

codex alimentarius commission



FOOD AND AGRICULTURE
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Agenda Item 3

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON NUTRITION AND FOODS FOR SPECIAL DIETARY USES 30th Session

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GUIDELINES FOR THE USE OF NUTRITION CLAIMS: DRAFT TABLE OF CONDITIONS FOR NUTRIENT CONTENTS (PART B CONTAINING PROVISIONS ON DIETARY FIBRE)

- Comments at Step 6 of the Procedure -

Comments from:

MALI

THAILAND

IFAC - International Food Additives Council

MALI

1. Table of conditions applicable to the claims

Mali considers that it is preferable to give a quantity in grammes "per portion" for both claims rather than to rely on an unquantified recommended contribution.

2. Definition of alimentary fibre

Mali supports the project of defining the alimentary fibres of the Codex since it reflects the current scientific consensus on fibre and takes into account the physiological properties of the constituents.

THAILAND

We are of an opinion that the definition of dietary fibre should be based on chemical classification with appropriate analytical methodology to determine the amount of fibre. We, therefore, would like to propose the "definition of dietary fibre" as follows:

"Dietary Fibre" means "non starch polysaccharides" found in food derived from plant cell walls of whole grain cereals, vegetables, fruits and legumes.

Once the definition has been established, its nutritional and physiological properties based on the published studies should be elaborated for consumer health protection and facilitation of trade.

IFAC - International Food Additives Council

As noted earlier (March 13, 2007), IFAC supports adoption of the Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU) and by the Codex Alimentarius Commission (CAC) the definition of dietary fibre proposed for final adoption at the 28th Session of CCNFSDU in November 2006 (ALINORM 06/29/26): Dietary fibre means carbohydrate polymers with a degree of polymerisation (DP) not lower than 3, which are neither digested nor absorbed in the small intestine. A degree of polymerisation not lower than 3 is intended to exclude mono- and disaccharides. It is not intended to reflect the average DP of a mixture. Dietary fibre consists of one or more of edible carbohydrate polymers occurring in the food as consumed; carbohydrate polymers naturally occurring in the food as consumed, carbohydrate polymers, which have been obtained from food raw material by physical, enzymatic or chemical means; synthetic carbohydrate polymers.

IFAC comments herein examine the FAO/WHO scientific update as it applies to the definition proposed for dietary fibre and its applicability for conditions for claims, and it concludes that Part B of the Draft Table of Conditions for Nutrient Contents should be adopted in its present form without amendment.

FAO and WHO are to be commended on undertaking a 'scientific update' of the expert consultation on carbohydrates in human nutrition which took place in 1997. An understanding of the role of carbohydrates in nutrition underpins progress in the CCNFSDU on this subject and the review of current science and the commentary from the authors' meeting that took place in July 2006 represents a valuable contribution to the work of the Committee.

However, it should be remembered that the CCNFSDU initiated discussion of the provisions relating to dietary fibre during its 18th Session in 1992 and has been discussing the subject actively and continuously since that time. Part B of the Draft Table of Conditions for Nutrient Contents presented at the 29th Session reflects input from experts in the fields of dietary fibre, nutrition, analysis, enforcement and food standards regulation made actively over the course of many years with the participation of consumer organisations and the food industry. It is significant that, while the scientific update has extensively reviewed the field, it brings no data additional to those previously available to the CCNFSDU that would justify reconsideration of the consensus thus far reached. This position is supported by a recent review of the EU Nutrition Labelling Directive⁽¹⁾ in which the European Food Safety Authority (EFSA) is cited as concluding that the scientific update does not add anything of

substance to the FAO/WHO position previously declared in Circular Letter CL 2007/3-NFSDU and taken into account by the EFSA during its own earlier review⁽²⁾.

While the update reviews the data and presents the views of the authors on them, the data themselves are those that have already been the subject of continuous, ongoing discussion by the CCNFSDU. In particular, the issues raised by the authors of the update with respect to the utility of functionality and non-digestibility as determinants of the definition of dietary fibre have already been actively addressed by the CCNFSDU through the iterative process of the stepwise Codex Procedure.

IFAC would respectfully remind the Committee that for two consecutive years the FAO/WHO author/peer review working group has called into question the consensus opinion, reached after 15 years' discussion with experts around the world, on the basis of documents presented at a stage so late in the proceedings that it has precluded their adequate appraisal. As the representative of the EC rightly pointed out at the 29th Session of the CCNFSDU, there is a weight of other scientific opinion, including that from the European Food Safety Authority that endorses the definition of dietary fibre that reached Step 7 of the Codex procedure.

Functionality

Physiological functionality is a key characterising feature of dietary fibre. Consumers expect dietary fibre to offer physiological benefits. They understand 'fibre is good' and usually associate it, at the very least, with a positive effect on bowel function^(3,4,5). Consumer research undertaken by industry⁽⁶⁾ indicates that 66% of consumers believe fibre can help maintain digestive health and consider it to have a beneficial effect on bowel function. The authors of the scientific update also acknowledge that dietary fibre is essentially a physiological concept⁽⁷⁾ and that, in its original conception, it was intended to describe a potentially beneficial characteristic of the diet⁽⁸⁾.

In its recent evaluation⁽²⁾ the European Food Safety Authority concluded that the intake of dietary fibre has a number of physiological effects in humans for example decreased intestinal transit time, increased stool bulk, reduction of blood total and/or LDL cholesterol levels, and reduction of post-prandial blood glucose and/or insulin levels. Fermentability in the colon, leading to the production of short chain fatty acids which have a lowering effect on intestinal pH, a beneficial effect on the gut mucosa and which lead, after absorption, to favourable changes in blood lipid chemistry, is also recognized as a positive functional characteristic of fibre^(5,9,10,11,12,13,14). Therefore it is appropriate that the definition of fibre should include carbohydrate polymers with one or more beneficial physiological effects^(15,16).

The demonstration of functionality as a qualifying pre-requisite is not restricted to the characterisation of dietary fibre. It is an established principle of Codex Food Labelling Guidelines^(17,18) that where any claim is made on a food, the person marketing the food must be able to justify the claim and, specifically where a health or nutrient function claim is made, the effect on which the claim is based should be scientifically substantiated. The demonstration of functionality is not a fundamentally more challenging task in the case of dietary fibre than it is for any other dietary component. From the perspective of the necessity of its demonstration, the inclusion of functionality as an element of the definition of dietary fibre therefore presents no particular difficulty.

Non-digestibility

Since the importance of dietary fibre was first recognised more than 30 years ago, all definitions of dietary fibre with the exception of that now proposed by the authors of the scientific update have included non-digestibility as a characterising property. Numerous authorities and authoritative bodies regard non-digestibility as a key characteristic of dietary fibre^(2,9,10,11,12) and a recent review by the British Nutrition Foundation concluded that a definition of dietary fibre should "recognize that a primary characteristic is resistance to digestion and absorption in the small intestine and fermentation in the large intestine"⁽⁵⁾. EFSA has concluded that the definition of dietary fibre should include all carbohydrate components occurring in foods that are non-digestible in the human small intestine⁽²⁾.

Furthermore, while methods for determining dietary fibre are a secondary issue and they remain a subject for separate discussion (see below), all those currently in use – including that supported by the authors of the scientific update – rely on procedures in which the fraction for critical analysis is isolated through its resistance to hydrolysis by digestive enzymes^(8,19).

Outside the immediate circle of the authors of the scientific update there is broad consensus that resistance to the action of digestive enzymes is a characteristic essential both to the concept of dietary fibre and to its method of analysis.

Methods of analysis

Methods of determining dietary fibre have been the subject of lengthy discussion. Although they are the subject of criticism by the authors of the scientific update, AOAC methods of analysis are the most widely accepted globally for both health and nutrition claims. They are the most studied and validated methods available and their use in routine analysis presents no insurmountable difficulty. Non-AOAC methods have not undergone the rigour of scientific substantiation to achieve the status of reference methods, nor do they accurately quantify many fibres that have beneficial physiological effects. In consequence, there is widespread consensus (outside the circle of the authors of the scientific update) that dietary fibre encompasses a broader spectrum of components than those defined by the term intrinsic plant cell wall polysaccharides.

While there is currently no validated procedure to combine AOAC methods to determine total fibre content in the draft Codex definition, agreement on methodology has been seen as the next phase in the Codex process. There is no essential reason why a definition for dietary fibre cannot be agreed in the absence of an agreement on methodology. Indeed, there is a logic which requires the definition to be agreed before an appropriate method of analysis can be adopted. The authors of the scientific update have themselves made the point that methods of analysis should be regarded as secondary to an appropriate nutritional definition⁽⁸⁾.

Scope of the definition in relation to the supporting scientific evidence: the rationale for nutrient content labeling

The definition should be based on the best scientific evidence. The authors of the scientific update quite rightly point to the fact that the evidence on which the dietary fibre hypothesis was originally based came from epidemiological studies on individuals consuming diets rich in fruits and vegetables. However, in those studies the diets were not characterised exclusively by their content of intrinsic plant cell wall polysaccharides. Other sources of dietary fibre will also have been present in those fruits and vegetables, and indeed in other components of the diets, and by the same token will also have contributed to the beneficial effects seen. Subsequent to the acceptance of the initial dietary fibre hypothesis, and as long ago as 1976, the author responsible for the formulation of the first definition (Trowell²⁰), along with others, recognised the inappropriateness of a narrow definition limited to intrinsic plant cell wall components and reasoned that the definition should be broadened to encompass analogous indigestible polysaccharides from other plant sources.

The observation that diets rich in fruits and vegetables are associated with beneficial health effects on which the dietary fibre hypothesis was originally based provides no de facto scientific basis for limiting the definition of dietary fibre to intrinsic plant cell wall polysaccharides because such diets will likely also have contained many other components, including other poorly digestible carbohydrates, at elevated levels.

Furthermore, the suggestion that intrinsic plant cell wall polysaccharides should be used as a basis for labelling on the grounds that they are markers for a diet rich in unrefined plant foods and plant micronutrients⁽⁷⁾ runs counter to the principles of clear food labelling. Firstly because there is no established and quantified relationship on a product by product basis between intrinsic plant cell wall polysaccharides and the content of an as yet uncharacterised variety of plant micronutrients. Secondly because, where health benefits are attributed in labelling to plant micronutrients, the relationships between the micronutrients and the health outcomes should be explicitly described and subjected to scientific substantiation. Thirdly because, where the aim is to direct consumers to dietary choices rich in fruits and vegetables, this can be more unambiguously achieved through appropriate product labelling and ingredient listing which directly indicates the presence of fruits and vegetables.

It is important that the rationale determining the scope of the definition be consistent with the purpose of nutrient content labelling. Codex currently defines a nutrient content claim as “a claim that describes the level of a nutrient contained in a food”⁽²¹⁾. To suggest that dietary fibre should be defined

in order to serve as a marker of some quite different attribute of food is inconsistent with this principle and risks confusing the mission of Codex with respect to food labelling.

The importance of finalising a definition

It is important that the definition for dietary fibre be finalised. Consumer research undertaken by industry⁽⁶⁾ indicates that 80% of consumers are aware of the term 'fibre' and 65% are aware of 'dietary fibre' (n=1587, US responders, web-based survey). At the same time, dietary surveys consistently show that fibre intake remains below recommended levels, despite sustained dietary advice over at least the past decade to consume more fibre. The priority for nutrition labelling should be to enable consumers to identify foods that are significant sources of dietary fibre. As underlined in this document, there is no evidenced-base indicating that 'intrinsic' fibre is somehow 'better for you' than added fibre. It should be emphasised that the overall goal is to promote greater intake of dietary fibre and, provided it fulfils the benefits expected of it, it does not matter where the fibre comes from.

An agreed definition will benefit all stakeholders (consumers, government bodies, healthcare professionals and industry). The present draft Codex definition has previously reached Step 7 of the 8-step Codex process. It reflects a consensus that has been achieved through 15 years of transparent co-operation and negotiation which has involved Codex Member State governments and Codex Observer Organisations (including those representative of consumers and the food industry). Furthermore, it is consistent with most definitions in use by scientific, regulatory, analytical and trade bodies worldwide, including those of the EFSA, AFSSA, ILSI, FSANZ, AOAC and the AACC.

Comments received at Step 6 of the Codex Procedure prior to the 29th Session of the CCNFSDU (22) indicated no country or observer organisation that was opposed to the draft Codex definition. The scientific update has identified no data additional to those previously available to the CCNFSDU.

The continued absence of an agreed definition results in confusion for consumers through inconsistent food labelling and health and nutrition messages, and uncertainty for industry which has to operate in an increasingly global market.

Conclusion

The Draft Table of Conditions for Nutrient Contents (Part B containing Provisions on Dietary Fibre) as presented at the 29th Session of the CCNFSDU and reproduced as Appendix II to ALINORM 08/31/26, the conditions it specifies and the draft definition it contains, reflects a scientifically valid position that has received wide endorsement after a full discussion by the CCNFSDU. It should be adopted in its present form without amendment.

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