

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD
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ORGANIZATION



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Agenda Item 4(d)

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES

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PROPOSED DRAFT CODEX STANDARD FOR JAMS, JELLIES, AND MARMALADES

Comments have been received from

Egypt, France, Iran, New Zealand, United States, Venezuela, and OEITFL.

EGYPT

We are of the opinion that the soluble solids have to be not less than 65%.

FRANCE

In regard to comments made by the Codex Secretariat:

- **Sweeteners** referred to in Sections 1 – 1.2, and 3.2 Soluble Solids, are concentrated sweeteners as defined in Guideline 94/35 for sweeteners.
- As for Section 3 and subsection 3.3.2. **Defects and Allowances**, the Secretariat noted that there were no defect allowances for jams, jellies and marmalades even though the initial Codex text contemplated some, especially for foreign matter, stones and stone pieces (serious defect); it might be agreed to study such provisions.

Within the actual Draft Standard, many points stray from the common guideline 2001/113 and from guideline 95/2.

IRAN

3. As Jam is an acidic product it is better to set the maximum pH value as a quality factor.

NEW ZEALAND

New Zealand notes that [this code] refers to the Codex General Principles of Food Hygiene, and Codes of Hygienic Practice and Codes of Practice.

It is suggested that, where Hygiene Codes are referred to and do not contain relevant food safety requirements, this information should be included in the Standard. We suggest that this information should be about particular food safety hazards associated with the food products.

This information will be useful to the users of the end-document when developing their HACCP programme.

UNITED STATES

2. Description

2.1. Product Definitions

Extra Jam/High Fruit Jam: The term “*Extra Jam*” implies something additional has been included to the regular product. Therefore, *High Fruit Jam* is the preferred term; it appropriately identifies the product without any ambiguity. Further, such definition should be left to the section on labeling:

The Codex General Standard for the Labeling of Prepackaged Foods (Codex Stan 1-1985 (rev. 1-1991):

4. Mandatory Labeling of Prepackaged Foods

4.1.2 *There shall appear on the label either in conjunction with, or in close proximity to, the name of the food, such additional words or phrases as necessary to avoid misleading or confusing the consumer in regard to the true nature and physical condition of the food including but not limited to the type of packing medium, style, and the condition or type of treatment it has undergone; for example: dried, concentrated, reconstituted, smoked.*

Differences should not exist between High Fruit Jam made from whole fruit or fruit puree, as long as the required amount of fruit is used in the formulation.

The United States suggests the definition of Marmalade and Jelly Marmalade be amended as follows:

Marmalade:

is the product brought to a suitable gelled consistency made from the whole fruit, fruit pulp, puree, juice, aqueous extract or peel of citrus fruits mixed with sugars and/or carbohydrate sweeteners such as honey, with or without the addition of water. **It contains, embedded in the mass pieces of citrus fruit peel.** (citrus peel is always a key ingredient in the final product irrespective of the stage of production at which it is added)

Jelly Marmalade:

is the product brought to a suitable gelled consistency made from the whole fruit, fruit pulp, puree, juice, aqueous extract or peel of citrus fruits mixed with sugars and/or carbohydrate sweeteners such as honey, with or without the addition of waters **from which all insoluble solids have been removed. It may or may not contain small portions of thinly cut citrus peel.**

2.1.2 Other Definitions

Sugars: The United States recommends sugars be defined as: "Safe and suitable nutritive carbohydrate sweeteners as defined in Codex Alimentarius on Sugars, such as sugars extracted from fruit (fruit sugars); fructose syrup; brown sugar, honey and glucose/corn syrup." Codex Standard for Sugars; Codex Stan 212-99 (AMD.1 -2001)

3.2. Soluble Solids

The proposed standard requires that the soluble solids content for the finished product "*shall in all cases not be lower than 60 percent.*" The previous standard currently being reviewed Codex Stan. (79-1981) Section 3.3 sets the soluble solid for the finished product at a minimum of 65%. The U.S like many other countries follows this requirement. The 65 percent soluble solids content provides protection from spoilage due to reduced water activities. The U.S. is concerned that product with 60 percent soluble solids content would be of poor quality.

We recommend that any product described in this standard less than 65 percent soluble solids be classified as a **Fruit Spread**.

In addition, the proposed standard states that the refractometer tolerance shall be +/- 3 refractometric degrees. The U.S is recommending a tolerance of - 0.5 refractometric degrees. Current refractometer equipment should be capable of meeting this tolerance.

4. Additives

The United States supports the general reference to the GSFA for Preservatives and Acidifying agents instead of the prescription method used. However the U.S recommends the following amendments to the list of acceptable additives in the Standard for Jams, Jellies, and Marmalades.

1. Delete 331ii (Disodium monohydrogen citrate) because JECFA has not assigned ADI for this substance
2. Delete INS 333i, ii, iii because the Codex INS only lists Calcium Citrate (333)
3. Delete the following colors:
 - a. Chlorophyllins (140i) because the Codex INS does not list this additive,
 - b. Paprika oleoresins (160c) – because JECFA has only recognized that this substance is “Acceptable for use as spice”,
 - c. Green S (142) because JECFA has not assigned an ADI,
 - d. Lycopene (160d) because JECFA has not assigned an ADI, and
 - e. Lutein (161b) because JECFA has not assigned an ADI.

The U.S. questions the need for food additive antioxidants; and recommends

- That acetic acid be listed as acceptable food additive preservative.
- That the standard simply refers to the thickening and gelling agents listed in Table 3 of the GSFA.

The CCPFV is requested to note:

- That the identity and purity of the following colors must be certified by FDA: Sunset Yellow FCF (FD&C Yellow No. 6), Allura Red AC (FD&C Red No. 40), and Brilliant Blue FCF (FD&C Blue No. 1) before they can be added to food in the U.S.
- The following colors are not permitted in foods sold in the US: Chlorophylls (140), Chlorophyll copper complexes (141i), Quinoline Yellow (104), Ponceau 4R, Green S (142), Lycopene (160d) and lutein (161b) because of unresolved safety issues.

8 Labeling

8.3. Fruit Quantity and Sugar Declaration

The United States recommends that this section be written in accordance with the following section from the Codex General Standard for the Labeling of Prepackaged Foods [Codex Stan 1-1985 9 Rev 1- 1991].

4.	Mandatory Labeling
4.2	List of ingredients
4.2.1.2.	All ingredients shall be listed in descending order of ingoing weight (m/m) at the time of manufacture of the food.

VENEZUELA

1. SCOPE

1.3 This Standard does not apply to:

(b) products prepared with non-carbohydrate sweeteners (**artificial, non-nutritive sweeteners**) and which are clearly intended or labelled as intended for diabetic or dietetic use; or

2. DESCRIPTION**2.1 PRODUCT DEFINITIONS**

PRODUCT	DEFINITION
Jam	is the product brought to a suitable gelled consistency, made from the fruit pulp or fruit puree or both, of one or more kinds of fruit, which is mixed with sugars and/or other carbohydrate sweeteners (natural nutritive sweeteners) such as honey, with or without the addition of water.
Extra Jam /High Fruit Jam	is the product brought to a suitable gelled consistency, made from the [un-concentrated] fruit pulp or fruit puree or both, of one or more kinds of fruit, which is mixed with sugars and/or other carbohydrate sweeteners (natural nutritive sweeteners) such as honey, with or without the addition of water.
Jelly and Extra Jelly	are the products brought to a semi solid gelled consistency, which should be practically free from suspended particles, and made from the cooked and concentrated juice and/or aqueous filtered extracts of one or more fruits, mixed with sugars and/or carbohydrate sweeteners (natural nutritive sweeteners) such as honey, with or without the addition of water, pectin, and with or without the addition of organic acids.
Marmalade	is the product brought to a suitable gelled consistency made from cooked whole fruit, concentrated fruit pulp, puree, juice, aqueous extract or peel of fruits and/or their mixes ; mixed with sugars and/or carbohydrate sweeteners (natural nutritive sweeteners) such as honey, with or without the addition of water, pectin, and with or without the addition of organic acids.

2.2 OTHER DEFINITIONS

PRODUCT	DEFINITION
Fruit	(a) Fresh, SOUND , edible and clean, which is of suitable ripeness but free from deterioration and containing all its essential characteristics except that it has been trimmed, sorted, and otherwise treated to remove any blemishes, bruises, toppings, tailings, cores, SEEDS (PITS) and may or may not be peeled. Under appropriate sanitary conditions, meeting the limits of tolerance established by the competent sanitary authorities for pesticides and other harmful substances.
Fruit Pulp	The fleshy and edible part of the whole fruit, if appropriate, less the peel, skin, seeds, pips, and similar parts, which may have been sliced or crushed but which has not been reduced to a puree.
Sugars or Natural Nutritive Sweeteners	(a) Sugars as defined in the Codex Alimentarius Standard on Sugars; (b) Sugars extracted from fruit (fruit sugars); (FRUCTOSE) (c) Fructose syrup; (d) Brown sugar; (e) Honey.

2.3 STYLES**3. ESSENTIAL COMPOSITION AND QUALITY FACTORS****3.1 COMPOSITION****3.1.1 Basic Ingredients**

(b) Sugars or **NATURAL NUTRITIVE SWEETENERS**, substances other than sugar that render a sweet flavor to food (Venezuelan Standard, COVENIN 910:2000 “*Norma General para Aditivos Alimentarios*” [General Standard for Food Additives], 2nd revision), as defined in Section 2.2.

3.1.2 Fruit Content

(a) Jam and Jelly:

- 35% (**40% for jelly**) in general;

3.2 Soluble Solids

The soluble solids content for the finished products, defined in Section 3.1.1.1 (a) to (c), shall in all cases not be lower than 60% (**65%**). This shall be determined by refractometer, subject to a tolerance of ± 3 refractometric degrees, with the temperature corrected to 20°C, and using the International Sucrose Scale, **with corrections for insoluble solids and acids.**

3.2 QUALITY CRITERIA**3.2.1 General Requirements**

(b) and (c). In Venezuela, the Venezuelan Standard, COVENIN 2592:89 “Mermeladas y Jaleas de Frutas” [Fruit marmalades and jellies], states: the addition of artificial colors, flavourings and preservatives will not be permitted in the processing of the product.

4. FOOD ADDITIVES (VENEZUELAN STANDARD, COVENIN 910:2000 “NORMA GENERAL PARA ADITIVOS ALIMENTARIOS” [GENERAL STANDARD FOR FOOD ADDITIVES], 2ND REVISION)

4.1 Antifoaming Agents

INS No	NAME OF FOOD ADDITIVE	MAXIMUM LEVEL (ADI) (Expressed in mg/kg)
900^a	Dimethyl polysiloxane	1.5

4.2 Antioxidants

INS No	NAME OF FOOD ADDITIVE	MAXIMUM LEVEL (ADI) (Expressed in mg/kg)
300	Ascorbic acid (L-)	15

4.3 Acidity Regulators

INS No	NAME OF FOOD ADDITIVE	MAXIMUM LEVEL (ADI) (Expressed in mg/kg)
270	Lactic acid (L-, D-, y DL)	NS
296	Malic acid (DL-)	NS
330	Citric acid	NS
334	Tartaric acid (L (+)-)	30
335 (i), (ii)	Monosodium tartrate and Disodium tartrate	30

The above acidity regulators may be used in the quantities required to achieve up to a pH of 3.0 in the final product.

4.4 Firming Agents

INS No	NAME OF FOOD ADDITIVE	MAXIMUM LEVEL (ADI) (Expressed in mg/kg)
509	Calcium chloride	NA

4.6 Preservatives

In Venezuela, the Venezuelan Standard, COVENIN 2592:89 “Mermeladas y Jaleas de Frutas” [Fruit marmalades and jellies], states: the addition of preservatives will not be permitted in the processing of the product.

4.7 Thickening and Gelling Agents

INS No	NAME OF FOOD ADDITIVE	MAXIMUM LEVEL (ADI) (Expressed in mg/kg)
440	Pectins	Max. 0.80% for marmalades Max. 0.70% for jellies
400 - 404	Alginate acid Sodium alginate, potassium alginate, ammonium alginate, and calcium alginate	50 25
406	Agar	NS
407	Carrageenan and its sodium, potassium and ammonium salts (carrageenans)	75
412	Guar gum	NS
415	Xanthan gum	10

4.8 NATURAL Colours. In all products

INS No	NAME OF FOOD ADDITIVE	MAXIMUM LEVEL (ADI) (Expressed in mg/kg)
100	Curcumin	0.1
140	Chlorophylls	NS
141 (i)	Copper complexes of chlorophylls	15
150 ^a	Plain caramel – Caramel I	NS
160 ^a (i), (ii)	Beta-carotene Natural extracts, mixed carotenes, from plant and marine (algae) origin	5
160 ^c	Paprika extracts (capsanthin, capsorubin)	2.5
163 (i)	Anthocyanins	NA
120	Carmines (cochineal extract, carminic acid)	2.5

In Venezuela, the Venezuelan Standard, COVENIN 2592:89 “Mermeladas y Jaleas de Frutas” [Fruit marmalades and jellies], states: the addition of artificial colours will not be permitted in the processing of the product.

NA: Not assigned. There are several reasons to not assign an ADI. One is the lack of information, and another is when data requires completely stopping the use of a food additive or drug due to its adverse effects.

NS: Not specified. A term that is applied to low toxicity food substances that, when used at the levels required to reach their desired effect, result in an ADI that does not pose a health hazard according to JECFA, based on available (chemical, biochemical, toxicological and other) data, and acceptable historical data. Therefore, due to these and other reasons indicated on individual evaluations, the establishment of the ADI expressed in numerical terms is not considered necessary. An additive that meets these requirements must be used according to the established limits dictated by good manufacturing practices, meaning that, it must be technologically effective and be used at the lowest level needed to reach this effect. It must not cover up the inferior quality of a food product, or its adulteration, nor must it create a nutritional imbalance.

OEITFL

Background

7. Essential Composition - Defects should include reference to gel strength characteristics. Lot Acceptance should be based upon the quoted Codex Sampling Plan.

Proposed Draft

1. Scope

1.2 OEITFL wonders if this means that “preserve” and “conserve” are synonymous terms for jam and extra jam respectively, or either?

2.1 Product definitions

Product	Definition
Jelly and Extra Jelly	<p>are the products brought to a semi solid gelled consistency which should be practically free from suspended particles and made from the juice and/or aqueous extracts of one or more fruits, mixed with sugars and/or carbohydrate sweeteners such as honey, with or without the addition of water</p> <p>For some (extra) jellies, consumers prefer non-clarified juices to be used. Those may contain some suspended particles.</p>

3. Essential Composition

3.1.2 c) The wording is misleading as it can be interpreted in different ways one of which entailing a major reduction in the quantity of fruit coming from the endocarp. 7,5% of 20% would mean 15 g of fruit from the endocarp for 1 000 g of finished product where as it should be 200g of citrus out of which 75 g obtained from the endocarp.

We suggest the following wording:

The product as defined in Section 2.1 shall be produced such that **the quantity of citrus fruit used in the manufacture of 1 000 g of finished product must not be less than 200 g of which at least 75 g must be obtained from the endocarp.**

4.4. Firming agents - the table should be amended as follows:

In all products except extra jam and extra jelly

INS No.	Name of Food	Additive
227	Calcium hydrogen sulphite	500 mg/kg
170 (i)	Calcium carbonate	Limited by GMP
327	Calcium lactate	
509	Calcium chloride	
578	Calcium gluconate	

4.5. Flavourings- the table should be amended as follows:

Natural fruit essences of the named fruits in the respective product	Limited by GMP
Natural mint flavour	
Natural cinnamon flavour	
Vanilla and vanilla extracts, vanillin	

4.6. Preservatives – As item 3.2 stipulates that the products where the sugars have been replaced wholly or partially by sweeteners are not covered by the Standard, the table should be amended as indicated below.

INS No.	Name of Food Additive	Maximum Level
200 - 203	Sorbic acid and its sodium, potassium and calcium salts	1 g/kg single or in combination
210 - 213	Benzoic acid and its sodium, potassium and calcium salts	
214 – 216 and 218	Ethyl, propyl and methyl p-hydroxybenzoate	
220	Sulphur dioxide (residual carry over)	50 mg/kg in the end product except when made with sulphited fruit when a maximum level of 100 mg/kg is permitted in the end product (except extra jam and extra jelly)

4.8 Colours – The following additives must be deleted:

INS No.	Name of Food Additive	Maximum Level
129	Allura red AC	100 mg/kg
133	Brilliant blue FCF	singly or in combination
143	Fast Green FCF	

7.1.1 Minimum fill

For small jars containing for instance 25g or 50g of finished product the minimum fill of 90% of the water capacity of the container can never be reached. It can also be the case with jars containing 340 g of jam depending of the type of jar. This paragraph should be deleted

8.3 Fruit quantity and sugar declaration

8.3.1 ~~Depending on the legislation or requirements of the importing country,~~ the products covered by this Standard may also shall give an indication of the fruit ingredient content in the form of “prepared with X g of fruit per 100g” and the total sugar content with the phrase “total sugar content X g per 100g”.

The declaration of the fruit quantity and of the sugar content should not be linked to the provisions laid down in the importing country, as the major objective of the Standard is precisely to facilitate international trade.

ANNEX

- Title - “low fruit jam” is not known in many countries and is not a term that the industry would favour especially as the minimum fruit content is specified.
- Definition - the “unconcentrated fruit” requirement should be retained to uphold the higher quality of extra jams above jams.
- Marmalade – the presence of peel in marmalade should be optional and not mandatory.
- Soluble solids – the U.S. proposal is too high. The EU Standard as incorporated in the main Standard text should be retained. Higher sugar content would not be well perceived especially as the overall tendency is to plead for a reduction of sugar intake all over the world and especially in some developed regions.