 | >1.2 | >14 |  |  |
| 7 | >2345 | >7 | >24 | >1.4 | >17 |  |  |
| 8 | >2680 | >8 | >27 | >1.6 |  |  |  |
| 9 | >3015 | >9 | >31 | >1.8 |  |  |  |
| 10 | >3350 | >10 | >34 | >2.0 |  |  |  |
| 11 |  |  | >37 | >2.2 |  |  |  |
| 12 |  |  | >41 | >2.4 |  |  |  |
| 13 |  |  | >44 | >2.6 |  |  |  |
| 14 |  |  | >48 | >2.8 |  |  |  |
| 15 |  |  | >51 | >3 |  |  |  |
| 16 |  |  |  | >3.2 |  |  |  |
| 17 |  |  |  | >3.4 |  |  |  |
| 18 |  |  |  | >3.6 |  |  |  |
| 19 |  |  |  | >3.8 |  |  |  |
| 20 |  |  |  | >4 |  |  |  |

A points= Pointsenergy+ PointsSaturated fat+ PointsSugars+ PointsSalt

C points= PointsFiber+ PointsProtein+ PointsF,V,P

**In the general case:**

* If A points<11; Final nutritional score (FNS)=A points – C points
* If A≥11, FNS= A points – (PointsFiber + PointsF,V,P)

**Specific calculation rules:**

1. For cheeses:

Same calculations as in the general case except for the FNS

* FNS=A points – C points (regardless of the value of A)

1. For red meat and processed meat:

Same calculations as in the general case except maximum number of protein points is set at 2.

* If A points<11; FNS=A points – (PointsFiber+ min(PointsProtein,2)+ PointsF,V,P)
* If A≥11, FNS= A points – (PointsFiber + PointsF,V,P)

1. For nuts, seeds and oils:

Points are allocated for unfavourable elements (A points) and for favourable elements (C points) using the table below:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Component | A points | | | | C points | | |
| Points | Energy from SFA (kJ)1 | Ratio SFA/total fat (%) | Sugars (g) | Salt (g) | Protein (g) | Fiber (g) | Fruits, vegetables, pulses (%)2 |
| 0 | ≤120 | <10 | ≤3.4 | ≤0.2 | ≤2.4 | ≤3 | ≤40% |
| 1 | >120 | >10 | >3.4 | >0.2 | >2.4 | >3 | >40% |
| 2 | >240 | >16 | >6.8 | >0.4 | >4.8 | >4.1 | >60% |
| 3 | >360 | >22 | >10 | >0.6 | >7.2 | >5.2 |  |
| 4 | >480 | >28 | >14 | >0.8 | >9.6 | >6.3 |  |
| 5 | >600 | >34 | >17 | >1 | >12 | >7.4 | >80% |
| 6 | >720 | >40 | >20 | >1.2 | >14 |  |  |
| 7 | >840 | >46 | >24 | >1.4 | >17 |  |  |
| 8 | >960 | >52 | >27 | >1.6 |  |  |  |
| 9 | >1080 | >58 | >31 | >1.8 |  |  |  |
| 10 | >1200 | ≥64 | >34 | >2.0 |  |  |  |
| 11 |  |  | >37 | >2.2 |  |  |  |
| 12 |  |  | >41 | >2.4 |  |  |  |
| 13 |  |  | >44 | >2.6 |  |  |  |
| 14 |  |  | >48 | >2.8 |  |  |  |
| 15 |  |  | >51 | >3 |  |  |  |
| 16 |  |  |  | >3.2 |  |  |  |
| 17 |  |  |  | >3.4 |  |  |  |
| 18 |  |  |  | >3.6 |  |  |  |
| 19 |  |  |  | >3.8 |  |  |  |
| 20 |  |  |  | >4 |  |  |  |

1Energy from SFA= Saturated fat content (g/100g)\*9\*4.18

2Oils derived from elements qualifying in the fruit and vegetable component qualify for fruit and vegetable component

A points= Pointsenergy+ PointsSaturated fat+ PointsSugars+ PointsSalt

C points= PointsFiber+ PointsProtein+ PointsF,V,P

* If A points<7; Final nutritional score (FNS)=A points – C points
* If A≥7 FNS= A points – (PointsFiber + PointsF,V,P)

1. Beverages:

Points are allocated for unfavourable elements (A points) and for favourable elements (C points) using the table below:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Component | A points | | | | | C points | | |
| Points | Energy (kJ) | Saturated fat (g) | Sugars (g) | Salt (g) | NNS1 | Protein (g) | Fiber (g) | Fruits, vegetables, pulses (%) |
| 0 | ≤30 | ≤1 | ≤0.5 | ≤0.2 | Absence | ≤1.2 | ≤3 | ≤40% |
| 1 | >30 | >1 | >0.5 | >0.2 |  | >1.2 | >3 |  |
| 2 | >90 | >2 | >2 | >0.4 |  | >1.5 | >4.1 | >40% |
| 3 | >150 | >3 | >3.5 | >0.6 |  | >1.8 | >5.2 |  |
| 4 | >210 | >4 | >5 | >0.8 | Presence | >2.1 | >6.3 | >60% |
| 5 | >240 | >5 | >6 | >1 |  | >2.4 | >7.4 |  |
| 6 | >270 | >6 | >7 | >1.2 |  | >2.7 |  | >80% |
| 7 | >300 | >7 | >8 | >1.4 |  | >3 |  |  |
| 8 | >330 | >8 | >9 | >1.6 |  |  |  |  |
| 9 | >360 | >9 | >10 | >1.8 |  |  |  |  |
| 10 | >390 | >10 | >11 | >2.0 |  |  |  |  |
| 11 |  |  |  | >2.2 |  |  |  |  |
| 12 |  |  |  | >2.4 |  |  |  |  |
| 13 |  |  |  | >2.6 |  |  |  |  |
| 14 |  |  |  | >2.8 |  |  |  |  |
| 15 |  |  |  | >3 |  |  |  |  |
| 16 |  |  |  | >3.2 |  |  |  |  |
| 17 |  |  |  | >3.4 |  |  |  |  |
| 18 |  |  |  | >3.6 |  |  |  |  |
| 19 |  |  |  | >3.8 |  |  |  |  |
| 20 |  |  |  | >4 |  |  |  |  |

1NNS stands for Non-nutritive sweeteners, as listed in Appendix 2 of the EU Regulation n°1333/2008

A points= Pointsenergy+ PointsSaturated fat+ PointsSugars+ PointsSalt+ PointsNNS

C points= PointsFiber+ PointsProtein+ PointsF,V,P

* FNS=A points – C points

Nutri-Score allocation depending on the Final Nutritional Score:

|  |  |  |  |
| --- | --- | --- | --- |
| FNS | | | Class |
| Solid foods | Nuts, seeds, oils | Beverages |  |
| ≤0 | ≤-6 | Water | A |
| 0 to 2 | -5 to 2 | ≤2 | B |
| 3 to 10 | 3 to 10 | 3 to 6 | C |
| 11 to 18 | 11 to 18 | 7 to 9 | D |
| ≥19 | ≥19 | ≥10 | E |

Supplementary Material 2: Databases used and details regarding the composition of each food group

|  |  |  |
| --- | --- | --- |
| **Group** | **Database used** | **Products covered** |
| Unprocessed vegetables | Ciqual | Raw vegetables |
| Prepared vegetables | OpenFoodFacts | Frozen vegetables mixes, canned vegetables or mixed vegetables (e.g. vegetable stew), vegetable salad |
| Unprocessed fruits | Ciqual | Raw fruits |
| Unprocessed pulses | Ciqual | Raw pulses |
| Prepared pulses | OpenFoodFacts | Canned pulses (e.g. beans with tomato sauce) |
| White pasta | OpenFoodFacts | Dried refined pasta |
| Whole grain pasta | OpenFoodFacts | Dried whole grain pasta |
| White rice | OpenFoodFacts | White rice dry |
| Whole grain rice | OpenFoodFacts | Whole grain rice dry |
| White bread | OpenFoodFacts | Refined bread and buns |
| Whole grain bread | OpenFoodFacts | Bread and buns (made out of whole-grain flour, no minimum proportion required) |
| Savoury snacks | OQALI | crackers, puff pastry-based appetizers, potato crisps, tortilla chips |
| Unprocessed beef | Ciqual | Different cuts of beef |
| Unprocessed pork | Ciqual | Different cuts of pork |
| Unprocessed poultry | Ciqual | Different cuts of poultry |
| Meat preparations | OQALI | Breaded meat, cordon bleu |
| Processed meat other than ham | OQALI | Cold cuts, patés, sausages (cured), hot dogs, cured ham |
| Ham | OQALI | White ham (pork, poultry) |
| Cheese | OQALI | Hard cheese, soft cheese, fresh cheese, processed cheese and blue cheese |
| Unsalted nuts | OpenFoodFacts | Nuts with no addition of salt or sugar |
| Seasoned nuts | OpenFoodFacts | Nuts with addition of salt or sugar |
| Fats and oils | OpenFoodFacts | Olive, canola, walnut, sunflower, coconut oil, butter, cream |
| Oily fish | OpenFoodFacts | Both unprocessed and processed fish (Salmon, herring, mackerel, tuna, anchovies, eel, trout…). Processed fish includes canned fish, smoked fish, and fish preparations |
| Lean fish | OpenFoodFacts | Both unprocessed and processed fish (Cod, haddock, hake, tilapia...) Processed fish includes fish sticks, and fish preparations |
| Partly-ready meals | OQALI | Meals with fish/ meat/ vegetarian/legumes/ pasta. Hot sandwiches. Includes canned, fresh and frozen meals. |
| Ready-to-eat meals | OQALI | Salads, sandwiches, sushis… |
| Pizza | OQALI | Pizza, pies |
| Warm sauces | OQALI | Ready-to-eat sauces used for meals and in which the main components are vegetables, such as pasta sauces. Also include pesto or Indian curry sauces. |
| Cold sauces | OQALI | Ketchup, vinaigrette, mayonnaise… |
| Soups | OQALI | Soups (both prepared and unprepared, but with compositions based on prepared product). |
| Dairy products unsweetened | OQALI | Yogurts, quark, plant-based yogurts (no sweetener sugar) |
| Dairy products sweetened | OQALI | Yogurts, quark, plant-based yogurts (added sugar or artificial sweeteners) |
| Dairy desserts | OQALI | Custards, flans, mousses |
| Compotes | OQALI | Unsweetened and sweetened fruit compotes. |
| Canned fruits | OQALI | Canned fruits in sugar syrups |
| Breakfast cereals | OQALI | Plain/flavored mueslis/cornflakes, chocolate or honey flavored cereals, cereals with a filling, puffed cereals… |
| Fine bakery ware -sweet | OQALI | Biscuits and cakes (cakes, cookies, biscuits…); pastries (brioche-based products, croissants…) |
| Chocolate | OQALI | Chocolate products (chocolate bars, chocolate candies, dark/milk/white chocolate). |
| Confectionery | OQALI | Confectionery, which includes candies (caramels, marshmallows, nougats, sugar candies), chewing-gums. |
| Ice creams and sorbets | OQALI | Ice cream and sorbets. |
| Sweet spreads | OQALI | Jams, marmalades, chocolate spreads |
|  |  |  |
| Skimmed milk | OpenFoodFacts | Skimmed cow milk |
| Partially-skimmed milk | OpenFoodFacts | Semi-skimmed cow milk |
| Whole milk | OpenFoodFacts | Whole cow milk |
| Sweetened flavoured milk | OpenFoodFacts | Non-fermented sweetened milk- based beverages (chocolate milk, vanilla milk…) |
| Sweetened yogurts to drink | OpenFoodFacts | Fermented sweetened milk- based beverages |
| Plant-based beverages | OpenFoodFacts | Soy, almond, oat, rice beverages |
| Flavoured waters | OQALI | Water, carbonated or not, flavored, with no fruit juices |
| Tea-based beverages | OQALI | Beverages based on tea extracts, carbonated or not, plain or flavored |
| Colas | OQALI | Beverages flavoured with cola |
| Soft drinks with fruit | OQALI | Beverages, carbonated or not, containing fruit juices |
| Lemonades, tonic waters and bitters | OQALI | Beverages based on water and flavors (lemon or other flavors), without juices, and/or sold under the name “Lemonade », and beverages, carbonated or not, that contain quinin |
| Fruit juices | OQALI | Fresh fruit juices and fruit juices obtained from concentrate (following the criteria listed in French decree n°2013-1049), smoothies and vegetable juices |
| Fruit nectars | OQALI | Fruit nectars (following the criteria listed in French decree n°2013-1049): contain more than 25% or 50% fruit purees depending on the fruit and with potential addition of a sweetener |
| Smoothies | OQALI | Smoothies |

Supplementary Material 3: methodology to transpose the French dietary guidelines into criteria:

Documents used:

* Dietary guidelines as communicated by the French Public health Agency
* Report from the High council of Public health

Principle:

Considering the documents that communicate the food-based dietary guidelines, the aim of this method was to establish criteria to assess the complementarity between the Nutri-Score and the French dietary guidelines.

1) Dietary guidelines as communicated by the French Public health Agency:

To translate dietary guidelines into criteria, we first used dietary guidelines as communicated by the French Public health Agency, which presents dietary guidelines under 3 categories:

1. Food groups to increase
2. Food groups to go towards
3. Food groups to limit

Food groups to increase corresponds to food groups for which an increased consumption is recommended. For these groups, we considered that an adequate Nutri-Score classification would rate these products in the A and B class, the most favourable classes.

Conversely, and using a similar method, we considered that food groups to limit would be adequately rated if the products belonging to these categories would be rated D or E, the most unfavourable classes.

|  |  |
| --- | --- |
| **Increase** | **Limit** |
| Fruits and vegetables (R 1.1) | Sweet products (R 1.5) |
| Pulses (R 1.2) | Sweetened beverages (R 1.6) |
| Unsalted nuts (R1.3) | Salty products (R 1.7) |
|  | Processed meat (R 1.8) |
|  | Red meat (R 1.9) |

Given the heterogeneity of the group « Go towards », it required a case-by-case analysis:

|  |  |  |  |
| --- | --- | --- | --- |
| Number | Group | Guideline | Translation |
| R2.1 | Whole grain cereals and starchy foods | [Go toward] Whole grain bread or multigrain bread, whole grain pasta, couscous or rice | Whole grain cereals and starchy foods should have a more favourable rating than their refined alternatives |
| R 2.2 | Fish | [Go toward] Lean and oily fish in rotation | Oily and lean fishes should have similar rating |
| R 2.3 | Fats and oils | [Go toward] Olive, canola and walnut oils | Olive, canola and walnut oils should have the most favourable rating the fat and oil category |
| R 2.4 | Dairy products | [Go toward] An adequate but limited consumption | No translation |

2) Report from the High council of Public health

In order to establish criteria for all food groups covered by the dietary guidelines, we complemented the first analysis with the report from the HCPH on the revision of the dietary guidelines for adults for the 2017-2021 national nutrition program, which covers a wide variety of food groups.

When in the report a recommendation consists in "preferring" a group over another, this is translated by the presence of a Nutri-Score class discrimination between the different groups in question.

When in the report a recommendation is to "limit" the consumption of a group, this is translated by an unfavourable rating for the group in question, which corresponds to a D or E.

When the report recommends "increasing" a group without limitation ("At least"), this is translated into a favourable rating for the group in question, which corresponds to an A or B.

If some guidelines could not be translated using criteria detailed above, they were analysed and translated on a case-to-case basis:

|  |  |  |  |
| --- | --- | --- | --- |
| **Number** | **Group** | **Guideline** | **Translation** |
| R 3.1 | Fruit juices | 1. No more than one glass of fruit juice per day, which within this limit can count as one serving of fruits and vegetables. 2. Consumption of sweetened beverages should remain exceptional, and for consumers, should be limited to one glass per day. In this category of products, give preference to fruit juices. | Fruit juices should be discriminated (negatively) from other fruits and vegetables and should be (positively) discriminated from other sweetened beverages. |
| R 3.2 | Canned fruits | 1. All forms of fruits and vegetables counts as servings of fruits and vegetables: fresh, frozen or canned. For canned fruits, prefer fruits in light syrup, without using the syrup | Canned fruits should be discriminated depending on the sugar content. |
| R 3.3 | Breakfast cereals | 1. Only unsweetened whole grain breakfast cereals can be included in this group [Whole grain product] | Unsweetened whole grain breakfast cereals should have a more favourable rating than unsweetened refined breakfast cereals |
| R 3.4 | Dairy products | 1. Limit the consumption of sweet products 2. Reduce salt consumption throughout the day | Plain dairy products (milk, plain yogurts) should have a more favourable rating than sweetened dairy products (sweetened yogurts, dairy desserts, sweetened dairy beverages) and salted dairy products (cheeses) |
| R 3.5 | Cheeses | 1. Prefer cheeses that are richer in calcium, less rich in fat 2. Reduce salt consumption throughout the day | The more favourably rated cheeses should be those with lower content in fat, and salt and calcium |
| R 3.6 | Meat and meat products | 1. Limit the consumption of red meat 2. Prefer poultry over red meat | Poultry should have a more favourable rating than red meat, which should have an unfavourable rating. |
| R 3.7 | Processed meat | 1. Limit the consumption of processed meat 2. Within this group, prefer white ham | Processed meat should have an unfavourable rating and white ham should have a more favourable rating than other processed meat products |
| R 3.8 | Fat and oils | 1. Prefer canola and walnut oils (rich in ALA) and olive oil over other oils low in ALA [e.g. sunflower, peanut and coconut oils] 2. Animal fats should be reserved for raw or spreadable use and used sparingly | Favourable vegetable oils (olive, canola, walnut) should be more favourably rated than other vegetable oils (sunflower, peanut, coconut).  Animal fats (cream, butter) should have an unfavourable rating. |
| R 3.9 | Sugar-sweetened beverages | 1. Limit consumption of sweetened beverages or sweet-tasting beverages | Rating of such beverages should be unfavourable |
| R 3.10 | Artificially-sweetened beverages | 1. Limit consumption of sweetened beverages or sweet-tasting beverages | Rating of such beverages should be unfavourable |
| R 3.11 | Sweet products | 1. Limit consumption of sweet products as well as sweet and fatty products (pastries, chocolate, dairy desserts et ice creams) 2. Breakfast cereals are usually sweet, and sometimes sweet and fatty | The rating of sweet (and potentially fatty) products should be unfavourable. Sweet breakfast cereals are also included in this category. |
| R 3.12 | Water, tea, coffee, herbal tea | 1. The only recommended drink is water 2. Tea, coffee and herbal teas, when unsweetened, can contribute to water intake | Plain water, tea, coffee and herbal teas (unsweetened) should be rated favourably. |
| R 3.13 | Salt | 1. Reduce salt consumption throughout the day 2. Salty products include products that have a high salt content and products that are highly contributing to the daily salt intake (e.g. bread) | Products high in salt should be unfavourably rated and foods contributing to the overall salt intake that are not considered high in salt should be discriminated depending on the salt content |
| R 3.14 | Fruits and vegetables | 1. At least 5 a day | Fruits and vegetables should have a favourable rating |
| R 3.15 | Pulses | 1. A least twice a week | Pulses should have a favourable rating |

Additional comments:

Given the guideline to reduce the consumption of sweet products (resp. salty products), it is necessary to identify which products are considered as such. To do so, we based our assessment on the classification used for the national representative nutrition and health study Esteban, carried out in 2015.

The cut-offs used are detailed in the tables below:

|  |  |
| --- | --- |
| Sweet products | Qualifying sugar threshold |
| Honey | All |
| Marmalade and jam | All |
| Chocolate | All |
| Biscuits and cakes | All |
| Pastries | All |
| Dairy desserts | ≥12% sugars per 100g |
| Ice creams | All |
| Confectionery | All |
| Sweet breakfast cereals | ≥20% sugars per 100g |

|  |  |
| --- | --- |
| Sweet beverages products | Qualifying sugar threshold |
| Any beverages with added sugar   * Soft drinks * Syrups * Fruit nectars * Sweetened water or milk | All |

|  |  |
| --- | --- |
| Products high in salt | Qualifying salt threshold |
| Processed meat | All |
| Some cheeses | No threshold provided. Median salt content was used as a cut-off. |
| Savoury snacks (including potato crisps) | All |

For products that contribute to the daily salt intake, without being classified as high in salt, we selected food groups contributing to at least 5% to the daily intake in salt in the national representative food consumption survey INCA 31, carried out in 2017.

The following groups were selected:

* Bread
* Cheeses
* Soups and broths
* Prepared dishes
* Sauces (sauces-used warm)
* Condiment sauces[[1]](#footnote-1)

Following this initial analysis, the analysis was summarized in the following table presenting the list of criteria defined:

|  |  |  |  |
| --- | --- | --- | --- |
| **Group** | **Guideline number** | **Covered categories** | **Criteria** |
| **Solid foods** |  |  |  |
| Bread | R 2.1  R 3.13 | White bread  Whole grain bread | 1. Discrimination between whole grain and white bread 2. Discrimination according to salt content |
| Breakfast cereals | R 3.3  R 3.11 | Breakfast cereals | 1. Unfavourable classification for sweet breakfast cereals 2. Discrimination according to fibre (proxy of whole grain) content among unsweetened or minimally sweetened breakfast cereals |
| Cereals | R 2.1 | White pasta  White rice  Whole grain pasta  Whole grain rice | 1. Discrimination between whole grain and refined cereals |
| Fruits and vegetables | R 1.1  R 3.14 | Unprocessed fruits  Unprocessed vegetables | 1. Favourable classification for unprocessed fruits and vegetables |
| Pulses | R 1.2  R 3.15 | Pulses (unprocessed and prepared) | 1. Favourable classification for pulses |
| Meat (non-processed meat) | R 1.9  R 3.6 | Unprocessed beef/ pork/ poultry  Meat preparations | 1. Unfavourable classification for red meat 2. Discrimination between poultry and red meat |
| Processed meat | R 3.7  R 3.13 | Ham  Processed meat except ham | 1. Unfavourable classification for processed meat 2. Discrimination between ham and other processed meat |
| Cheese | R 3.4  R 3.5  R 3.13 | Cheese | 1. Unfavourable classification for cheeses with the higher salt content 2. Discrimination between cheeses and unsweetened yogurts 3. In the cheese category, the best rated products should be those with a lower salt or fat content and those with a high amount of calcium |
| Fish | R 2.2  R 3.13 | Oily fish  Lean fish | 1. Similar classification for oily and lean fish (with similar salt content) |
| Sauces | R 3.13 | Cold sauces  Sauces- used warm | 1. Discrimination according to salt content |
| Soups | R 3.13 | Soups and broths | 1. Discrimination according to salt content |
| Prepared dishes | R 3.13 | Prepared dishes | 1. Discrimination according to salt content |
| Savoury snacks | R 3.13 | Savoury snacks | 1. Unfavourable classification for savoury snacks |
| Nuts | R 1.3  R 3.11  R 3.13 | Unsalted nuts  Seasoned nuts | 1. Favourable classification for unsalted nuts 2. Discrimination between unsalted nuts and seasoned nuts |
| Fats and oils | R 2.3  R 3.8 | Olive/ canola /walnut oil  Sunflower / coconut oil  Cream/ butter | 1. Discrimination between recommended vegetable oils (canola, walnut, olive) and other vegetable oils 2. Unfavourable classification for animal fats |
| Dairy products (except cheeses) | R 3.4 | Unsweetened yogurts  Sweetened yogurts  Dairy desserts | 1. Discrimination between unsweetened and sweetened dairy products |
| Fine bakery ware-sweet | R 3.11 | Fine bakery ware-sweet | 1. Unfavourable classification for fine bakery ware - sweet |
| Chocolate products | R 3.11 | Chocolate products | 1. Unfavourable classification for chocolate and chocolate products |
| Ice creams | R 3.11 | Ice creams and sorbets | 1. Unfavourable classification for ice creams |
| Confectionery | R 3.11 | Confectionery | 1. Unfavourable classification for confectionery |
| Dairy desserts | R 3.11 | Dairy desserts | 1. Unfavourable classification for sweet dairy desserts |
| Prepared fruits | R 3.2 | Canned fruits  Compotes | 1. Discrimination according to sugar content for canned fruits 2. Discrimination according to sugar content for compotes |
| Sweet spreads | R 3.11 | Sweet spreads | 1. Unfavourable classification for sweet spreads |
| **Beverages** |  |  |  |
| Water, tea, coffee, herbal teas | R 3.12 | Water | 1. Favourable classification for all water-based beverages with no sugar added |
| Sugar and artificially sweetened beverages | R 3.9  R. 3.10 | Flavoured waters  Colas  Soft drinks with fruits  Lemonades, tonic waters  Tea-based beverages  Fruit nectars  Sweetened flavoured milk  Sweetened yogurt to drink | 1. Unfavourable classification for sugar-sweetened beverages 2. Unfavourable classification for artificially-sweetened beverages |
| Fruit juices | R 3.1 | Fruit juices | 1. Discrimination between fruit juices and fruits and vegetables 2. Discrimination between fruit juices and other sugar-sweetened beverages 3. Discrimination between fruit juices and other artificially-sweetened beverages |
| Dairy beverages | R 3.4 | Skimmed milk  Partially-skimmed milk  Whole milk  Sweetened flavoured milk  Sweetened yogurt to drink | 1. Discrimination between unsweetened milks and sweetened dairy beverages |

Supplementary Material 4: Detailed distribution of all food categories used in the study

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Group** | **N** | **2017 Nutri-Score** | | | | | **2023 Nutri-Score** | | | | |
|  |  | A | B | C | D | E | A | B | C | D | E |
| Unprocessed vegetables | 113 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| Prepared vegetables | 729 | 94 | 5 | 1 | 0 | 0 | 85 | 10 | 5 | 0 | 0 |
| Unprocessed fruits | 73 | 99 | 1 | 0 | 0 | 0 | 99 | 0 | 1 | 0 | 0 |
| Unprocessed pulses | 33 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| Prepared pulses | 64 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| White pasta | 1380 | 98 | 1 | 1 | 0 | 0 | 85 | 14 | 1 | 0 | 0 |
| Whole grain pasta | 55 | 100 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| White rice | 704 | 69 | 27 | 3 | 1 | 0 | 13 | 81 | 4 | 2 | 0 |
| Whole grain rice | 77 | 91 | 6 | 3 | 0 | 0 | 64 | 31 | 4 | 1 | 0 |
| White bread | 571 | 27 | 55 | 15 | 3 | 0 | 5 | 8 | 78 | 8 | 1 |
| Whole grain bread | 238 | 76 | 20 | 3 | 1 | 0 | 21 | 38 | 40 | 1 | 0 |
| Whole grain bread rich in fibre | 143 | 83 | 14 | 2 | 1 | 0 | 32 | 52 | 15 | 1 | 0 |
| Savoury snacks | 1309 | 1 | 4 | 23 | 51 | 21 | 0 | 1 | 8 | 52 | 39 |
| Unprocessed beef | 28 | 46 | 32 | 7 | 11 | 4 | 14 | 33 | 39 | 11 | 3 |
| Unprocessed pork | 29 | 67 | 20 | 10 | 3 | 0 | 30 | 37 | 30 | 3 | 0 |
| Unprocessed poultry | 32 | 78 | 22 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 |
| Meat preparations | 111 | 4 | 25 | 59 | 13 | 0 | 0 | 1 | 59 | 40 | 0 |
| Processed meat other than ham | 749 | 0 | 0 | 3 | 33 | 64 | 0 | 0 | 2 | 14 | 84 |
| Ham | 222 | 0 | 7 | 68 | 25 | 0 | 3 | 14 | 35 | 48 | 0 |
| Cheese | 413 | 0 | 0 | 8 | 87 | 5 | 0 | 0 | 14 | 76 | 10 |
| Cheese high in salt | 207 | 0 | 0 | 2 | 88 | 10 | 0 | 0 | 2 | 79 | 19 |
| Hard cheese | 157 | 0 | 0 | 5 | 92 | 3 | 0 | 0 | 19 | 78 | 3 |
| Soft cheese | 126 | 0 | 0 | 5 | 95 | 0 | 0 | 0 | 7 | 93 | 0 |
| Fresh cheese | 40 | 0 | 0 | 35 | 63 | 2 | 0 | 0 | 38 | 40 | 22 |
| Other cheese | 90 | 0 | 0 | 3 | 80 | 17 | 0 | 0 | 3 | 68 | 29 |
| Unsalted nuts | 1483 | 66 | 24 | 10 | 0 | 0 | 70 | 22 | 8 | 0 | 0 |
| Seasoned nuts | 1248 | 6 | 14 | 76 | 4 | 0 | 5 | 6 | 66 | 18 | 5 |
| Olive oil | 2552 | 0 | 0 | 100 | 0 | 0 | 0 | 98 | 2 | 0 | 0 |
| Canola oil | 220 | 0 | 0 | 100 | 0 | 0 | 0 | 95 | 5 | 0 | 0 |
| Walnut oil | 204 | 0 | 0 | 99 | 1 | 0 | 0 | 54 | 46 | 0 | 0 |
| Sunflower oil | 228 | 0 | 0 | 14 | 85 | 1 | 0 | 11 | 89 | 0 | 0 |
| Coconut oil | 387 | 0 | 0 | 2 | 3 | 95 | 0 | 0 | 0 | 2 | 98 |
| Cream | 946 | 0 | 1 | 4 | 95 | 0 | 0 | 1 | 1 | 86 | 12 |
| Butter | 1399 | 0 | 0 | 1 | 18 | 81 | 0 | 0 | 1 | 9 | 90 |
| Oily fish | 9368 | 8 | 20 | 24 | 47 | 1 | 20 | 16 | 13 | 41 | 10 |
| Oily fish (less than 0.9g of salt/100g) | 2287 | 32 | 31 | 26 | 11 | 0 | 50 | 23 | 15 | 12 | 0 |
| Lean fish | 2218 | 36 | 26 | 24 | 14 | 1 | 36 | 16 | 29 | 16 | 3 |
| Lean fish (less than 0.9g of salt/100g) | 1101 | 70 | 23 | 4 | 3 | 0 | 69 | 21 | 7 | 3 | 0 |
| Partly-ready meals | 3266 | 33 | 38 | 24 | 5 | 0 | 16 | 22 | 53 | 8 | 1 |
| Ready-to-eat meals | 827 | 14 | 29 | 27 | 29 | 1 | 6 | 5 | 47 | 36 | 6 |
| Pizza | 636 | 2 | 20 | 41 | 37 | 0 | 0 | 0 | 30 | 69 | 1 |
| Warm sauces | 370 | 52 | 17 | 21 | 9 | 1 | 36 | 15 | 36 | 9 | 4 |
| Cold sauces | 172 | 0 | 0 | 12 | 68 | 20 | 0 | 0 | 2 | 65 | 33 |
| Soups | 663 | 10 | 60 | 30 | 0 | 0 | 6 | 41 | 52 | 1 | 0 |
| Dairy products unsweetened | 142 | 54 | 29 | 17 | 0 | 0 | 43 | 28 | 28 | 0 | 0 |
| Dairy products sweetened | 445 | 11 | 39 | 49 | 1 | 0 | 8 | 16 | 75 | 1 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Compotes | 754 | 91 | 7 | 2 | 0 | 0 | 83 | 9 | 7 | 0 | 0 |
| Canned fruits | 183 | 5 | 81 | 14 | 0 | 0 | 1 | 21 | 78 | 0 | 0 |
| Breakfast cereals | 626 | 17 | 13 | 46 | 24 | 0 | 11 | 4 | 36 | 44 | 5 |
| Sweet breakfast cereals (>20g sugar/100g) | 383 | 2 | 9 | 51 | 37 | 0 | 0 | 0 | 31 | 61 | 8 |
| Fine bakery ware -sweet | 2439 | 0 | 1 | 7 | 44 | 48 | 0 | 0 | 2 | 23 | 75 |
| Chocolate | 753 | 0 | 7 | 1 | 15 | 77 | 0 | 1 | 7 | 6 | 86 |
| Confectionery | 273 | 0 | 7 | 12 | 70 | 11 | 0 | 7 | 4 | 11 | 78 |
| Ice creams and sorbets | 1303 | 1 | 1 | 31 | 53 | 14 | 1 | 0 | 19 | 44 | 36 |
| Dairy desserts (>12g of sugar/100g) | 516 | 4 | 2 | 54 | 35 | 5 | 3 | 1 | 43 | 38 | 15 |
| Sweet spreads | 440 | 0 | 1 | 42 | 53 | 4 | 0 | 0 | 8 | 86 | 6 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Skimmed milk | 160 | 39 | 61 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 |
| Partially-skimmed milk | 1041 | 28 | 72 | 0 | 0 | 0 | 0 | 98 | 2 | 0 | 0 |
| Whole milk | 323 | 4 | 94 | 2 | 0 | 0 | 0 | 6 | 87 | 4 | 3 |
| Sweetened flavoured milk | 94 | 5 | 88 | 7 | 0 | 0 | 0 | 0 | 22 | 29 | 49 |
| Sweetened yogurts to drink | 308 | 7 | 79 | 13 | 1 | 0 | 0 | 5 | 5 | 27 | 63 |
| Plant-based beverages | 972 | 30 | 69 | 1 | 0 | 0 | 0 | 30 | 31 | 23 | 16 |
| Flavoured waters | 88 | 0 | 49 | 30 | 21 | 0 | 0 | 48 | 43 | 9 | 0 |
| Flavoured waters w/o NNS | 68 | 0 | 52 | 20 | 28 | 0 | 0 | 62 | 38 | 0 | 0 |
| Flavoured waters w/ NNS | 20 | 0 | 40 | 60 | 0 | 0 | 0 | 0 | 60 | 40 | 0 |
| Tea-based beverages | 141 | 0 | 5 | 16 | 60 | 19 | 0 | 0 | 38 | 62 | 0 |
| Tea-based beverages w/o NNS | 104 | 0 | 1 | 0 | 73 | 26 | 0 | 1 | 28 | 71 | 0 |
| Tea-based beverages w/ NNS | 37 | 0 | 16 | 59 | 24 | 0 | 0 | 0 | 65 | 35 | 0 |
| Colas | 142 | 0 | 22 | 35 | 7 | 36 | 0 | 0 | 57 | 1 | 42 |
| Colas w/o NNS | 39 | 0 | 0 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 100 |
| Colas w/ NNS | 103 | 0 | 30 | 49 | 10 | 12 | 0 | 0 | 79 | 2 | 19 |
| Soft drinks with fruit | 580 | 0 | 1 | 15 | 15 | 69 | 0 | 1 | 17 | 22 | 60 |
| Soft drinks with fruits w/o NNS | 461 | 0 | 0 | 4 | 12 | 84 | 0 | 1 | 7 | 26 | 66 |
| Soft drinks with fruits w/ NNS | 119 | 0 | 2 | 58 | 28 | 14 | 0 | 0 | 59 | 7 | 34 |
| Lemonades, tonic waters and bitters | 150 | 0 | 10 | 11 | 24 | 55 | 0 | 0 | 19 | 33 | 48 |
| Lemonades, tonic waters and bitters w/o NNS | 80 | 0 | 0 | 0 | 5 | 95 | 0 | 0 | 0 | 50 | 50 |
| Lemonades, tonic waters and bitters w/NNS | 70 | 0 | 21 | 24 | 46 | 9 | 0 | 0 | 41 | 13 | 46 |
| Fruit juices | 1080 | 0 | 5 | 54 | 15 | 26 | 0 | 4 | 49 | 20 | 26 |
| Fruit nectars | 262 | 0 | 0 | 2 | 11 | 87 | 0 | 0 | 2 | 30 | 68 |
| Smoothies | 37 | 0 | 0 | 54 | 30 | 16 | 0 | 0 | 24 | 57 | 19 |

Supplementary Material 5: Detailed comparison between food-based dietary guidelines and both versions of the Nutri-Score

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Group** | **Covered categories** | **Type of criteria** | **Criteria** | **Results** | **Comments** |
| **Solid foods** |  |  |  |  |  |
| Fruits and vegetables | Unprocessed fruits  Unprocessed vegetables | Position  Position | 1. Favourable classification for unprocessed fruits 2. Favourable classification for unprocessed vegetables | For 1, 2, both algorithms met the criteria |  |
| Pulses | Unprocessed pulses | Position | 1. Favourable classification for pulses | For 3, both algorithms met the criteria |  |
| Cereals | White pasta  White rice  Whole grain pasta  Whole grain rice | Group discrimination  Group discrimination | 1. Discrimination between whole grain and white rice 2. Discrimination between whole grain and white pasta | For 4, only revised algorithm met the criteria  For 5, both algorithms did not meet the criteria |  |
| Bread | White bread  Whole grain bread | Group discrimination  Nutrient discrimination | 1. Discrimination between whole grain and white bread 2. Discrimination according to salt content | For 6, both algorithms met the criteria  For 7, revised algorithm was superior to the initial | For 1, the apparent lack of discrimination for the revised algorithm was interpreted to be related the rather low content in fibres of whole grain bread in France. To consider whole grain products more adequately, the comparison was based on whole grain bread rich in fibre. |
| Savoury snacks | Savoury snacks | Position | 1. Unfavourable classification for savoury snacks | For 8, only revised algorithm met the criteria |  |
| Meat (non-processed meat) | Unprocessed beef/ pork/ poultry  Meat preparations | Position  Group discrimination | 1. Unfavourable classification for red meat 2. Discrimination between poultry and red meat | For 9, both algorithms did not meet the criteria  For 10, only revised algorithm met the criteria |  |
| Processed meat | Processed meat except ham  Ham | Position  Group discrimination | 1. Unfavourable classification for processed meat 2. Discrimination between ham and other processed meat | For 11, 12, both algorithms met the criteria |  |
| Cheese | Cheese | Position  Group discrimination  Nutrient discrimination | 1. Unfavourable classification for cheeses with the higher salt content 2. Discrimination between cheeses and unsweetened yogurts 3. In the cheese category, the best rated products should be those with a lower salt or fat content and those with a high amount of calcium1 | For 13, 14, both algorithms met the criteria  For 15, revised algorithm was superior to the initial | For 3, revised was considered superior as initial rates C (the best category for cheeses) cheeses that are lower in fat and salt but lower in calcium (i.e. soft cheeses), while updated included more cheeses that are rich in calcium and low in salt (i.e. hard cheeses) in the C category |
| Nuts | Unsalted nuts  Seasoned nuts | Position  Group discrimination | 1. Favourable classification for unsalted nuts 2. Discrimination between unsalted nuts and seasoned nuts | For 16, 17, both algorithms met the criteria |  |
| Fats and oils | Olive/ canola /walnut oil  Sunflower / coconut oil  Cream/ butter | Group discrimination  Position | 1. Discrimination between recommended vegetable oils (canola, walnut, olive) and other vegetable oils 2. Unfavourable classification for animal fats | For 18, 19, both algorithms met the criteria | For 1, the discrimination between walnut oil was more distinct in the initial than with the updated |
| Fish | Oily fish  Lean fish | Group discrimination | 1. Similar classification for oily and lean fish (with similar salt content) | For 20, revised algorithm was superior to the initial |  |
| Dairy products (except cheeses) | Unsweetened yogurts  Sweetened yogurts  Dairy desserts | Group discrimination | 1. Discrimination between unsweetened and sweetened dairy products | For 21, both algorithms met the criteria |  |
| Sauces | Cold sauces  Sauces- used warm | Nutrient discrimination | 1. Discrimination according to salt content | For 22, revised algorithm was superior to initial |  |
| Soups | Soups and broths | Nutrient discrimination | 1. Discrimination according to salt content | For 23, no difference was observed between the two algorithms |  |
| Prepared dishes | Prepared dishes | Nutrient discrimination | 1. Discrimination according to salt content | For 24, no difference was observed between the two algorithms |  |
| Prepared fruits | Canned fruits  Compotes | Nutrient discrimination  Nutrient discrimination | 1. Discrimination according to sugar content for canned fruits 2. Discrimination according to sugar content for compotes | For 25, no difference was observed between the two algorithms  For 26, revised algorithm was superior to the initial |  |
| Breakfast cereals | Breakfast cereals | Position  Nutrient discrimination | 1. Unfavourable classification for sweet breakfast cereals 2. Discrimination according to fibre (proxy of whole grain) content among unsweetened or minimally sweetened breakfast cereals | For 27, both did not meet the criteria  For 28, revised was superior to initial | For 1, while both algorithms did not meet the criteria, revised rated D or E a much greater proportion of sweet breakfast cereals (from 37% to 61%) |
| Fine bakery ware-sweet | Fine bakery ware-sweet | Position | 1. Unfavourable classification for fine bakery ware – sweet | For 29, both algorithms met the criteria |  |
| Chocolate products | Chocolate products | Position | 1. Unfavourable classification for chocolate and chocolate products | For 30, both algorithms met the criteria |  |
| Confectionery | Confectionery | Position | 1. Unfavourable classification for confectionery | For 31, both algorithms met the criteria |  |
| Ice creams | Ice creams and sorbets | Position | 1. Unfavourable classification for ice creams | For 32, only revised algorithm met the criteria |  |
| Dairy desserts | Dairy desserts | Position | 1. Unfavourable classification for sweet dairy desserts | For 33, both did meet the criteria |  |
| Sweet spreads | Sweet spreads | Position | 1. Unfavourable classification for sweet spreads | For 34, only revised algorithm met the criteria |  |
| **Beverages** |  |  |  |  |  |
| Water, tea, coffee, herbal teas | Water | Position | 1. Favourable classification for water | For 35, both algorithms met the criteria |  |
| Dairy beverages | Skimmed milk  Partially-skimmed milk  Whole milk  Sweetened flavoured milk  Sweetened yogurt to drink | Group discrimination | 1. Discrimination between unsweetened milks and sweetened dairy beverages | For 36, only revised algorithms met the criteria |  |
| Sugar and artificially sweetened beverages | Flavoured waters  Colas  Soft drinks with fruits  Lemonades, tonic waters  Tea-based beverages  Fruit nectars  Sweetened flavoured milks  Sweetened yogurts to drink | Position  Position | 1. Unfavourable classification for sugar-sweetened beverages 2. Unfavourable classification for artificially-sweetened beverages | For 37, both algorithms met the criteria  For 38, both algorithms did not meet the criteria | For 1, flavoured water (lightly sweetened water) was mostly rated B. All other sweetened beverages were mostly rated D or E.  For 2, while both algorithms did not meet the criteria, revised did not rate any artificially-sweetened beverages B, which was not the case for initial. |
| Fruit juices | Fruit juices | Group discrimination  Group discrimination  Group discrimination | 1. Discrimination between fruit juices and fruits and vegetables 2. Discrimination between fruit juices and other sugar-sweetened beverages 3. Discrimination between fruit juices and other artificially-sweetened beverages | For 39, 40, both algorithms met the criteria  For 41, both algorithms did not meet the criteria | For 2, only flavoured received a better rating than fruit juices (among 5 categories) |

1. https://www.vie-publique.fr/rapport/36772-etude-individuelle-nationale-des-consommations-alimentaires-3-inca-3 [↑](#footnote-ref-1)