



JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEx COMMITTEE ON FOOD ADDITIVES

Fiftieth Session

DISCUSSION PAPER ON THE USE OF THE TERMS “UNPROCESSED” AND “PLAIN” IN THE GSFA

(Prepared by the Russian Federation)

I. Background

1. CCFA49 supported the proposal of the Russian Federation to prepare, for the next session of the Committee, a discussion paper on their concern regarding the use of the terms “unprocessed” and “plain” in the GSFA.
2. The terms “plain”, “fresh”, “untreated” and “processed” have been widely used in the GSFA with certain ambiguity as they lack standardized definitions which could be used throughout the food category system.
3. Until recently, the use of food additives in categories named plain and fresh has been largely avoided. In 2010-13, a limited number of additives were approved in subcategories 01.x.x. In the following years, additives were approved for peeled or cut fresh fruit (04.1.1.3), fresh and peeled or cut fresh vegetables (04.2.1.1 and 04.2.1.3), fresh meats (08.1.x), and fresh mollusks (09.1.2). A considerable number of proposals to use more additives in more plain or fresh categories are being currently held at different steps awaiting approval. Even a superficial analysis reveals that there is a trend to expand the use of food additives in foods that do not undergo a technological treatment or processing.
4. There are several risks associated with the use of additives in unprocessed and plain foods. First, technological justification of the additive use in unprocessed foods appears to be limited as the definition of a food additive, as given in the GSFA, clearly states that a food additive is purposed for “...*the intentional addition to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results*”. It implies that food additives are used in the processes which, in the majority of cases, result in processed foods, with exception of packing, packaging and transport.
5. Not surprisingly, many proposals to use additives in plain and fresh foods currently under discussion often lack sufficient technological justification.
6. It is rather common that additives are proposed to preserve quality of foods. However, food preservation should be achieved primarily through the observance of sanitary and hygienic requirements in manufacturing and handling.
7. Second, Codex approval of food additive use in plain or unprocessed or fresh foods facilitates intentional adulteration of foods and allows for the use of additives to cover compromised food quality and safety and thereby to mislead consumers.
8. The development of definitions of unprocessed and plain foods in GSFA food category system could become the first step in addressing the two risks highlighted above.

II. Definitions of unprocessed, minimally processed (plain) and processed food products currently in use

9. The extensive terminology for foods of different degree of processing was introduced in Brazil [1] based on the work by Monteiro et al. [2] and later adapted in the PAHO nutrient profile model [3] and in the Committee on World Food Security (CFS) (High Level Panel of Experts) [4]

Unprocessed or minimally processed (plain) foods (without added oils, fats, free sugars, other sweeteners, or salt): Natural, packaged, cut, chilled, or frozen vegetables, fruits, potatoes, cassava, and other roots and tubers; bulk or packaged white, parboiled, and wholegrain rice; whole grains of wheat and other cereals; granola made from cereal grains, nuts and dried fruits, cassava, corn, or wheat grits and flours; all types of beans; lentils, pigeon peas, chickpeas, and other legumes; dried fruits, fresh or pasteurized fruit juices without added sugars; nuts, peanuts, and other oilseeds without added salt; fresh and dried mushrooms and other fungi; fresh, frozen, dried beef, pork, poultry and other meat and fish; pasteurized, UHT liquid and powdered milk; fresh and dried eggs, yogurt; and tea, herbal infusions, coffee, and tap, spring, and mineral water.

Processed products: Vegetables such as carrots, cucumbers, peas, heart of palm, onions, and cauliflower preserved in salt, or by pickling; tomato extract or concentrates (with salt or sugars); fruits in sugars and candied fruits; beef jerky and bacon; canned sardine and tuna; other salted, smoked, or cured meat or fish; cheeses; breads and baked products (in general).

Ultra-processed products: Sweet or salty packaged snacks, biscuits (cookies), ice cream, and candies and confectionery (in general); cola, soda, and other soft drinks; sweetened juices and "energy" drinks; sweetened breakfast cereals; cakes and cake mixes and cereal bars; sweetened and flavored yogurts and dairy drinks; canned, packaged, dehydrated, and other "instant" soups, noodles, and seasonings; pre-prepared meat, fish, vegetables, pizza and pasta dishes, burgers, hot dogs, sausages, poultry and fish "nuggets" and "sticks", and other products made from animal byproducts.

10. In the European Union, Regulation (EC) No 1333/2008 [5] defines **unprocessed food** as a food which has not undergone any treatment resulting in a substantial change in the original state of the food, for which purpose the following in particular are not regarded as resulting in substantial change: dividing, parting, severing, boning, mincing, skinning, paring, peeling, grinding, cutting, cleaning, trimming, deep-freezing, freezing, chilling, milling, husking, packing or unpacking.

11. In the Eurasian Union, technical regulation of the Customs Union on food safety (TR TS 021/2011) [6] distinguishes between **unprocessed food products of animal origin** (non-processed carcasses of productive animals of all kinds, their parts (including blood and sub-products), raw milk, raw skimmed milk, raw cream, beekeeping products, eggs and egg products, aquatic biological resources, aquaculture products) and **food raw materials** - products of animal, plant, microbiological, mineral, artificial or biotechnological origin and drinking water used for the production (manufacture) of food products.

III. Proposed definitions of unprocessed and minimally processed (plain) foods

12. The following definitions are proposed taking into account previously developed definitions of unprocessed and minimally processed (plain) foods:

Unprocessed food (food raw materials or fresh food) are unprocessed (untreated) products of animal, plant, microbiological, mineral, artificial or biotechnological origin and drinking water used for the production (manufacture) of food products and/or for direct consumption in food.

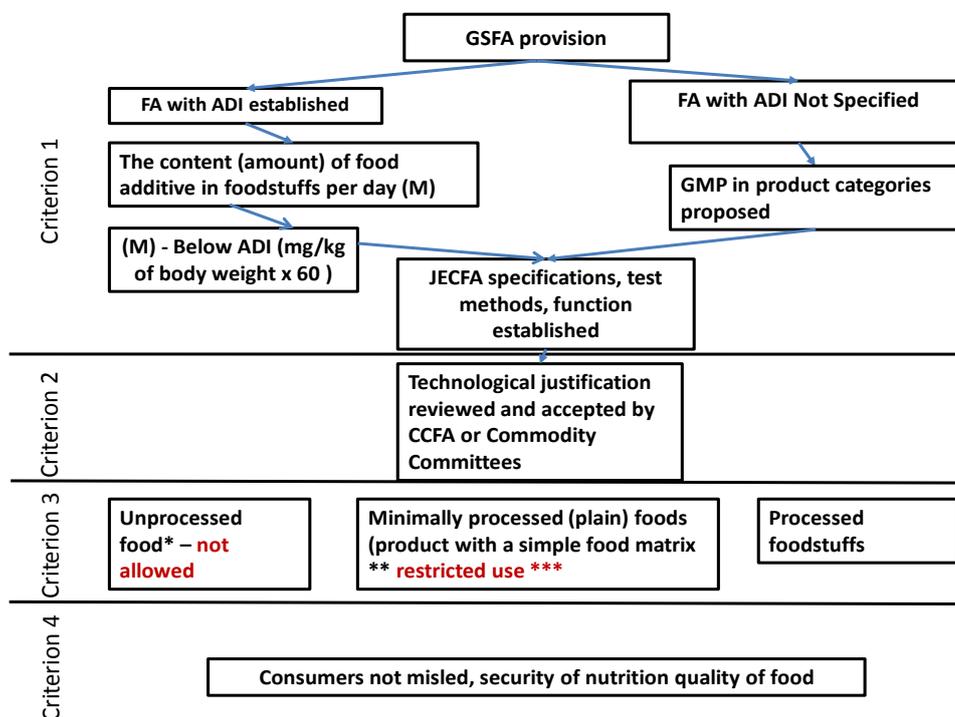
Minimally processed (plain) foods are foods which have not undergone any treatment resulting in a substantial change in the original state of the food, for which purpose the following in particular are not regarded as resulting in substantial change: dividing, parting, severing, boning, mincing, skinning, paring, peeling, grinding, cutting, cleaning, trimming, deep-freezing, freezing, chilling, milling, husking, packing or unpacking. This food category allowed only restricted strongly technological justified use of food additives.

Recommendation 1:

Consider the definitions of unprocessed (food raw materials or fresh food) and minimally processed (plain) foods for inclusion in the *General Standard for Food Additives* (CXS 192-1995)

IV. Guiding principles and priority criteria in reviewing new and existing provisions of the use of food additives in unprocessed (food raw materials) and minimally processed (plain) in the *General Standard for Food Additives (CXS192-1995)*

13. In reviewing new and existing provisions in the GSFA and in assigning priorities for new proposals, it is proposed to use the following decision tree:



Notes:

*Unprocessed food (food raw materials or fresh food) are unprocessed (untreated) products of animal, plant, microbiological, mineral, artificial or biotechnological origin and drinking water used for the production (manufacture) of food products and/or for direct consumption in food.

**Minimally processed (plain) foods (products with a simple food matrix) are foods which have not undergone any treatment resulting in a substantial change in the original state of the food, for which purpose the following in particular are not regarded as resulting in substantial change: dividing, parting, severing, boning, mincing, skinning, paring, peeling, grinding, cutting, cleaning, trimming, deep-freezing, freezing, chilling, milling, husking, packing or unpacking. This food category allowed only restricted strongly technological justified use of food additives.

*** the term 'restricted use' to be defined.

14. The decision tree presented above is based on key provisions in:

- The *General Standard for Food Additives (CXS192-1995)*;
- Principles for the Safety Assessment of Food Additives and Contaminates in Food, Environmental Health Criteria 70, WHO, 1987;
- "Safety evaluation of certain food additives and contaminants" prepared by the Seventy-seventh meeting of the Joint FAO/WHO Expert Committee on Food Additives (JECFA), WHO food additives series; 68, 2013.

Recommendation 2:

Consider the provision not to use food additives in unprocessed (food raw materials or fresh food) and to restrict the use of food additives in minimally processed (plain) foods.

V. The misuse of food additives in the unprocessed and plain foods

15. The Codex Alimentarius is a collection of internationally adopted food standards and related texts presented in a uniform manner. These food standards and related texts aim at protecting consumers' health and ensuring fair practices in the food trade. The Codex Alimentarius is designed to ensure safety of foods sold internationally while protecting interests of consumers and fairness of the international food trade.

16. In achieving this goal, food additives play an essential role when used in accordance with Section 3.2 Justification for the Use of Additives of the GSFA:

"The use of food additives is justified only when such use has an advantage, does not present an appreciable health risk to consumers, does not mislead the consumer, and serves one or more of the technological functions set out by Codex and the needs set out from (a) through (d) below, and only where these objectives cannot be achieved by other means that are economically and technologically practicable..."

17. At the same time, the unjustified use of food additives could mislead consumers about organoleptic properties of foods such as taste, colour, texture, and put their health at risk as additives may hide otherwise apparent spoilage of foods or contamination of food by pathogenic and opportunistic microorganisms.

18. There is evidence that food additives are used for adulteration of olive oil, wine, spices, tea, fish, honey, milk, meat, fruit juices, coffee etc. [7, 8].

19. Typical examples of food additive use in food adulteration include [9]:

- a. Complete or partial replacement of a food ingredient or valuable authentic constituent with a less expensive substitute, usually achieved through the addition, dilution, or extension of an authentic ingredient with an adulterant or mixture of adulterants. Such a replacement of food ingredients in food products leads to the need to use food additives that give the product a customary look for the consumer.
- b. Addition of small amounts of a non-authentic substances to mask inferior quality ingredient. An example is the addition of a colour additive to enhance the colour of poor quality paprika.

20. Unprocessed and plain foods are commonly consumed. They are also used as food ingredients in manufacturing of processed and ultra processed foods. In the later case, food additives contained in unprocessed and plain foods may influence organoleptic and physico-chemical properties of unprocessed product.

21. Food additives used in the composition of liquid unprocessed food and plain foods could lead to reduction of their nutritional value, for example, in milk. The nutritional value is one of the key properties of foods which have a direct effect on the health of the population of different countries [10,11].

22. According to the *General Standard for the Use of Dairy Terms* (CXS 206-1999), milk is the normal mammary secretion of milking animals obtained from one or more milkings without either addition to it or extraction from it, intended for consumption as liquid milk or for further processing.

23. Mass fraction of fat, in unprocessed and plain milk, should be not less than 2.8%. Mass fraction of protein should be at least 2.8%. The methods of ultra-high temperature (UHT) treatment or sterilization milk do not result in the modification of milk physical or chemical characteristics and should not lead to any changes of milk (plain) aggregative state.

24. The use of food additives in milk could lead to an increase in the milk density index, and in order to offset this increase, milk components (milk fat, milk protein) may need to be extracted from milk. On the other hand, food additives could be used to impart into skimmed milk of characteristics plain milk or plain cream.

25. In both cases, the use of additives will result in milk products with a low nutritional value. The long-term use of food with a low nutritional value can lead to various alimentary-dependent diseases especially in children who are the main consumers of milk and dairy products [10,12,13].

26. Another example is the use of food additives in fruit and vegetable juices, which also often results in the reduction of the nutritional value. It should be noted that proposals for the use of food additives in juices are often opposed by the industry. Thus, in the Russian Federation, manufacturers do not allow the use of food additives in juices.

27. In conclusion, it should be noted that the use of food additives in unprocessed (food raw materials) and minimally processed (plain) foods should be technologically justified. Considering that the criteria for technological justification in different countries are significantly different, a globally agreed approach is required within the framework of the CCFA to ensure safe use of additives in unprocessed and/or plain foods.

Recommendation 3:

To consider the following options to technological justification for the use of a food additive in minimally processed (plain) foods:

Option 1 - the decision should be made taking into consideration:(1) the technological necessity, (2) a possible change in the nutritional value of food, (3) the risk of misleading consumers about the organoleptic and physico-chemical properties the minimally processed (plain) food;

Option 2 - the decision should be made taking into consideration:(1) the technological necessity, (2) the risk of misleading consumers about the organoleptic and physico-chemical properties the minimally processed (plain) food;

Option 3 - the decision should be made taking into consideration:(1) the technological necessity.

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