JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX ALIMENTARIUS COMMISSION
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REPORT OF THE 23rd SESSION OF THE
CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES
Arlington, VA (Washington DC metro area), U.S.A.
16 – 21 October 2006

DRAFT CODEX STANDARD FOR PROCESSED TOMATO CONCENTRATES (Agenda Item 3b)[10]

39. The Committee revised the draft Standard section by section and, in addition to editorial and consequential changes, agreed on the following amendments:

Section 1 - Scope

40. The Committee agreed to amend the Scope to clarify that products that contained skins and seeds such as "pizza toppings" and "home-style" products were excluded from this Section.

Section 2.1 - Product Definition

41. The Committee replaced "natural tomato soluble solids" with "natural total soluble solids" and agreed to apply this throughout the text and to the Standard for Preserved Tomatoes, where applicable. It also agreed to a tomato concentration of 7% natural total soluble solids.

Sections 2.2 - Product Designation

42. The Committee had an exchange of views on the designations for tomato puree and tomato paste. Some delegations were of the opinion that the provisions were overly restrictive and could impede product innovation and proposed that the level for natural total soluble solids for tomato paste be no less than 20% or to delete the value and to refer to national legislation. Several other delegations supported retention of these provisions and noted that the levels proposed for tomato paste and puree, respectively, were in the current Codex Standard and had not previously impeded trade and reflected general production practices. The Committee thus agreed to retain the product designations for tomato puree and tomato paste, respectively.

43. In addition, “Aromatic plants” was replaced by “aromatic herbs” in line with an earlier decision.

Section 3.1.2 – Other Permitted Ingredients

44. The Committee did not agree to a proposal to include sugar to the list with a footnote on the measurement of concentration without sugars, on the understanding that the addition of sugar would affect the quality of the product by altering the soluble solids content which in turn would create difficulties in relation to the measurement of soluble solids. The delegation of the European Community further drew the attention of the Committee to the *WHO Global Strategy on Diet, Physical Activity and Health* and noted that the undue addition of sugars was in conflict with the recommendations of this Strategy.

Section 3.2.2.1 - Mineral Impurities

45. The footnote clarifying which impurities were being referred to was correctly placed within this Section.

Section 3.2.2.3 - Mould Count

46. A Delegation was of the opinion that this Section was not necessary in the Standard, since it was not a public health issue and proposed its deletion. Several delegations were of the opinion that this Section was essential to the Standard to avoid the use of raw material of poor quality and others proposed to set a maximum level for mould counts. The Committee recalled its earlier decision to allow for mould counts to be set according to national legislation of importing countries due to the difficulty to compromise on a value since tolerances for mould counts varied considerably amongst national legislations. In view of this, it agreed to retain the text as proposed.

Section 3.2.2.3 - pH

47. The Committee agreed to retain the pH value as proposed.

Section 4 – Food Additives

48. The Committee agreed to incorporate the list of food additives as recommended by the Working Group on Food Additives.

Section 5 - Contaminants

49. Sections 5.1.2 and 5.2.2 were amended to clarify what needed to be taken into account when considering concentration factors for maximum pesticide residue limits and maximum contaminant levels. The Committee agreed to apply this decision across Codex standards for processed fruits and vegetables where appropriate.

Section 7 - Weights and Measures

50. The Committee agreed to align this Section in accordance with a previous decision taken in this regard with the exception of provisions for minimum drained weight as not applicable to processed tomato concentrates.

Section 8.1 - Name of Product (labelling)

51. An additional provision, Section 8.1 (d), was inserted to allow for labelling of specific ingredients that may affect the characteristic flavour of the product in order not to mislead the consumer in line with the language applying in other Codex standards for processed fruits and vegetables.

Section 9 – Methods of Analysis and Sampling

52. The Committee agreed to incorporate the list of methods of analysis as recommended by the Working Group on Methods of Analysis and Sampling.

53. The Committee noted Australia's reservation about the prescriptive quality parameters in the Standard as the country considered these to be unnecessary and potentially trade restrictive. The delegation of Cuba also expressed its reservation in this regard.

Status of the draft Codex Standard for Processed Tomato Concentrates

54. The Committee agreed to forward the Standard to the Commission for adoption at Step 8 (Appendix III).

[10] ALINORM 05/28/27, comments from Australia, Brazil, Cuba, European Community, Malaysia, Panama, Thailand, United States, Uruguay, Venezuela, and the World Processing Tomato Council (CX/PFV06/23/5).

DRAFT CODEX STANDARD FOR PROCESSED TOMATO CONCENTRATES

(AT STEP 8)

1 SCOPE

This Standard applies to the product as defined in Section 2 below, and offered for direct consumption, including for catering purposes or for repacking if required. This Standard also applies to the product when indicated as being intended for further processing. The Standard does not include products that contain seeds and skins such as "pizza toppings" and other "homestyle" products as well as products commonly known as tomato sauce, chilli sauce, and ketchup, or similar products which are highly seasoned products of varying concentrations containing characterising ingredients such as pepper, onions, vinegar, etc., in quantity that materially alter the flavour, aroma and taste of the tomato component.

2 DESCRIPTION

2.1 PRODUCT DEFINITION

Processed tomato concentrate is the product:

(a) prepared by concentrating the juice[1] or pulp obtained from substantially sound, mature red tomatoes (*Lycopersicon/Lycopersicum esculentum* P. Mill) strained or otherwise prepared to exclude the majority of skins, seeds and other coarse or hard substances in the finished product; and

(b) preserved by physical means.

The tomato concentration shall be 7% or more of natural total soluble solids[2], but not dehydrated to a dry powder or flake form.

2.2 PRODUCT DESIGNATION

Tomato concentrate may be considered "Tomato Puree" or "Tomato Paste" when the concentrate meets these requirements:

2.2.1 **"Tomato Puree"** – Tomato concentrate that contains no less than 7% but less than 24% of natural total soluble solids.

2.2.2 **"Tomato Paste"** – Tomato concentrate that contains at least 24% of natural total soluble solids.

3 ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 COMPOSITION

3.1.1 Basic Ingredients

Processed tomato concentrate as defined in Section 2.1.

3.1.2 Other Permitted Ingredients

(a) salt (sodium chloride) in accordance with the Codex Standard for Food Grade Salt (CODEX STAN 150-1985);

(b) spices and aromatic herbs (such as basil leaf, etc.) and their natural extracts;

(c) lemon juice (single strength or concentrated) used as an acidulant; and

(d) water.

3.2 QUALITY CRITERIA

Processed tomato concentrates shall have good flavour and odour, fairly good red colour, and shall possess a homogeneous (evenly divided) texture, characteristic of the product.

3.2.1 Definition of Defects

Processed tomato concentrates shall be prepared in accordance with good manufacturing practices (GMP), from such materials and under such practices that the product is substantially free of extraneous plant materials, this including other objectionable material and shall be practically free of mineral impurities.

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[1] In this Standard, "juice" must not be intended as the fruit juice (including tomato juice) as defined in the Codex General Standard for Fruit Juices and Nectars (CODEX STAN 247-2005).

[2] The concentrations are measured on the product without added salt.

Consistent with its intended use, these conditions are fulfilled when:

(a) the product is practically free of objectionable tomato peel;

(b) the product is practically free of seeds or particles of seeds;

(c) the presence of any extraneous plant material other than seed and peel and other than those used as seasonings cannot be detected by the naked eye, and can only be seen under microscope; and

(d) the product is practically free of dark specks or scale-like particles.

3.2.2 **Defects and Allowances**

3.2.2.1 ***Mineral impurities***[3]

The mineral impurity content does not exceed 0.1% of the natural total soluble solids content.

3.2.2.2 ***Lactic Acid***

The content of lactic acid (total) does not exceed 1% of the natural total soluble solids content.

3.2.2.3 ***Mould Count***

Mould count for processed tomato concentrates to be set according to the legislation of the country of retail sale.

3.2.2.4 ***pH***

The pH must be below 4.6.

3.3 **CLASSIFICATION OF "DEFECTIVES"**

A container that fails to meet the natural total soluble solids requirements, as set out in Section 2.2, and/or one or more of the applicable quality requirements, as set out in Section 3.2, should be considered as a "defective".

3.4 **LOT ACCEPTANCE**

A lot should be considered as meeting the applicable quality requirements referred to in Section 3.2 when:

(a) the number of "defectives", as defined in Section 3.3, does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5; and

(b) the maximum allowance for mould count is not exceeded (see Section 3.2.2.3).

These acceptance criteria do not apply to non-retail containers.

4 FOOD ADDITIVES

4.1 **ACIDITY REGULATORS**

INS No.	Name of the Food Additive	Maximum Level
330	Citric Acid	GMP
331(i)	Sodium dihydrogen citrate	
331(iii)	Trisodium citrate	
332(i)	Potassium dihydrogen citrate	
332(iii)	Tripotassium citrate	
333	Calcium citrates	

5 CONTAMINANTS

5.1 **PESTICIDE RESIDUES**

5.1.1 The product covered by the provisions of this Standard shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this product.

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[3] Sand, soil and any other impurities insoluble in hydrochloric acid.

5.1.2 In order to consider the concentration of the product, the determination of the maximum pesticide residue limits shall take into account the natural total soluble solids, the reference value being 4.5 for fresh fruit.

5.2 OTHER CONTAMINANTS

5.2.1 The product covered by the provisions of this Standard shall comply with those maximum levels for contaminants established by the Codex Alimentarius Commission for this product.

5.2.2 In order to consider the concentration of the product, the determination of the maximum levels for contaminants shall take into account the natural total soluble solids, the reference value being 4.5 for fresh fruit.

6 HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969), and other relevant Codex texts such as codes of hygienic practice and codes of practice.

6.2 The products should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

7 WEIGHTS AND MEASURES[4]

7.1 FILL OF CONTAINER

7.1.1 Minimum Fill

The container should be well filled with the product which should occupy not less than 90% (minus any necessary head space according to good manufacturing practices) of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20°C which the sealed container will hold when completely filled.

7.1.2 Classification of "Defectives"

A container that fails to meet the requirement for minimum fill of Section 7.1.1 should be considered as a "defective".

7.1.3 Lot Acceptance

A lot should be considered as meeting the requirement of Section 7.1.1 when the number of "defectives", as defined in Section 7.1.2, does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.

8 LABELLING

8.1 The product covered by the provisions of this Standard shall be labelled in accordance with the latest edition of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985). In addition, the following specific provisions apply:

8.2 NAME OF THE PRODUCT

The name of the product shall be:

(a) "Tomato Puree" if the food contains not less than 7% but less than 24% natural total soluble solids;

(b) "Tomato Paste" if the food contains not less than 24% natural total soluble solids;

(c) Another denomination usually employed in the country accompanied by the declaration of the percentage of the natural total soluble solids; or

(d) If an added ingredient, as defined in Section 3.1.2, alters the flavour characteristic of the product, the name of the food shall be accompanied by the term "flavoured with X" or "X flavoured" as appropriate.

8.3 DECLARATION OF THE PERCENTAGE OF NATURAL TOTAL SOLUBLE SOLIDS

The percentage solids may be included on the label in either of the following manners:

(a) The minimum percentage of natural total soluble solids (example: "Minimum Solids - 20%").

(b) A range within 2% of the natural total soluble solids (example: "Solids - 20% to 22%").

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[4] The provisions in this Section do not apply to non-retail containers.

8.4 LABELLING OF NON-RETAIL CONTAINERS

Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

9 METHODS OF ANALYSIS AND SAMPLING

The methods of analysis listed below will be considered by the Codex Comité on Methods of Análisis and Sampling for endorsement. The following should be taken in account when submitting comments on such methods:

The CCMAS noted that it would not be procedurally correct to endorse a method before relevant Codex provisions had been established. It is noted that where there is a specification or labelling requirement in the Standard, it is necessary to recommend a method(s) for the provision. However, if there is no specification or labelling requirement, there is no need to select methods of analysis.

Governments and Observers wishing to submit comments on methods of analysis listed below should do so in conformity with the *General Criteria for the Selection of Methods of Analysis* as set out in the *Principles for the Establishment of Codex Methods of Analysis* and the *Relations between Commodity Committees and General Committees (Methods of Analysis and Sampling)* of the Codex Alimentarius Procedural Manual and the *Recommendations for a Checklist of Information required to evaluate Methods of Analysis submitted to the Codex Committee on Methods of Analysis and Sampling for Endorsement* (Codex standards and related texts including the Procedural Manual are available on the Codex website at: http://www.codexalimentarius.net/web/).

Provision	Method	Principle	Note	Recommendation CCPFV to CCMAS	Type	Status
Fill of containers	CAC/RM 46-1972 (Codex General Method for processed fruits and vegetables)	Weighing	The CCMAS retained the method while deleting the references to "metal containers" and refer to ISO 90:1:1986 for determination of water capacity in metal containers.	ADD	I	
Lactic Acid	EN 1139	Enzymatic determination	European Industry General Method for determination of Lactic acid in processed tomato concentrates	ADD		
Mineral impurities (sand)	AOAC 971.33 (Codex General Method for processed fruits and vegetables)	Gravimetry	The CCMAS endorsed AOAC 971.33 as a general method for the determination of mineral impurities in jams, jellies and marmalades and processed tomato concentrates. This method replaces CAC/RM 49/1972.		I	E
Mould count	AOAC 965.41	Howard mould count		ADD	I	
pH	AOAC 981.12	Potentiometry		ADD	I	
pH	NMKL 179:2005		The CCMAS endorsed this method for the determination of pH in processed fruits and vegetables (except canned bamboo shoots)		II	

Provision	Method	Principle	Note	Recommendation CCPFV to CCMAS	Type	Status
Sodium Chloride	ISO 3634:1979 expressed as sodium chloride- (Codex General Method)	Potentiometry			III	E
Solids (soluble)	AOAC 932.12 ISO 2173:1978 (Codex General Method for processed fruits and vegetables)	Refractometry		ADD	I	
Tomato soluble solids	AOAC 970.59		AOAC 970.59 is already contained in CX/STAN 234/1999 for processed tomato concentrates.		I	E