MAC ADVICE

Nutri-Score Labelling on Fish Products

Brussels, 10 December 2020

1. Introduction

Nutri-score is a nutrition labelling system developed by French authorities based on a scientific evaluation of the nutritional value of food products, which aims to promote healthier choices by consumers, in a complementary manner to the mandatory nutritional information imposed by EU legislation. It is regulated under Article 35 of the FIC Regulation[1], whereby Member States may recommend to food business operators (FBO) the use of one or more additional forms of expression or presentation of the nutrition declaration, after notifying the European Commission via the TRIS procedure.

Besides France, the Nutri-score has also been officially recommended by health authorities in Germany, Belgium, the Netherlands, Luxembourg and Spain. In some Member States, several food companies have announced the use of the scheme even without official recommendation by public authorities. Considering the increasing relevance of this FOP nutrition scheme in the EU's Internal Market, the Market Advisory Council (MAC) believes that the analysis of the calculation methods for fish products under the Nutri-score is relevant.

[1] Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004

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The MAC believes that it is important that FOP nutrition schemes recommended by European public authorities clearly represent the nutritional values of products, taking into account the different nutritional aspects.

In the Annex, supporting information that substantiated the recommendations is made available.

2. Recommendations

The MAC is concerned with the impact of the Nutri-score's algorithm on the EU's market of seafood products, since:

- it provides a negative rating for fish products that have high fat content and are high in natural omega-3 of marine origin (EPA – DHA), despite their recognised high health benefits;
- it considers proteins benefit, but only if the negative score is under N = 11, despite the exceptional high content and quality of proteins in fish;
- it considers vitamins and minerals, but only if coming from a certain category of nutrients (fruits, vegetables, legumes, nuts and rapeseed, walnut and olive oil), even though fish contains a lot of them as well.

Therefore, the MAC recommends the following:

a) Considering that the general framework of the Nutri-score's Scientific Committee is currently being discussed by the adopting countries, the independent national experts from the participating Member States should aim to introduce changes to the Nutri-score's algorithm, in order to ensure alignment with public health recommendations. In this respect, the MAC specifically recommends taking positively into account the natural presence of healthy omega 3, making an exception to the N≥ 11 rule for these products,

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and considering the ratio of saturated fat to unsaturated fat when attributing penalty points (see Annex point 4 detailed recommendations);

b) Member States should ensure that EU consumers are provided with correct information, in conformity with the FIC Regulation, and the European Commission should monitor the effective application, implementation and enforcement of the EU law. In particular, appropriate information is needed to adequately evaluate fisheries products;

c) The European Commission should make sure to communicate the MAC's concerns over the impact of the Nutri-score's algorithms on fish products to the Scientific Committee of national experts, as the latter's scores may mislead consumers into believing that fish is not a healthy product when in fact it is;

d) Considering the increasing relevance in the EU's Internal Market, the European Commission should actively observe the development of the Nutri-score, in order to ensure coordination amongst Member States and coherence with public health recommendations and the EU's rules on consumer information, while respecting national competences.

In due course, the MAC will develop an advice to the European Commission on the framework of FOP labelling schemes in general.

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Annex

1. Information on the Nutri-score scheme

1.1. Products covered

Nutri-score uses an algorithm based on the nutritional declaration of products. According to the scheme's FAQ, the food products covered are those with a mandatory nutrition declaration, in conformity with the FIC Regulation. These are processed products.

Therefore, the Nutri-score is not applicable to products listed in Appendix V of the FIC Regulation. However, some of these products can apply a voluntary nutrition declaration on their package, allowing the display of a Nutri-score, provided that the nutrition declaration is conform the mentioned regulation.

1.2. Calculation method

As described above, Nutri-score uses an algorithm which is based on the nutritional values of a product. Points are gathered for the 'unfavourable' nutrients: energy, saturated fatty acids, sugars and sodium. The sum of these is depicted as 'N'. Scoring of the points for N happens according to table 1.

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Points	Calories (kJ)	Sugars (g)	Saturated fatty acids (g)	Sodium (mg)[1]
0	≤ 335	≤ 4.5	≤ 1	≤ 90
1	> 335	> 4.5	> 1	> 90
2	> 670	> 9	> 2	> 180
3	> 1005	> 13.5	> 3	> 270
4	> 1340	> 18	> 4	> 360
5	> 1675	> 22.5	> 5	> 450
6	> 2010	> 27	> 6	> 540
7	> 2345	> 31	> 7	> 630
8	> 2680	> 36	> 8	> 720
9	> 3015	> 40	> 89	> 810
10	> 3350	> 45	> 10	> 900

Table 1: Assigned points for N nutrients. Source: Nutri-score, 2018.

Additionally, points are gathered for the 'favourable' nutrients: fibres, proteins and fruit & vegetables (F&V[2] and oils[3] are scored together). These sum up into 'P'. These 'favourable' nutrients have a maximum score of 5, see table 2.

Points	Fruits, vegetables, legumes, nuts and rapeseed, walnut and olive oils[1] (%)	Fibres (g/100g) AOAC method	Proteins (g/100g)
0	≤ 40	≤ 0.9	≤ 1.6
1	> 40	> 0.9	> 1.6
2	> 60	> 1.9	> 3.2
3	-	> 2.8	> 4.8
4	-	> 3.7	> 6.4
5	80	> 4.7	> 8.0

[1]: fruits, vegetables, legumes and nuts contain many vitamins (especially vitamins E, C, B1, B2, B3, B6, and B9 as well as provitamin A)

Table 2: Points attributed to each of the nutrients of the positive P components. Source: Nutri-score, 2019

[2] F&V include nuts and legumes (pulses)

[3] Specific oils were added in the 2019 revision of the algorithm: olive, rapeseed and walnuts oils

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The final score of a product is determined as follows: if N < 11 the Nutri-score will be defined by N-P. However, if N ≥ 11 there are certain conditions in order to subtract the favourable points from the unfavourable ones:

a. If the points for fruits, vegetables, legumes, nuts and rapeseed, walnut and olive oil = 5 (i.e. > 80% FVNLO[4]), the score will be calculated by N-P;
b. If the points for fruits, vegetables, legumes, nuts and rapeseed, walnut and olive oil < 5 (i.e. > 80% FVNLO), the score will be determined by N – the sum of the points for fibres and ….

This means that proteins are left out of the equation. Therefore, negative nutrients have more weight than positive components / nutrients, thus discouraging reformulation and downplaying the inclusion in the diet of high-quality components.

2. Fish Nutrients

Fish contains many favourable nutrients among which are vitamins (like FLNO), minerals, proteins and most importantly natural omega-3 fatty acids. Especially the marine omega-3 fatty acids EPA (eicosapentaenoic acid) and DHA (decosahexaenoic acid) have important health benefits, such as brain development in foetuses and infants (*Singh, 2005*), improved cardiovascular function, reduced major coronary events and improved anti-platelet effects (*Swanson, Block, & Mousa, 2012*), and prevention of Alzheimer's disease (*Majou, 2017*).

This is why the European Food Safety Authority (EFSA) advises the consumption of 250 mg per day of EPA+DHA (EFSA, 2010).

[4] FVLNO = Fruits, Vegetables, Legumes, Nuts and Oils (rapeseed, walnut and olive oils)

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In the EU population, there is a significant deficit of EPA – DHA consumption:

	0 to 10 yo	11 to 17 yo	18 to 79 yo
Proteins (g/day)	55.3	76.7	83.2
Available carbohydrates (g/day)	187.5	244.5	240.1
Lipids (g/day)	55.5	71.7	76.2
SFA (g/day)	25	30.5	32.4
MUFA (g/day)	18.4	24.3	25.9
PUFA (g/day)	6.5	9.2	9.8
Linoleic acid (g/day)	4.9	6.8	7
α-linolenic acid (g/day)	0.7	0.9	1
AA (mg/day)	68.9	100.5	119.6
EPA (mg/day)	**28.1**	**92.8**	**117.3**
DHA (mg/day)	**85.7**	**146.4**	**169.2**

Table 3: Average daily intake of macronutrients and fatty acids for the French population according to age
Source: INCA 3 study, 2014-2015 (ANSES)

Moreover, due to genetic characteristics, part of the EU population (25%) is not able to synthetize EPA and DHA from vegetable omega 3 (Buckley et al, 2017).

Omega-3 fatty acids EPA and DHA are mainly found in fish products (Swanson et al., 2012). Figure 1 shows the number of food products in certain food categories for which EPA+DHA content is relatively high.

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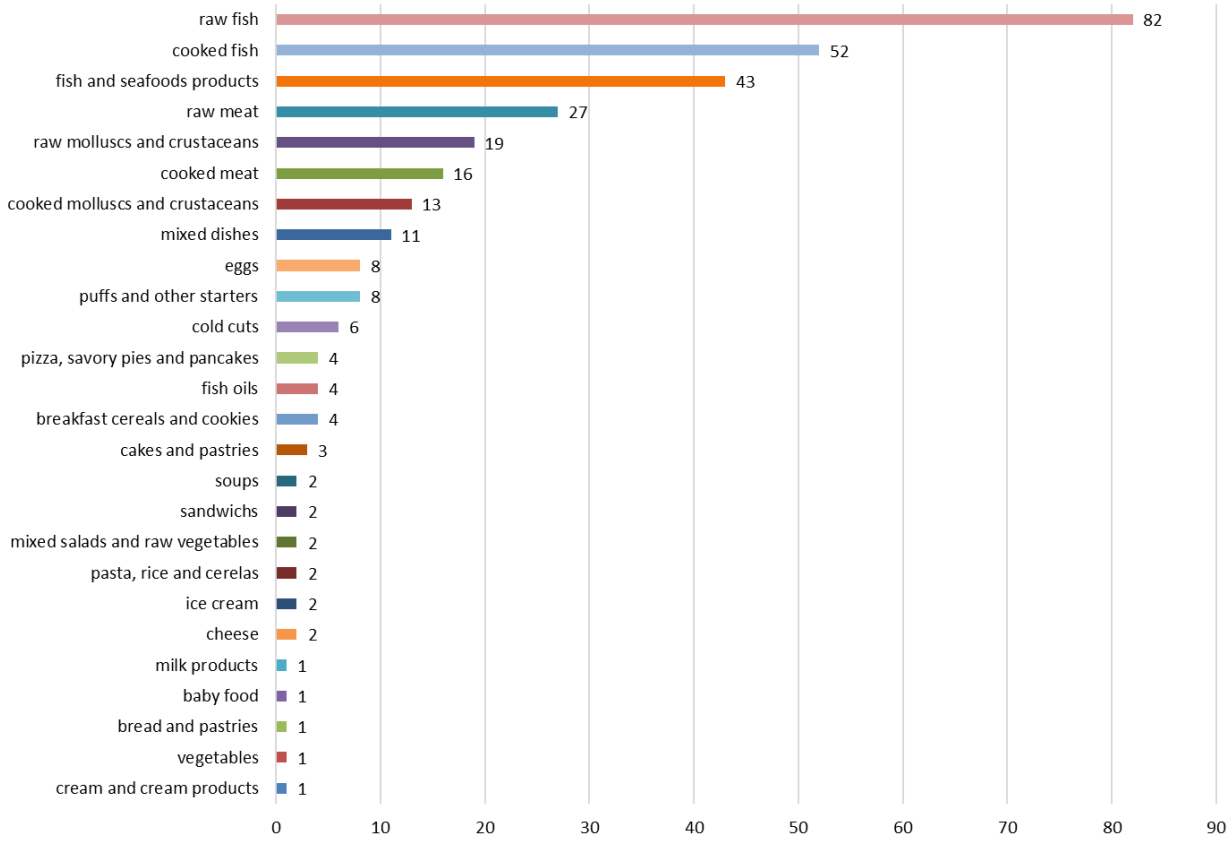

Figure 1: Food for which the content of EPA+DHA ≥ 15 mg/ 100 g of product. Source: CIQUAL 2017. Provided by ADEPALE (FR).

As shown in figure 1, there are many products of the seafood category that score high with regard to the EPA+DHA content. Figure 2 specifies which species, belonging to raw seafood, contain high amounts of omega-3 fatty acids with a distinction in EPA and DHA. As shown in this figure, the species which contain the highest amount of omega-3 fatty acids are mackerel, salmon, trout and herring. All of these are fatty fish.

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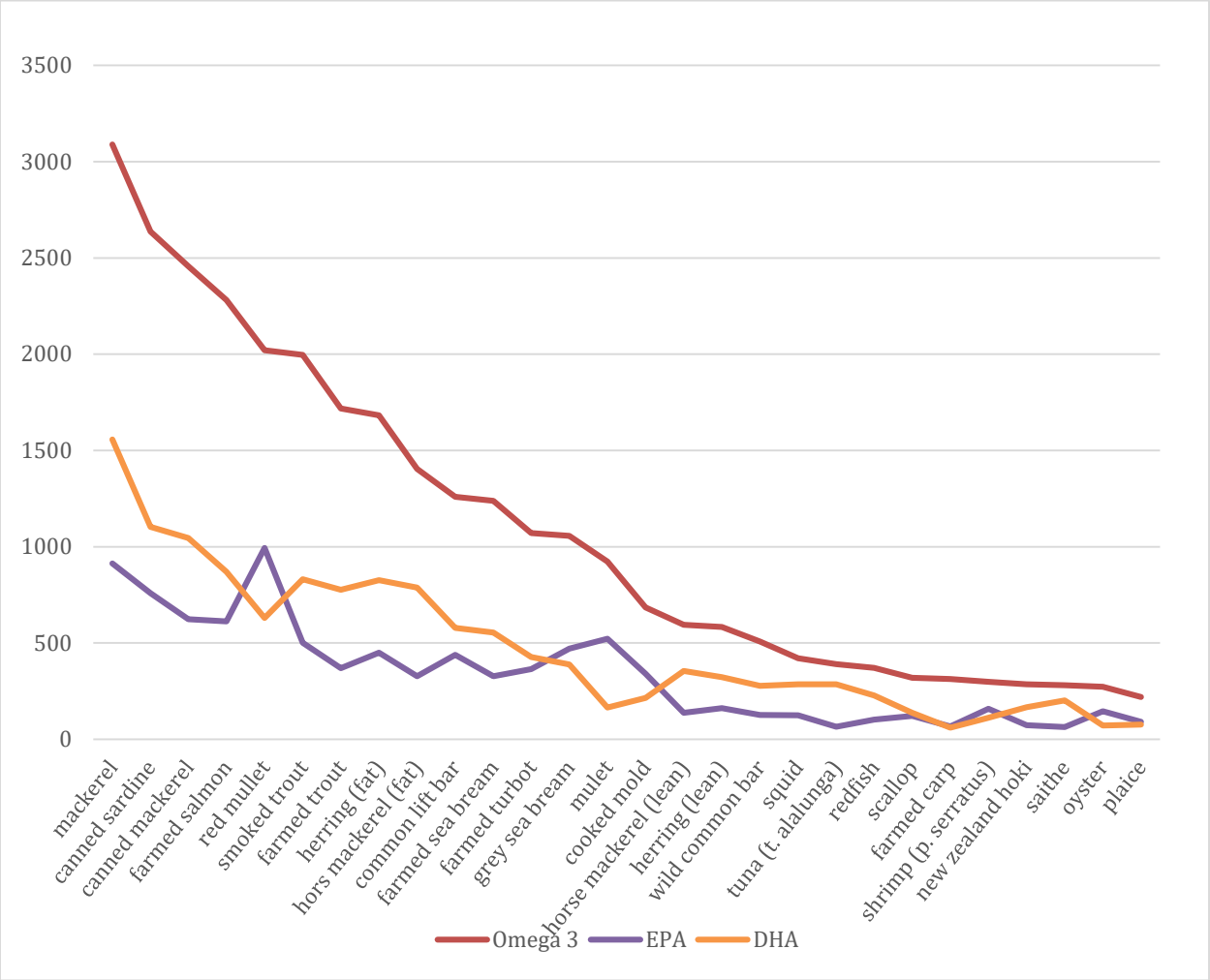

Figure 2: Omega-3 content of raw seafood (EPA+DHA in mg per 100 g of product). Source: Nutraqua 2008. Provided by ADEPALE.

These fish are mainly consumed in a processed form, e.g. smoked and canned mackerel, canned sardines, smoked salmon and cured (i.e. marinated) herring.

Test results of a Dutch company have indicated that there is a linear relationship between the fat content of a smoked mackerel and the amount of omega-3 fatty acids this fish contains. The results are shown in figure 3.

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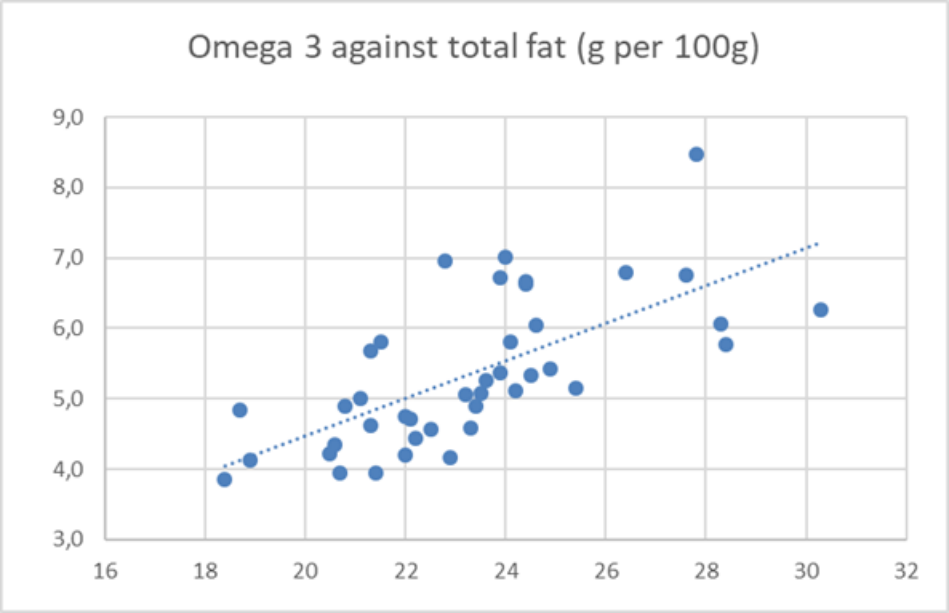

Figure 3: Results of tests on omega-3 content of smoked mackerel in relation to total fat content. Source: KVG 2020. Provided by Visfederatie.

Whether these results are an indication of the omega-3 to total fat ratio in other species has to be researched further. These first results show, however, that there is a certain relationship between total fat content and omega-3 fatty acid content of a fish, which can be summarized in: the higher the fat content of a fish, in this case smoked mackerel, the higher the amount of omega-3 fatty acids and the more beneficial the product is for public health.

Despite the fact that Table 3 perfectly illustrates that in different age groups the protein intake is sufficient, some countries such as Canada and the USA (Ref: Department of Health of Canada), classify the proteins in foods taking into account the index of protein efficiency (PER). This index is related to the digestibility of proteins and their amino acid composition and, applying a series of formulas approved by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO), a numerical value is obtained that allows the food to be classified. In a study carried out, fish proteins obtained the highest rating.

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3. Discrepancy

The latter, however, is not shown in the score that fishery products, which are high in fat content, high in natural omega-3 and therefore have high health benefits, receive once they are scored through the Nutri-score's algorithm.

Therefore, there is a discrepancy between health recommendations in the EU and the score fatty products which are high in natural omega-3, receive when using Nutri-score.

3.1. Consumer understanding

The fact that a product which, according to public health recommendations, is a healthy product scores badly can be confusing for consumers. Additionally, it is difficult to explain that a scientifically proven healthy product scores badly when one uses a FOP nutrition labelling scheme. The goal of FOP nutrition labelling schemes is to make it easier for consumers to choose healthy products. Thereby, the Nutri-score foregoes its goal as a FOP nutrition labelling scheme for certain products, notably fisheries products.

4. Suggestions to solve scoring discrepancy

In order to ensure that the algorithm of the Nutri-score is more in line with the public health recommendations, the MAC suggests the adaptation of the scoring method as follows:

1. Consider that Healthy products that could be claimed "natural source of or naturally high in" omega 3 and / or EPA/DHA natural content should benefit of positive points despite the number of negative points: so make an exception on N>= 11.

   NB. Such exception already exists for cheese and their protein content. A similar approach to fish product appears consistent due to the nutritional quality of their protein fraction;

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2. Add columns to table 2 for the nutrients for which a health claim can be made according to Regulation (EC) No 1924/2006 on nutrition and health claims made on foods. Conform the guidelines that are implemented for fibres and proteins a product could, for example attribute 3 points when the claim can be made that it is a "natural source of …" and 5 points when the claim can be made that the product is "naturally high in …". Apply this new column to natural omega-3 and/or EPA-DHA claim, points would be allotted to that product and added to the sum of "P";

   A specific additional recommendation should be made to compensate the negative points of saturated fats by positive points of natural omega;

3. 3. Propose to change the allocation of points for saturated fat to take account of the fat composition (i.e. the ratio of saturated fat to unsaturated fat.) = applying the coefficient (saturated fat / total fat) * points for saturated fat in the current Nutri-score.

The MAC believes that such formula is a more balanced calculation, meaning that the lower the proportion of saturated fat, the lower the 'penalty points' for saturated fat.

This adaptation would also be applicable for other healthy products which have a high fat content. The MAC is aware that the above proposals may lead to an adjustment in the range of the Nutri-score scale which will probably require adjustment of the score classification.

5. References

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