

codex alimentarius commission



FOOD AND AGRICULTURE
ORGANIZATION
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HEALTH
ORGANIZATION



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ALINORM 03/39A

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

Twenty-Sixth Session

Rome, 30 June - 5 July 2003

REPORT OF THE THIRD SESSION OF THE

***AD HOC* CODEX INTERGOVERNMENTAL TASK FORCE ON FRUIT AND VEGETABLE JUICES**

Salvador (Bahia), Brazil, 6 - 10 May 2003

NOTE: This Report includes Codex Circular Letter CL 2003/19-FJ

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CX 5/100

CL 2003/19-FJ
May 2003

TO : - Codex Contact Points
- Interested International Organizations

FROM : Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, FAO, 00100 Rome, Italy

SUBJECT : **Distribution of the Report of the 3rd Session of the *Ad Hoc* Codex Intergovernmental Task Force on Fruit and Vegetable Juices**

PART A: MATTERS FOR ADOPTION BY THE 26TH SESSION OF THE CODEX ALIMENTARIUS COMMISSION

1. *Proposed Draft Codex General Standard for Fruit Juices and Nectars at Step 5/8* (paras. 86 – 87 and Appendix II)

Governments and international organizations wishing to propose amendments or to comment on the above Proposed Draft Standard should do so in writing in conformity with the *Guide to the Consideration of Standards at Step 8 of the Procedure for the Elaboration of Codex Standards Including Consideration of Any Statements Relating to Economic Impact* (Codex Alimentarius Procedural Manual, 12th Edition, pages 23-25) to the Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy (Fax: +39 (06) 5705 4593; E-mail: codex@fao.org *preferably*), **before 20 JUNE 2003.**

2. *Proposed Draft Minimum Brix Level for Reconstituted Juice and Reconstituted Purée and Minimum Juice and/or Purée Content for Fruit Nectars (% v/v) – grape, guava, mandarine/tangerine, mango, passion fruit and tamarind (Indian date) juice - at Step 5* (para. 88 and Appendix III)

Governments and international organizations wishing to submit comments regarding the implications which the proposed draft Brix Level/Purée Content or any provisions thereof may have for their economic interest should do so in writing in conformity with the *Uniform Procedure for the Elaboration of Codex Standards and Related Texts* (at Step 5) (Codex Alimentarius Procedural Manual, 12th Edition, pages 19-21) to the Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy (Fax: +39 (06) 5705 4593; E-mail: codex@fao.org *preferably*), **before 20 JUNE 2003.**

PART B: REQUEST FOR COMMENTS AND INFORMATION

3. *Proposed Draft Minimum Brix Level for Reconstituted Juice and Reconstituted Purée and Minimum Juice and/or Purée Content for Fruit Nectars (% v/v) – lemon, lime, orange and pineapple juice – at Step 3* (para. 89 and Appendix IV)

Governments and international organizations wishing to submit comments regarding the implications which the proposed draft standards or any provisions thereof may have for their economic interest should do so in writing in conformity with the *Uniform Procedure for the Elaboration of Codex Standards and Related Texts* (at Step 3) (Codex Alimentarius Procedural Manual, 12th Edition, pages 19-21) to the Secretary, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy (Fax: +39 (06) 5705 4593; E-mail: codex@fao.org *preferably*), **before 31 MAY 2004.**

SUMMARY AND CONCLUSIONS

The 3rd Session of the *Ad Hoc* Codex Intergovernmental Task Force on Fruit and Vegetable Juices reached the following conclusions:

MATTERS FOR CONSIDERATION BY THE 26TH SESSION OF THE CODEX ALIMENTARIUS COMMISSION

The Task Force:

- Agreed to advance the *Proposed Draft Codex General Standard for Fruit Juices and Nectars* to the 26th Session of the Codex Alimentarius Commission for final adoption at Step 5/8 (with omission of Steps 6/7) (paras. 87 and 87).
- Agreed to advance *Proposed Draft Minimum Brix Level for Reconstituted Juice and Reconstituted Purée and Minimum Juice and/or Purée Content for Fruit Nectars (% v/v) – grape, guava, mandarine/tangerine, mango, passion fruit and tamarind (Indian date) juice* to the 26th Session of the Codex Alimentarius Commission for primary adoption at Step 5 (para. 88).

OTHER MATTERS OF INTEREST TO THE COMMISSION

- Agreed to retain *Proposed Draft Minimum Brix Level for Reconstituted Juice and Reconstituted Purée and Minimum Juice and/or Purée Content for Fruit Nectars (% v/v) – lemon, lime, orange and pineapple juice* at Step 3 for circulation, comments and finalization by the 4th Session of the Task Force (para. 89).

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INTRODUCTION

1) The 3rd Session of the *Ad Hoc* Codex Intergovernmental Task Force on Fruit and Vegetable Juices was held in Salvador (Bahia), from 6 to 10 May 2003 by courtesy of the Government of Brazil. The Session was chaired by Dr Rudi Braatz, Division Chief of Sanitary Affairs at the World Trade Organization, Ministry of Agriculture and Supply. Delegates from 19 Member countries and Observers from 6 international organizations attended the Session. The List of participants is attached to this report as Appendix I.

OPENING OF THE SESSION

2) Mr. Macao Tadano, Secretary of Agribusiness Inspection and Protection Services of the Ministry of Agriculture, Livestock and Food Supply, opened the Session on behalf of the Government of Brazil. Mr. Paulo Roberto de Oliveira Reis E Souza, Federal Delegate of the Ministry of Agriculture, Livestock and Food Supply and Mr. Casio Peixoto, Director of the State Agency of Agribusiness Protection Services of the Ministry of Agriculture, Livestock and Food Supply also addressed the Task Force.

ADOPTION OF THE AGENDA (Agenda Item 1)¹

3) The Task Force adopted the Provisional Agenda as proposed.

MATTERS OF INTEREST TO THE TASK FORCE ARISING FROM THE EXECUTIVE COMMITTEE OF THE CODEX ALIMENTARIUS COMMISSION AND OTHER CODEX COMMITTEES (Agenda Item 2)²

4) The Task Force noted that the document was presented mainly for information while the question of endorsement of methods of analysis for fruit and vegetable juices and nectars as well as matters related to sampling, relationship between the analytical results, the measurement of uncertainty and recovery factors, would be considered under Section 8 – Methods of Analysis and Sampling of the General Standard for Fruit Juices and Nectars.

CONSIDERATION OF PROPOSED DRAFT CODEX STANDARDS AT STEP 4

PROPOSED DRAFT CODEX GENERAL STANDARD FOR FRUIT JUICES AND NECTARS (Agenda Item 3a)³

5) The Task Force noted that a document prepared by the Brazilian Secretariat was made available to the delegates containing the proposed draft Standard with the written comments submitted to this Session so that views of members countries that might have not been present at the Session could be taken into account although they might have not been discussed in detail at the Plenary.

6) The Task Force revised the proposed draft Codex General Standard for Fruit Juices and Nectars section by section and agreed on the following changes:

Section 2 - Description

Section 2.1.1 Fruit Juice

Third Paragraph

7) The Task Force agreed to amend the first sentence of this paragraph by inserting the word “juices of” before “the fruit” for clarity.

¹ CX/FJ 03/1.

² CX/FJ 03/2 and CX/FJ 03/3-Add.1.

³ CX/FJ 03/3; CX/FJ 03/3-Add.1 (comments from Brazil, France, Israel, Poland, Russia, Switzerland, the United States of America, Uruguay, International Federation of Fruit Juice Producers (IFU)); CX/FJ 03/4 (comments from Brazil, France, Switzerland and the United States of America); CRD 1 (comments from Iran); CRD 2 (comments from the European Community); CRD 3 (comments from Canada); CRD 4 (comments from Panama); CRD 5 (comments from Japan); CRD 6 (comments from the United States of America); CRD 7 (report of the Drafting Group on Methods of Analysis); CRD 8 (comments from India); CRD 9 (report of the Drafting Group on Brix levels (methodology)).

8) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, pointed out that only fruit juice prepared by “suitable physical processes” could maintain the essential physical, chemical, organoleptical and nutritional characteristics of the juice. Several delegations recalled that this issue had been discussed at length at previous sessions of the Task Force and that the wording of the first sentence corresponded to the decision taken at the 2nd Session of the Task Force⁴ in order to allow for “suitable processes” in the elaboration of fruit juices as long as they complied with the aforesaid parameters.

9) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, expressed its reservation regarding the non-inclusion of the word “physical” qualifying the permitted methods of extraction. However, in the spirit of advancing the development of the Standard, the Delegation stated that “according to the European Community’s interpretation of the current wording of this sentence, only “suitable physical means of extraction” could maintain the essential physical, chemical, organoleptical and nutritional characteristics of the juice.”

10) Some delegations noted that an excessive addition of pulp and cells might alter the quality of the juice and therefore, the condition of such addition would need to be described either by a definition for pulp and cells or the establishment of a quantitative limitation of this addition. Other delegations indicated that this concern was adequately addressed in the Labelling Section (see para. 60). These delegations pointed out that the establishment of a limit was not viable in practice due to the different technologies involved in the elaboration of fruit juices and the peculiarities of the different fruits and/or their varieties which made difficult to determine the necessary amount of these products that would not lead to changes in the quality of the juice.

11) A definition, proposed by the Delegation of France, was therefore considered which referred to pulp and cells as products obtained from the same kind of fruit from which the juice came without removing the juice. In this regard, it was indicated that pulp and cells were obtained through the ongoing extraction process and that the current technology available could not avoid that some of the juice were removed during the extraction process. Since this issue related particularly to citrus fruit juices, the Task Force agreed to add a footnote to indicate that for citrus fruits, pulp or cells were the juice sacs obtained from the endocarp.

12) The Delegation of India propose to align the text in Section 2.1.1.1 by referring to “physical means” as opposed to “mechanical extraction processes” as “physical means” might envisage processes other than mechanical extraction. The Task Force recalled that the wording of this paragraph had been already agreed at previous sessions of the Task Force⁵ and therefore, it decided to maintain the text unchanged. The Delegation of India expressed its reservation on this decision.

Section 2.1.2 Concentrated Fruit Juices

13) The Task Force agreed to replace the term “water extracted juice” to read “water extracted soluble fruit solids” to avoid confusion with water extracted fruit juices defined in Section 2.1.3.

Section 2.1.3 – Water Extracted Fruit Juice

14) There was an exchange of views on the opportunity to include a list of fruit juices that could be produced according to this definition. A number of delegations indicated that this type of production applied particularly to tropical fruits and that the drawing of an exhaustive list of fruits might prevent future developments in this field. It was also indicated that the Standard provided for extraction of fruit juices by “suitable means” of all kind of fruits and therefore there was no need to limit the application of this method to certain types of fruits. Moreover, the Labelling Section also provided for provisions in this respect. In view of this, the Task Force decided not to pursue the consideration of this matter.

Section 2.1.5 Concentrated Fruit Purée

15) A footnote related to restoration of aromatic substances and volatile flavour components was inserted next to the term “restore” for consistency with previous sections.

⁴ ALINORM 03/39 paras. 16-18.

⁵ ALINORM 03/39 para. 12 and ALINORM 01/39 para. 12.

Section 2.1.6 Fruit Nectars

16) The Task Force amended the first sentence regarding the addition of sugars, carbohydrate sweeteners and/or sweeteners in other to avoid confusion regarding the nature of these products. It also agreed to simplify the last sentence of this paragraph related to mixed fruit nectars by referring to mixed fruit nectars obtained from two or more kinds of fruits.

Section 2.2 Species

17) The Delegation of India drew the attention of the Task Force to the fact that botanical names of fruits should not be used in the Standard, as there might be cases when fruits and/or some varieties of fruits not listed in the Annex could be used for the production of fruit juices. The Task Force noted that this matter was covered by Section 3.1.1(a) and (b) which allowed for other fruits/varieties of fruits not listed in the Annex to be used in the production of fruit juices. However, in order to address this concern, the Task Force agreed to refer to “fruit species” as oppose to “fruits” when referring to fruits not included in the Annex to the Standard. The Task Force further agreed that the fruits indicated in the Annex should also apply to fruit purée.

Section 3 – Essential Composition and Quality Factors

18) Additional changes to Section 3 related to methods of analysis are indicated in Section 8 – Methods of Analysis and Sampling (see paras. 69 - 71)

Section 3.1.2 (b)

19) The Task Force agreed to delete the reference to glucose syrup as it was already covered by the Codex Standard for Sugars while leaving the rest of the listing of syrups unchanged.

Section 3.1.2 (c)

20) The Task Force agreed to replace “subject to further national labelling requirements” by “subject to national legislation of the importing country” as this formula better clarified the purpose of the sentence in this provision and for consistency with the footnote in Section 4 - Food Additives. Accordingly, consequential changes were made throughout the text.

Section 3.1.2 (d)

21) The Task Force agreed to refer to Section 4.1 – Acidity Regulators as opposed to Section 4 as this was the specific Section in the Standard dealing with the food additives referred to in the text.

Section 3.1.2 (g)

22) The Task Force agreed to modify this Section so that the text clearly indicate the possibility of adding essential nutrients to the products defined in Section 2.1 for the purposes of fortification in order to allow for nutrition claims in the Labelling Section.

Quantitative limitation of sugars in fruit nectars and fruit juices other than pear and grape

23) The Task Force had an exchange of views on the need to limit the addition of sugars for both regulating acidity in fruit juices other than pear and grape and for sweetening purposes in fruit juices other than pear and grape and fruit nectars.

24) It was indicated that a quantitative limitation of the addition of sugars to these products would make the Standard unnecessarily restrictive. Moreover, it was noted that the amount of sugars in sweetened fruit juices and nectars was well regulated by the market forces. It was further noted that this issue was adequately covered in the Labelling Section of the Standard to avoid deceiving practices and misleading the consumer. In view of this consideration, the Task Force decided not to add any provision in this respect.

Section 3.2 – Quality Criteria

25) The Task Force agreed to delete the second sentence of the first paragraph as provisions for restoration of natural flavour components and addition of pulps and cells were already covered by Section 2.1 for the relevant products.

Section 4 – Food Additives

26) The Task Force agreed that the Maximum Levels for food additives applied to ready-to-drink products.

Section 4.1 Acidity Regulators

27) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, proposed that the use of malic acid should be restricted to pineapple juice only at a maximum level of 3g/l. Some delegations noted that malic acid was a food additive with an Acceptable Daily Intake (ADI) "Non Specified (NS)" which allowed its use at GMP level. These delegations also noted that malic acid was used in small amounts as an aid to calcium fortification.

28) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, proposed as a second option to leave malic acid at GMP level but to limit its use to pineapple juice only, as fruit nectars were highly consumed within the European Union. Those delegations in favour of keeping malic acid at GMP level for both pineapple juice and fruit nectars noted that problems of authenticity related with the use of malic acid might arise from any of the acidity regulators listed in Section 4.1. These delegations further noted that malic acid was not a low-priced acidifier to be linked to authenticity matters.

29) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, agreed not to pursue on this matter while expressing its reservation on the use of malic acid in fruit nectars at GMP level. In view of this, the Task Force decided to leave this entry unchanged.

Section 4.2 – Antioxidants

Section 4.4 – Preservatives

Section 4.5 - Sequestrants

30) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, proposed to limit the use of sulphites to orange, grapefruit, apple and pineapple juice for bulk dispensing in catering establishments. Some delegations questioned the use of sulphites as the same effect could be achieved by other more suitable technological means such as the use of ascorbic acid. These delegations proposed to remove sulphites from the list of permitted additives as they were preservatives, which were not allowed in their national legislations. Furthermore, these delegations noted the potential allergenicity associated with these compounds.

31) Other delegations stated that at the level permitted in the Standard, sulphites did not have a preservative function but an antioxidant effect and that the level set up in the Standard was in line with the ADI established for this compound. In addition, any hypersensitivity to these compounds could be addressed through the label. These delegations noted that countries had the right to keep their own limits in their national legislations but not to restrict the use of sulphites for the purposes of international trade. In this regard, it was further noted that there were juices traded internationally which utilized sulphites particularly in those zones of tropical climate.

32) A number of delegations expressed the need for preservatives listed in Section 4.4 due to their tropical climate. In this connection, it was noted that sodium tripolyphosphate (Section 4.5) was used to enhance effectiveness of preservatives listed in Section 4.4. In view of this, the Task Force agreed to keep these compounds while introducing a reference to national legislation of the importing country for sulphites (Section 4.2) and sequestrants (Section 4.5) at the suggestion of the Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session. In the case of sulphites, the Task Force further agreed to include an additional reference by which they should be used where there was a technological need.

Section 4.6 Stabilizers

33) The Task Force agreed that pectins should be limited at GMP for cloudy juices and fruit nectars only.

Section 4.7 Sweeteners

34) Different views were expressed regarding the use of cyclamic acids and its salts. Some countries indicated that the use of cyclamic acid and its salts in fruit juices were prohibited based on food safety considerations, while others indicated that the use of these compounds should be subject to national legislation of the importing country. In view of this, the Task Force agreed to add a footnote to this effect. It also clarified that sweeteners could be used singly or in combination.

Section 4.8 Processing Aids

Antifoaming agents, Clarifying Agents, Filtration Aids and Flocculating Agents

35) The Task Force noted that polydimethylsiloxane was listed as an antifoaming agent at 10 mg/kg for fruit and vegetable juices in the General Standard for Food Additives (GSFA) and also as an antifoaming agent in the Inventory List for Processing Aids of the Codex Alimentarius. Several delegations were of the opinion that polydimethylsiloxane should be treated as a processing aid for the purposes of this Standard as the residues in these foods were below the amount that could have a technological effect in the final product. In view of this, the Task Force agreed to request the Codex Committee on Food Additives and Contaminants (CCFAC) to withdraw polydimethylsiloxane from the GSFA and to consider it as a processing aid for the products covered by this Standard. The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, expressed its reservation on this decision.

36) The Task Force clarified that the correct spelling for clays and resins were “adsorbent” and that “activated” carbon could be used only from plants.

37) The Task Force had an exchange of views on the need to keep gelatin on the list of processing aids due to the safety concern associated with this compound account being taken that processing aids were not subject to labelling requirements. However, the Task Force agreed to remove the square brackets around “gelatine” while clarifying the source “*from skin collagen*” as this part of the animal was not in association with other parts (e.g. bones) that might pose a health risk to consumers. The Delegation of India expressed its reservation on those processing aids which were not from plant origin.

38) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, proposed the removal from the list of permitted processing aids of the following substances: chitosan, ion exchange resins, isinglass, kaolin and rice hulls. The Delegation indicated that they could release substances into the juice that might alter the quality of the product.

39) A number of delegations noted that the amount of material that could be released into the juice were not enough to change the quality of the product. These delegations also noted that according to Section 2.1.1 processing aids listed in Section 4.8 were not permitted to change the essential physical, chemical, organoleptical and nutritional characteristics of the juice. It was further noted that kaolin was an inert material. The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, decided to withdraw its earlier proposal while keeping its reservation on the use of these substances as processing aids in the elaboration of the products covered by the Standard. Consequently, chitosan, ion exchange resins, isinglass, kaolin and rice hulls were retained on the list of permitted processing aids.

40) The Task Force clarified that the figure of 10 mg/l of sulphur dioxide (SO₂) in grape juice related to residual SO₂ and not to the maximum level to which this compound could be added.

Enzyme Preparations

41) The Observer from the European Commission proposed to remove cellulases from the list of permitted processing aids due to the difficulties in controlling the use of this compound which might lead to abuse on the use of cellulases resulting in total liquefaction of the juice. It was noted that the use of cellulases as well as proteinases were limited to those preparations which would not result in a total liquefaction and would not substantially affect the cellulose content of the processed fruit. In this regard, it was indicated that there was analytical methodology available to determine cellulose which had been proven to be useful in the case of apple juice. The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, decided to withdraw its proposal while keeping its reservation on the use of cellulases. In view of this, the Task Force decided to remove the brackets around cellulases and proteinases.

Section 5 – Contaminants

Section 5.2 – Residues of Pesticides

42) The Task Force agreed to change the reference to “for these products” to read “for the respective fruits” as there were no maximum residue limits for pesticide residues regarding the products defined by the Standard but for individual agricultural commodities (e.g. fresh fruits and vegetables).

Section 6 - Hygiene

43) The Task Force agreed with the text as proposed.

Section 7 –Labelling

Section 7.1.1 – Name of the Product

44) The Observer of the European Commission introduced a proposal to differentiate between directly expressed fruit juices and fruit juice from concentrate in the name of the product. He noted that, in order to avoid misleading consumers about the nature of the product, Section 7.1.1.1 - Fruit Juice defined under Section 2.1.1 should read “*fruit juice as defined in Section 2.1.1.1 should be named as “[] juice”*” while “*fruit juice from concentrate as defined in Section 2.1.1.2 should be named as “[] juice from concentrate” or “juice of [] made from concentrate”*”.

45) Several delegations opposed this proposal and referred to the agreement reached at previous sessions of the Task Force by which Section 2.1.1 – Fruit Juice included both directly expressed fruit juices (Section 2.1.1.1) and fruit juice from concentrate (Section 2.1.1.2) although they were obtained by different processing methods. These delegations noted that the name of the product, “fruit juice”, was listed in Section 2.1.1 and that the form of the food was not addressed in the name of the product but, as stated in Section 4.1.2 of the Codex General Standard for the Labelling of Pre-packaged Foods (CODEX STAN 1-1985, Rev. 1-1991), “... *in conjunction with, or in close proximity to, the name of the food...*”. The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, advised that the form of the juice was considered to be part of the product name in the European Union and that this provision did not reflect that.

46) In view of the above consideration, the Task Force reached a compromise solution to move Section 7.1.2.1 (new 7.1.1.8) under Section 7.1.1, the section dealing with “The name of the Product”. It was noted that this change would be in line with the provisions of Section 4.1 of the Codex General Standard for the Labelling of Pre-packaged Foods.

47) The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, accepted the compromise solution as a constructive way to cover the labelling requirements and product categorization for juice made from concentrate as set out in the current EC legislation. The Delegation recalled that, according to the EC legislation “juice (made) from concentrate” was a specific product name. It reiterated that this concept would have been best reflected through the proposal made by the Observer of the European Commission as contained in CRD 2 (see also para. 44).

Section 7.1.1.7 – Mixed Fruit Juices/Nectars

48) The Task Force noted that there were no labelling provisions for these products and therefore, it agreed to introduce a new Section 7.1.1.7 to address this matter.

49) The Observer of the European Commission proposed to add a new Section with provisions that when a fruit juice product was manufactured from two or more fruits, except for lemon, the product name should include the names of the fruits used in descending order of the volume of fruit or purée used. In the case of three or more fruits, the indication of fruits used might also be replaced by the words “several fruits” or a similar wording or by the number of fruits.

50) The proposal was accepted by the Task Force except that it was agreed that lemon juice should not be exempted as provision for the use of lemon/lime juice as acidifying agents in fruit juices/nectars were adequately covered by Section 3.1.2(c) and, it was also agreed to align the order of the fruits in the blend mixture with Section 4.2.1.2 of the Codex General Standard for the Labelling of Pre-packaged Foods by referring to “descending order of proportion by “weight (m/m)” as opposed to “volume”. However, the Task Force noted that Section 4.2.1.2 required that a list of ingredients be declared in descending order of ingoing “weight (m/m)” while Section 4.3.2(ii) required that net contents for liquid foods be declared by “volume” and therefore, it decided to seek the advice of the Codex Committee on Food Labelling as to how to apply provisions in Section 4.2.1.2 in relation to Section 4.3.2 as regards to fruit juices/nectars.

Section 7.1.2 Additional Requirements

51) The Task Force agreed to delete the word “shall” from the introductory statement.

Sections 7.1.2.3 (new 7.1.2.2) and 7.1.2.9 (new 7.1.2.7)Section 7.1.2.3 (new 7.1.2.2)

52) Some delegations commented that nectars were widely viewed as “natural” products and that when artificial sweeteners such as those listed in Section 4.7 were used, the name should include the term “high intensity sweetener” or “artificial sweetener” to reveal their presence. It was commented that the term “sweetener” might suggest to consumers that the product contained only natural carbohydrate sweeteners rather than artificial sweeteners. In this regard, the Task Force noted that in Codex “sweetener” was regarded as a food additive and defined as “*a non-sugar substance which imparts a sweet taste to a food*” with technological functions as sweetener, artificial sweetener and nutritive sweetener. It further noted that the functional class allocated to such additives in the Codex General Standard for the Labelling of Pre-packaged Foods was “sweetener”. In view of this, the Task Force agreed to refer to “sweeteners listed in Section 4.7” to make it clear that the term “sweetener” referred to food additives and apply this reference throughout the text.

53) The Task Force agreed that, when adding one or more of the sugars and/or syrups described in Section 3.1.2 (a) and (b) to products defined in Section 2.1.1 to 2.1.5, the statement “sugars added” must be part of the name of the product. It further agreed that fruit nectars and mixed fruit nectars (Section 2.1.6) should be exempted from this declaration as the addition of sugars and/or syrups to these products was already included in their definition. However, when any of the sweeteners listed in Section 4.7 were added to fruit nectars or mixed fruit nectars, the statement “with sweetener(s)” must be included in conjunction with or in close proximity to the product name.

54) The Task Force recognized that the partial or total replacement of sugars and/or syrups listed in Section 3.1.2 (a) and (b) by one or more of the sweeteners listed in Section 4.7 did not entitle a product to make a nutrition claim (e.g. “light”, “reduced/low in calories”, etc.). It was indicated that such products envisaged nutritional aspects considerations, calorie content, etc. and therefore, they should be not considered under this labelling provision but under the section dealing with nutrition labelling/claims.

Section 7.1.2.9 (new 7.1.2.7)

55) In view of the above consideration, the Task Force agreed to add an additional paragraph in Section 7.1.2.9 (new 7.1.2.7) to state that for fruit nectars in which sugars and/or other carbohydrate sweeteners have been wholly or partially replaced by sweetener(s), any nutrient content claims related to the reduction of sugars should conform with the Codex General Guidelines on Claims (CAC/GL 1-1979, Rev. 1-1991), Codex Guidelines on Nutrition Labelling (CAC/GL 2-1985, Rev. 1-1993) and Codex Guidelines for Use of Nutrition Claims (CAC/GL 23-1997).

Sections 7.1.2.6 and 7.1.2.10

56) The Task Force agreed to delete these Sections as they were already covered by Sections 4.1.2 and 5.2 of the Codex General Standard for the Labelling of Pre-packaged Foods.

Section 7.1.2.11 (new 7.1.2.8)

57) The Task Force had an exchange of views on how to address on the label pictorial representation of fruits contained in mixed fruit juices in order not to mislead consumers. Some delegations felt that this provision should be either kept unchanged or removed from the Standard as it was adequately covered under different sections of the Codex General Standard for the Labelling of Pre-packaged Foods (e.g. General Principles, Quantitative Ingredient Declaration (QUID), etc.). Other delegations were of the view that some additional wording was needed to ensure that pictorial representation of fruits was not presented in such a way to confuse consumers regarding the true nature of the product. In view of this, the Task Force decided to rephrase the sentence to accommodate this concern.

Section 7.1.2.12 (new 7.1.2.9)

58) The Task Force agreed that the term “*sparkling*” also be allowed to be used on the label when carbon dioxide was added to fruit juices.

Section 7.1.2.13 (new 7.1.2.10)

59) The Task Force agreed to add “*and/or aromatic herbs*” in addition to “spices” in tomato juices and to indicate that, when these products were added, besides the term “spiced” the words “*and/or the common name of the aromatic herb*” should appear on the label near the product name.

Section 7.1.2.14 (new 7.1.2.11)

60) The Delegation of Thailand questioned the labelling provisions on pulp and cells since there was no maximum level established for these products in the Standard and therefore no analytical methods could be applied for their determination. The Task Force noted that this Section was introduced as a compromise solution of the adoption of the term “restoration” in Section 2.1. The Task Force recalled that in practice it was technologically difficult to establish a maximum level for the addition of pulp of cells (see para. 10) while excessive additions of pulp and cells could still be determined by analytical methods, as listed in the relevant Section of the Standard, to avoid adulteration of the product. Consequently, the Task Force decided to leave this Section unchanged.

Section 8 - Methods of Analysis and Sampling

61) The 23rd Session of the Codex Committee on Methods of Analysis and Sampling (CCMAS) confirmed that methods of analysis proposed by Codex commodity committees for endorsement should correspond to provisions in Codex standards. The CCMAS recalled that methods that did not correspond to a specific provision could not be considered for endorsement. Consequently, the CCMAS did not endorse methods of analysis forwarded by the Task Force and asked it to identify the methods corresponding to specific provisions in the Codex Standards under consideration.⁶

62) In view of the above, the Drafting Group on the Methods of Analysis and Sampling was reconvened to consider this issue as well as other matters concerning sampling, measurement of uncertainty, recovery factors, performance methods, etc. as requested by CCMAS.

63) The Chairperson of the Drafting Group, Mrs. Carla Barry (Canada), introduced CRD 7 and informed the Task Force about the conclusions and recommendations of the Drafting Group related to the identification of the provision and/or labelling requirement(s) and the corresponding methods of analysis in the proposed draft Codex General Standard for Fruit and Vegetable Juices as well as the request from CCMAS in relation to sampling, measurement of uncertainty, recovery factors, performance methods, etc.

64) The conclusions and recommendations of the Drafting Group on Methods of Analysis and Sampling were as follows:

Sampling

65) The General Guidelines on Sampling elaborated by CCMAS are applicable to fruit juices. In certain cases, for example Brix, the minimum value should be used and applied to every sample representing the lot. In other cases, an average value is used among countries. The Drafting Group agreed that they did not have the expertise required to address this issue and deferred the matter to CCMAS to advise on sampling from the general point of view, in order to ensure consistency throughout Codex.

Measurement Uncertainty

66) The Drafting Group agreed that an allowance for measurement uncertainty should be made when deciding whether an analytical result fell within a specification or not.

Recovery

67) Analytical results for quality, composition and authenticity should not be corrected for recovery.

Method Performance

68) The Drafting Group agreed to support the performance based approach to Methods of Analysis and in fact used that approach to establish the list of methods for juice commodity standards.

⁶ ALINORM 03/23 para. 24.

Methods of analysis for the proposed draft Codex General Standard for Fruit Juices and Nectars

69) The CCMAS reminded the Task Force that the methods proposed by the Codex commodity committee for endorsement should correspond to provisions in Codex standards. In order to overcome this problem and recognizing that a single method cannot be used to determine the overall authenticity, composition, and quality and that a combination of methods may be used, the Drafting Group recommended to the Task Force the addition of the following wording to Section 3 - Essential Composition and Quality Factors.

Section 3.3 - Authenticity

70) Authenticity is the maintenance of the product's essential physical, chemical, organoleptical, and nutritional characteristics of the fruit(s) from which it comes.

Section 3.4 - Verification of Composition, Quality, and Authenticity

71) Fruit juices and nectars should be subject to testing for authenticity, composition, and quality where applicable and where required. The analytical methods used should be those found in Section 8, Methods of Analysis and Sampling.

72) An additional column with the provision in the Standard was added to the list of the proposed methods which after CCMAS endorsement would be included in Section 8 of this Standard (see Appendix II to this report).

Volume 6 - Fruit Juices and Related Products

73) The Drafting Group reviewed the list of methods relevant to fruit juices listed in Volume 6, Part VI. and recommended that methods currently listed in Volume 6 on Fruit Juices, except for those for heavy metals, should be replaced with the list developed by the Drafting Group on Methods of Analysis. The Drafting Group noted that the methods for heavy metals were referred to Codex Committee on Food Additives and Contaminants by the second session of the Task Force.⁷

Methods of Analysis for Sweeteners and Sequestering Agents

74) The Drafting Group recommended that the Task Force ask CCFAC to propose methods for the sweeteners: acesulfame potassium, aspartame, cyclamic acid and its salts, saccharin and its salts, and sucralose and for the sequestering agent sodium tripolyphosphate.

75) The Task Force complemented the Drafting Group for their valuable work and **endorsed** the above conclusions and recommendations.

76) The Task Force noted that the question of establishing specific values for fruit juices corresponding to each method of analysis was complicated and required a new approach. The Task Force was of the view that previous fruit juice standards applied to a very small number of juices from specific fruits and that the current General Standard being developed covered a much wider range of juices, their mixtures and other fruit juice products and that a number of different methods were used internationally, therefore it was not possible to agree on the specific values at this stage. The Task Force concluded that the approach used by this Task Force should be to develop and only then agree upon specific values for all the varieties of fruit juices and other products covered by the General Standard on Fruit Juices and Nectars using the proposed methodology.

77) The Task Force agreed to request Mrs Carla Barry to attend the next session of the CCMAS in order to ensure that all technical questions which might arise at the CCMAS regarding the proposed methods for fruit juices and nectars be adequately replied.

Minimum Brix Levels

78) The Task Force noted that the report of the Drafting Group on Brix Level was contained in CRD 9. The Delegation of the United States introduced the document and gave a brief account of the deliberations of the Drafting Group in regard to determination of Brix levels for reconstituted juices and single strength juices.

⁷ ALINORM 03/39, para 50.

Annex I - Minimum Brix Level for Directly Expressed Juice

79) The Task Force had an exchange on views on the need to keep the table for Minimum Brix Levels for Directly Expressed Fruit Juices due to the difficulties in determining appropriate minimum Brix levels in single strength fruit juices. Some delegations stated that the minimum Brix level for single strength juice was a self-limiting problem as it was regulated by market demands and therefore, there was no need to address this matter in an international Standard. The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, agreed in principle with the deletion of the Table while indicating that there might be a need to come back on this matter some time in the future to discuss the addition of water to this type of juices.

80) In view of the above discussion, the Task Force agreed to delete Annex I on Minimum Brix Levels for Directly Expressed Juices. In taking this decision, it agreed to amend Section 3.1.1 (a) to make it clear that for directly expressed fruit juices the Brix level shall be the Brix as expressed from the fruit.

Annex II – Minimum Brix Level for Reconstituted Juice and Minimum Juice and/or Pureé Content for Fruit Nectars

81) The Task Force concurred with the recommendation of the Drafting Group to adopt Option 1 as contained in CL 2003/2-FJ as its methodology to develop average Brix levels representing world-wide production of fruit juices. It was noted that this methodology applied only to the determination of Brix levels for those fruits listed in Annex II for which it was not possible to establish a level at previous sessions of the Task Force. It was further noted that this methodology was a tool to facilitate the Task Force to establish minimum Brix levels nor the methodology to set up the level.

82) The Task Force agreed to introduce a footnote to allow countries consistently producing fruit juice with low Brix values that could not be adequately accommodated by Option 1 to be able to be marketed internationally. It was further agreed to apply this footnote to allow for apple and orange juice with a minimum Brix value not below 10°Brix. The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, indicated that the footnote did not adequately address the issue of blending of fruit juices which did not reach the minimum Brix level established with Option 1 as was the case for orange juice. The Delegation also stated that “mandatory labelling provisions for country of origin as provided for in Section 4.5 of the Codex General Standard of the Labelling of Prepackaged Foods would apply for products covered by this footnote.”

83) The Task Force noted that a minimum Brix level of 11.8 was obtained for orange juice by using the adopted method Option 1 based on the submitted data. The Task Force had a lengthy discussion with opposing views regarding the appropriateness of this value. The Delegation of Greece, speaking on behalf of the Member States of the European Union present at the Session, recalled that the minimum Brix level in the current Codex Standard for Orange Juice (CODEX STAN 45-1981) is 11.0 and that the increase from this value to 11.8 represent a major change with significant economic impact. The Delegation of Brazil suggested as a compromised solution a provisional minimum Brix level of 11.5 as a basis for discussions at the next session of the Task Force, as for this Delegation was clear that the provisional value of 11.5 was better than no value. The Delegation of the United States “requested the EC Member countries to provide data on the average Brix value of orange juice produced in countries that exported orange juice to the European Union so that a decision on the orange juice Brix level could be facilitated at the next session of the Task Force.” This Delegation also stated that it could not compromise on a minimum Brix level of 11.4 due to the authenticity related issues. The concept of a range of values subject to national legislation of importing countries was also discussed but no agreement could be reached on various ranges proposed by different delegations (e.g. 11.2 – 11.8 (US), 11.4 – 11.8 (US), 11.0 – 11.8 (EU), 11.2 – 11.6 (EU), etc.). The Task Force could not reach consensus on a provisional minimum Brix level for orange juice to be considered at its next Session and therefore, it decided to defer the discussion together with lime and lemon juice to the next session of the Task Force. Consequently, no minimum Brix levels were entered for lime and lemon juice.

84) Due to insufficient international diversity of data, the Task Force was unable to set up a final minimum Brix level for grape, guava, mandarin/tangerine, mango, passion fruit and pineapple juice. In view of this, it agreed to consider these values as provisional and to place them in a separate Appendix for further consideration at its next Session. The Delegation of Thailand indicated that its country had different Brix data for pineapple juice and therefore, it requested the Task Force to reconsider the provisional value allocated to this juice.

85) The Task Force agreed that all of those fruits for which a numerical Brix value was allocated should be sent to the Commission for final adoption with the exception of tamarind (Indian date) for which the minimum Brix value allocated did not represent the global production of this juice. It was also agreed to assign a value of 25% as minimum juice and/or purée content for those fruits with a minimum Brix level agreed to by the Task Force with the exception of nectarine (40%); tomato (50%) and watermelon (40%). In addition, it was agreed that acidity correction applied only to passion fruit and citrus fruit juices.

STATUS OF THE PROPOSED DRAFT CODEX GENERAL STANDARD FOR FRUIT JUICES AND NECTARS

86) The Task Force agreed to forward the proposed draft Codex General Standard for Fruit Juices and Nectars to the 26th Session of the Codex Alimentarius Commission for adoption at Step 5/8 with omission of Steps 6/7 (see Appendix II). The Task Force noted that the Sections on Food Additives, Pesticide Residues, Food Labelling and Methods of Analysis and Sampling would be sent to the relevant Codex General Committees for endorsement.

87) The Task Force decided that those fruit juices for which an agreed minimum Brix level was established should be placed in the Annex to the Standard and forward to the 26th Session of the Codex Alimentarius Commission for adoption at Step 5/8 with omission of Steps 6/7 (see Appendix II).

88) The Task Force also decided that those fruit juices for which an agreed provisional minimum Brix level was established should be placed in a separate Appendix and forward to the 26th Session of the Codex Alimentarius Commission for preliminary adoption at Step 5 (see Appendix III).

89) The Task Force further decided that those fruit juices for which no minimum Brix level was established should be placed in a separate Appendix for circulation, comments at Step 3 and further consideration by the next Session of the Task Force (see Appendix IV).

PROPOSED DRAFT REVISED CODEX GENERAL STANDARD FOR VEGETABLE JUICES (Agenda Item 3 b)⁸

90) The Task Force recalled that its Terms of Reference provided for the revision and consolidation of the existing individual Codex standards and guidelines for fruit and vegetable juices and related products, giving preference to general standards. The Task Force noted that this mandate applied to the revision of the Codex General Standard for Vegetable Juices (CODEX-STAN 179-1991). However, the Task Force only considered the Standard briefly at its first Session.

91) The Task Force discussed whether there was a need to continue work on the revision/updating of the Standard for Vegetable Juices considering that little international trade occurred with these products and that tomato juice was already included in the proposed draft General Standard for Fruit Juices and Nectars.

92) In view of the above consideration, the Task Force agreed to discontinue work on the revision of the General Standard for Vegetable Juices and inform the Commission accordingly. In taking this decision, the Task Force further agreed to recommend the withdrawal of the Standard from the Codex Alimentarius to the 26th Session of the Codex Alimentarius Commission in June 2003.

OTHER BUSINESS (Agenda Item 4)

93) The Task Force noted that there was no other business to discuss.

DATE AND PLACE OF THE NEXT SESSION (Agenda Item 5)

94) The Task Force was informed that the next session of the Task Force was tentatively scheduled to be held in Brazil in 2004. The exact date and place would be determined by the Host Government and the Codex Secretariat.

⁸ ALINORM 03/39, Appendix III; CX/FJ 03/4 (comments from Brazil, France, Switzerland and the United States of America); CX/FJ 03/5 (comments from Brazil, Poland, Switzerland, Russia and the United States of America).

SUMMARY STATUS OF WORK

Subject	Step	For Action by	Document Reference (ALINORM 03/39A)
Proposed Draft Codex General Standard for Fruit Juices and Nectars	5/8	26 th CAC	paras. 86 - 87 and Appendix II.
Proposed Draft Minimum Brix Level for Reconstituted Juice and Reconstituted Purée and Minimum Juice and/or Purée Content for Fruit Nectars (%v/v) – <i>grape, guava, mandarine/tangerine, mango, passion fruit and tamarind (Indian date) juice</i>	5	26 th CAC Codex members 4 th TFFVJ	para. 88 and Appendix III.
Proposed Draft Minimum Brix Level for Reconstituted Juice and Reconstituted Purée and Minimum Juice and/or Purée Content for Fruit Nectars (%v/v) – <i>orange, lemon, lime and pineapple juice</i>	3	Codex members 4 th TFFVJ	para. 89 and Appendix IV.

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**PROPOSED DRAFT CODEX GENERAL STANDARD FOR FRUIT JUICES AND NECTARS
(At Step 5/8)**

1. SCOPE

This Standard applies to all products as defined in Section 2.1 below.

2. DESCRIPTION**2.1 PRODUCT DEFINITION****2.1.1 Fruit Juice**

Fruit juice is the unfermented but fermentable liquid obtained from the edible part of sound, appropriately mature and fresh fruit or of fruit maintained in sound condition by suitable means including post harvest surface treatments applied in accordance with the applicable provisions of the Codex Alimentarius Commission.

Some juices may be processed with pips, seeds and peel, which are not usually incorporated in the juice, but some parts or components of pips, seeds and peel, which cannot be removed by Good Manufacturing Practices (GMP) will be acceptable.

The juice is prepared by suitable processes, which maintain the essential physical, chemical, organoleptical and nutritional characteristics of the juices of the fruit from which it comes. The juice may be cloudy or clear and may have restored¹ aromatic substances and volatile flavour components, all of which must be obtained by suitable physical means, and all of which must be recovered from the same kind of fruit. Pulp and cells² obtained by suitable physical means from the same kind of fruit may be added.

A single juice is obtained from one kind of fruit. A mixed juice is obtained by blending two or more juices or juices and purées, from different kinds of fruit.

Fruit juice is obtained as follows:

2.1.1.1 Fruit juice directly expressed by mechanical extraction processes.

2.1.1.2 Fruit juice from concentrate by reconstituting concentrated fruit juice defined in Section 2.1.2 with potable water that meets the criteria described in Section 3.1.1(c).

2.1.2 Concentrated Fruit Juice

Concentrated fruit juice is the product that complies with the definition given in Section 2.1.1 above, except water has been physically removed in an amount sufficient to increase the Brix level to a value at least 50% greater than the Brix value established for reconstituted juice from the same fruit, as indicated in the Annex. In the production of juice that is to be concentrated, suitable processes are used and may be combined with simultaneous diffusion of the pulp cells or fruit pulp by water, provided that the water extracted soluble fruit solids are added in-line to the primary juice, before the concentration procedure. Fruit juice concentrates may have restored¹ aromatic substances and volatile flavour components, all of which must be obtained by suitable physical means, and all of which must be recovered from the same kind of fruit. Pulp and cells² obtained by suitable physical means from the same kind of fruit may be added.

2.1.3 Water Extracted Fruit Juice

Water Extracted Fruit Juice is the product obtained by diffusion with water of:

- Pulpy whole fruit whose juice cannot be extracted by any physical means, or
- Dehydrated whole fruit.

Such products may be concentrated and reconstituted.

The solids content of the finished product shall meet the minimum Brix level for reconstituted juice specified in the Annex.

¹ Introduction of aromas and flavours are allowed to restore the level of these components up to the normal level attained in the same kind of fruit.

² For citrus fruits, pulp or cells are the juice sacs obtained from the endocarp.

2.1.4 Fruit Purée

Fruit purée is the unfermented but fermentable product obtained by suitable processes e.g. by sieving, grinding, milling the edible part of the whole or peeled fruit without removing the juice. The fruit must be sound, appropriately mature, and fresh or preserved by physical means or by treatment(s) applied in accordance with the applicable provisions of the Codex Alimentarius Commission. Fruit purée may have restored¹ aromatic substances and volatile flavour components, all of which must be obtained by suitable physical means, and all of which must be recovered from the same kind of fruit. Pulp and cells² obtained by suitable physical means from the same kind of fruit may be added.

2.1.5 Concentrated Fruit Purée

Concentrated fruit purée is obtained by the physical removal of water from the fruit purée in an amount sufficient to increase the Brix level to a value at least 50% greater than the Brix value established for reconstituted juice from the same fruit, as indicated in the Annex. Concentrated fruit purée may have restored¹ aromatic substances and volatile flavour components, all of which must be obtained by suitable physical means, and all of which must be recovered from the same kind of fruit.

2.1.6 Fruit Nectar

Fruit Nectar is the unfermented but fermentable product obtained by adding water with or without the addition of sugars as defined in Section 3.1.2(a), honey and/or syrups as described in Section 3.1.2(b), and/or sweeteners as listed in Section 4.7 to products defined in Sections 2.1.1, 2.1.2, 2.1.3, 2.1.4 and 2.1.5 or to a mixture of those products. Aromatic substances, volatile flavour components, pulp and cells² all of which must be recovered from the same kind of fruit and be obtained by suitable physical means may be added. That product moreover must meet the requirements defined for fruit nectars in the Annex. A mixed fruit nectar is obtained from two or more different kinds of fruit.

2.2 SPECIES

The species indicated as the botanical name in the Annex shall be used in the preparation of fruit juices, fruit purées and fruit nectars bearing the product name for the applicable fruit. For fruit species not included in the Annex, the correct botanical or common name shall apply.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 COMPOSITION

3.1.1 Basic Ingredients

(a) For directly expressed fruit juices, the Brix level shall be the Brix as expressed from the fruit and the soluble solids content of the single strength juice shall not be modified, except by blendings with the juice of the same kind of fruit.

(b) The preparation of fruit juice that requires reconstitution of concentrated juices must be in accordance with the minimum Brix level established in the Annex, exclusive of the solids of any added optional ingredients and additives. If there is no Brix level specified in the Table, minimum Brix shall be calculated on the basis of the soluble solids content of the single strength juice used to produce such concentrated juice.

(c) For reconstituted juice and nectar, the potable water used in reconstitution shall, at a minimum, meet the latest edition of the *Guidelines for Drinking Water Quality of the World Health Organization* (Volumes 1 and 2).

3.1.2 Other Permitted Ingredients

Except as otherwise provided, the following shall be subject to ingredient labelling requirements:

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- (a) Sugars with less than 2% moisture as defined in the Codex Standard for Sugars (CODEX STAN 212-1999, Amd. 1-2001): sucrose³, dextrose anhydrous, glucose⁴, fructose, may be added to all products defined in Section 2.1. (The addition of ingredients listed in Section 3.1.2(a) and 3.1.2(b) applies only to products intended for sale to the consumer or for catering purposes.)
- (b) Syrups (as defined in the Codex Standard for Sugars), liquid sucrose, invert sugar solution, invert sugar syrup, fructose syrup, liquid cane sugar, isoglucose and high fructose syrup may be added only to fruit juice from concentrate, as defined in Section 2.1.1.2, concentrated fruit juices, as defined in Section 2.1.2, concentrated fruit purée as defined in Section 2.1.5, and fruit nectars as defined in Section 2.1.6. Honey and/or sugars derived from fruits may be added only to fruit nectars as defined in Section 2.1.6.
- (c) Subject to national legislation of the importing country, lemon (*Citrus limon* (L.) Burm. f. *Citrus limonum* Rissa) juice or lime (*Citrus aurantifolia* (Christm.)) juice, or both, may be added to fruit juice up to 3 g/l anhydrous citric acid equivalent for acidification purposes to unsweetened juices as defined in Sections 2.1.1, 2.1.2, 2.1.3, 2.1.4 and 2.1.5. Lemon juice or lime juice, or both, may be added up to 5 g/l anhydrous citric acid equivalent to fruit nectars as defined in Section 2.1.6.
- (d) The addition of both sugars and acidifying agents (defined in subparagraph (b) and Section 4.1 respectively) to the same fruit juice is prohibited.
- (e) Subject to national legislation of the importing country, the juice from *Citrus reticulata* and/or hybrids with *reticulata* may be added to orange juice in an amount not to exceed 10% of soluble solids of the *reticulata* to the total of soluble solids of orange juice.
- (f) Salt and spices and aromatic herbs (and their natural extracts) may be added to tomato juice.
- (g) For the purposes of product fortification, essential nutrients (e.g. vitamins, minerals) may be added to products defined in Section 2.1. Such additions shall comply with the texts of the Codex Alimentarius Commission established for this purpose.

3.2 QUALITY CRITERIA

The fruit juices and fruit nectars shall have the characteristic colour, aroma and flavour of juice from the same kind of fruit from which it is made.

The fruit shall retain no more water from washing, steaming or other preparatory operations than technologically unavoidable.

3.3 AUTHENTICITY

Authenticity is the maintenance of the product's essential physical, chemical, organoleptical, and nutritional characteristics of the fruit(s) from which it comes.

3.4 VERIFICATION OF COMPOSITION, QUALITY AND AUTHENTICITY

Fruit juices and nectars should be subject to testing for authenticity, composition, and quality where applicable and where required. The analytical methods used should be those found in Section 8, Methods of Analysis and Sampling.

4. FOOD ADDITIVES

INS No.	Food Additive	Maximum Level ⁵
4.1 ACIDITY REGULATORS		
330	Citric acid	3 g/l ⁶
330	Citric acid	5 g/l (for fruit nectars)
296	Malic acid	GMP (only for pineapple juice and fruit nectars)
334	Tartaric acid	4g/l (only for grape juice and fruit nectars)

³ termed "white sugar" and "mill sugar" in the Codex Standard for Sugars.

⁴ termed "dextrose anhydrous" in the Codex Standard for Sugars.

⁵ Calculated as serve to the consumer.

⁶ Subject to national legislation of the importing country.

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INS No.	Food Additive	Maximum Level ⁵
4.2 ANTIOXIDANTS		
300 - 303	Ascorbic acid and its salts	GMP
220–225, 227, 228, 539	Sulphites	50 mg/l ^{6,7} (as residual SO ₂)
4.3 CARBONATING AGENTS		
290	Carbon dioxide	GMP
4.4 PRESERVATIVES⁶		
210 - 213	Benzoic acid and its salts	1 g/l, single or in combination
200 - 203	Sorbic acid and its salts	
4.5 SEQUESTRANTS⁶		
451(i)	Sodium tripolyphosphate	1 g/l (only to enhance effectiveness of benzoates and sorbates)
4.6 STABILIZERS		
440	Pectins	GMP (only for cloudy juices and fruit nectars)
4.7 SWEETENERS		
950	Acesulfame potassium	350 mg/l
951	Aspartame	600 mg/l
952	Cyclamic acid and its salts	400 mg/l ⁶
954	Saccharin and its salts	80 mg/l
955	Sucralose	300 mg/l
(only for fruit nectars)		

4.8 PROCESSING AIDS

Function	Substance	Maximum Level ⁵
Antifoaming Agent	Polydimethylsiloxane	10 mg/l
Clarifying Agents Filtration Aids Flocculating Agents	Adsorbent clays (bleaching, natural or activated earths)	
	Adsorbent resins	
	Activated carbon (only from plants)	
	Bentonite	
	Calcium hydroxide	GMP (only in grape juice)
	Cellulose	
	Chitosan	
	Colloidal silica	
	Diatomaceous earth	
	Gelatin (from skin collagen)	
	Ion exchange resins (cation and anion)	
	Isinglass	
	Kaolin	
	Perlite	
	Polyvinylpolypyrrolidone	
	Potassium tartrate	GMP (only in grape juice)
	Precipitated calcium carbonate	GMP (only in grape juice)
	Rice hulls	
	Silicasol	
	Sulphur dioxide	10 mg/l (as residual SO ₂) (only in grape juice)
Tannin		

⁷ Sulphites should be used where there is a technological necessity.

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Function	Substance	Maximum Level ⁵
Enzyme preparations	Pectinases (for breakdown of pectin), Proteinases (for breakdown of proteins), Amylases (for breakdown of starch) and, Cellulases (limited use to facilitate disruption of cell walls).	Enzyme preparations may be used as processing aids provided these preparations do not result in a total liquefaction and do not substantially affect the cellulose content of the processed fruit.
Packing gas ⁸	Nitrogen	GMP
	Carbon dioxide	GMP

5. CONTAMINANTS

The products covered by the provisions of this Standard shall comply with those maximum levels established by the Codex Alimentarius Commission.

5.1 HEAVY METALS

The products covered by the provisions of this Standard shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission for these products.

5.2 PESTICIDE RESIDUES

The products covered by the provisions of this Standard shall comply with those maximum residue limits established by the Codex Alimentarius Commission for the respective fruits.

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, Rev. 3 (1997), Amd. 1999), 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. LABELLING

In addition to the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991), the following specific provisions apply:

7.1 CONTAINERS DESTINED FOR THE FINAL CONSUMER

7.1.1 The Name of the Product

The name of the product shall be the name of the fruit used as defined in Section 2.2. The fruit name shall be filled in the blank of the product name mentioned under this Section. These names may only be used if the product conforms to the definition in Section 2.1 or which otherwise conform to this Standard.

7.1.1.1 Fruit Juice defined under Section 2.1.1

The name of the product shall be “_____ juice” or “juice of _____”.

7.1.1.2 Concentrated Fruit Juice defined under Section 2.1.2

The name of the product shall be “concentrated _____ juice” or “_____ juice concentrate”.

7.1.1.3 Water Extracted Fruit Juice defined under Section 2.1.3

The name of the product shall be “water extracted _____ juice” or “water extracted juice of _____”.

7.1.1.4 Fruit Purée defined under Section 2.1.4

The name of the product shall be “_____ purée” or “Purée of _____”

⁸ May also be used e.g., for preservation.

7.1.1.5 Concentrated Fruit Purée defined under Section 2.1.5

The name of the product shall be “concentrated _____ purée” or “_____ purée concentrated”

7.1.1.6 Fruit Nectars defined under Section 2.1.6

The name of the product shall be “_____ nectar” or “nectar of _____”.

7.1.1.7 Where products defined under Section 2.1 are mixed or blended with the defined products made from different kinds of fruit, the product name shall include “mixed” or “blended” or other similar descriptive words or name indicating the product is not made from a single fruit.

In the case of fruit juice products (as defined in Section 2.1) manufactured from two or more fruits, the product names should be supplemented by a list of the fruits used in descending order of proportion by weight (m/m) of the fruit juices or fruit purée included. However, in the case of products manufactured from three or more fruits, the indication of the fruits used may also be replaced by the words “several fruits” or a similar wording or by the number of fruits.

7.1.1.8 For fruit juices, fruit nectars and mixed fruit juice/nectar, if the product contains or is prepared from concentrated juice and water or the product is prepared from juice from concentrate and directly expressed juice or nectar, the words “from concentrate” or “reconstituted” must be entered in conjunction with or close to the product name, standing out well from any background, in clearly visible characters, not less than 1/2 the height of the letters in the name of the juice.

7.1.2 Additional Requirements

The following additional specific provisions apply:

7.1.2.1 For fruit juices, fruit nectars, fruit purée and mixed fruit juices/nectars/purées, if the product is prepared by physically removing water from the fruit juice in an amount sufficient to increase the Brix level to a value at least 50% greater than the Brix value established for reconstituted juice from the same fruit, as indicated in table of the Annex, it shall be labelled “concentrated”.

7.1.2.2 For products defined in Sections 2.1.1 to 2.1.5, where one or more of the optional sugar or syrup ingredients as described in Section 3.1.2 (a) and (b) are added, the product name shall include the statement called “sugar(s) added” after the fruit juice or mixed fruit juice’s name. When sweeteners as listed in Section 4.7 are employed as substitutes for sugars in fruit nectars and mixed fruit nectars, the statement, “with sweetener(s),” shall be included in conjunction with or in close proximity to the product name.

7.1.2.3 Where concentrated fruit juice, concentrated fruit purée, concentrated fruit nectar or mixed concentrated fruit juice/nectar/purée is to be reconstituted before consumption as fruit juice, fruit purée, fruit nectar or mixed fruit juices/nectars/purées, the label must bear appropriate directions for reconstitution on a volume/volume basis with water to the applicable Brix value in the Annex for reconstituted juice.

7.1.2.4 Distinct varietal denominations may be used in conjunction with the common fruit names on the label where such use is not misleading.

7.1.2.5 Fruit nectars and mixed fruit nectars must be conspicuously labelled with a declaration of “juice content ___%” with the blank being filled with the percentage of purée and/or fruit juice computed on a volume/volume basis. The words “juice content ___%” shall appear in close proximity to the name of the product in clearly visible characters, not less than 1/2 the height of the letters in the name of the juice.

7.1.2.6 An ingredient declaration of “ascorbic acid” when used as an antioxidant does not, by itself, constitute a “Vitamin C” claim.

7.1.2.7 Any added essential nutrients declaration should be labelled in accordance with the *Codex General Guidelines on Claims* (CAC/GL 1-1979, Rev. 1-1991), *Codex Guidelines on Nutrition Labelling* (CAC/GL 2-1985, Rev. 1-1993) and the *Codex Guidelines for Use of Nutrition Claims* (CAC/GL 23-1997).

For fruit nectars in which a sweetener identified in Section 4.7 has been added in order to replace wholly or in part the added sugars or other authorized carbohydrate sweeteners, any nutrient content claims related to the reduction in sugars should conform to the *Codex General Guidelines on Claims* (CAC/GL 1-1979, Rev. 1-1991), *Codex Guidelines for Use of Nutrition Claims* (CAC/GL 23-1997) and *Codex Guidelines on Nutrition Labelling* (CAC/GL 2-1985, Rev 1-1993).

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7.1.2.8 A pictorial representation of fruit(s) on the label should not mislead the consumer.

7.1.2.9 Where the product contains added carbon dioxide the term “carbonated” or “sparkling” shall appear on the label near the name of the product.

7.1.2.10 Where tomato juice contains spices and/or aromatic herbs in accordance with Section 3.1.2(f), the term “spiced” and/or the common name of the aromatic herb shall appear on the label near the name of the juice.

7.1.2.11 Pulp and cells added to juice over that normally contained in the juice shall be declared in the list of ingredients. Aromatic substances, volatile flavour components, pulp and cells added to nectar over that normally contained in the juice shall be declared in the list of ingredients.

7.2 NON-RETAIL CONTAINERS

Information for non-retail containers not destined to final consumers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, net contents and the name and address of the manufacturer, packer, distributor and/or importer, as well as storage instructions, shall appear on the container, except that for tankers the information may appear exclusively in the accompanying documents.

However, lot identification, and the name and address of the manufacturer, packer, distributor and/or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

8. METHODS OF ANALYSIS AND SAMPLING

APPENDIX II

Quality Method (QM) or Authenticity Method (AM)	Provision in the Standard	ANALYTE	PRINCIPLE	METHOD	CODEX TYPE
QM	3.4	Acetic acid	Enzymatic determination	EN 12632 IFU Method No 66 (1996)	II
QM	3.4	Alcohol (ethanol)	Enzymatic determination	IFU Method No 52 (1983/1996)	II
AM	3.4	Anthocyanins	HPLC	IFU Method No 71 (1998)	I
QM	3.4, 4.2	Ascorbic acid-L	HPLC	IFU Method No 17a (1995)	II
QM	3.4, 4.2	Ascorbic-L	Indophenol method	AOAC 967.21 IFU Method No 17	III
AM	3.4	ASH in fruit products	Gravimetry	AOAC 940.26 (JAOAC 23, 314 (1940)) EN 1135 (1994) IFU Method No 9 (1989)	I
AM	3.4	Beet sugar in fruit juices	Deuterium NMR	AOAC 995.17 JAOAC 79, 917 (1996)	I
AM	3.4	Benzoic acid as a marker in orange juice	HPLC	AOAC 994.11 JAOAC 78, 80 (1995)	II
QM	4.3, 4.8	Carbon dioxide	Titrimetry (back-titration after precipitation)	IFU Method No 42 (1976)	IV
QM	3.4	C ¹³ /C ¹² ratio of ethanol derived from fruit juices	Stable isotope mass spectrometry	Submitted to AOAC	III

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Quality Method (QM) or Authenticity Method (AM)	Provision in the Standard	ANALYTE	PRINCIPLE	METHOD	CODEX TYPE
AM	3.4	Carbon stable isotope ratio of apple juice	Stable isotope mass spectrometry	AOAC 981.09 JAOAC 64, 85 (1981)	II
AM	3.4	Carbon stable isotope ratio of orange juice	Stable isotope mass spectrometry	AOAC 982.21 JAOAC 65, 608 (1982) J.Agric.Food Chem, 29, 803-804 (1981)	II
AM	3.4	Carotenoid, Total/individual groups	Precipitation/fractionation	EN 12136 (1997) IFU Method No59 (1991)	I
QM	3.4	Centrifugable pulp	Centrifugation/% value	EN 12134 IFU Method No 60 (1991/1998)	I
QM	3.4	Chloride (expressed as sodium chloride)	Electrochemical titrimetry	EN12133 IFU Method No 37 (1968)	II
QM	3.4	Chloride in vegetable juice	Titration	AOAC 971.27 (Codex general method)	III
AM	3.1.2 c), 3.4, 4.1	Citric acid	HPLC	AOAC 986.13 JAOAC 69, 594 (1986) JAOAC 77, 411 (1994)	
AM	3.1.2 c), 3.4, 4.1	Citric acid, enzym	Enzymatic determination	EN 1137 IFU Method No 22 (1985)	II
QM	3.4	Essential oils	(Scott) distillation, titration	AOAC 968.20 IFU 45b	I

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Quality Method (QM) or Authenticity Method (AM)	Provision in the Standard	ANALYTE	PRINCIPLE	METHOD	CODEX TYPE
QM	3.4	Fermentability	Microbiological method	IFU Method No 18 (1974)	I
AM	3.4	Formol number	Potentiometric titration	EN 1133 (1994) IFU Method No 30 (1984)	I
AM	3.4	Free amino acids	Chromatography	EN 12742 IFU Method No 57 (1989)	II
QM	3.4	Fumaric acid	HPLC	IFU Method No 72 (1998)	II
AM	3.1.2 a)/b), 3.4	Glucose, fructose, sorbitol	HPLC	EN 12630 IFU Method No 67 (1996)	III
AM	3.1.2 a)/b), 3.4	Glucose-D fructose-D	Enzymatic determination	EN 1140 IFU Method No 55 (1985)	II
QM	3.4	Gluconic acid		IFU Method No 76 (2001)	II
QM	3.4	Glycerol		IFU Method No 77 (2001)	II
AM	3.4	Hesperidin and naringin	HPLC	EN 12148 (1996) IFU Method No 58 (1991)	II
AM	3.1.2 a)/b), 3.4	HFCS & HIS in apple juice	CAP GC Method	JAOAC 84, 486 (2001)	I
AM	3.4	Hydroxymethylfurfural	HPLC	IFU Method No 69 (1996)	II

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Quality Method (QM) or Authenticity Method (AM)	Provision in the Standard	ANALYTE	PRINCIPLE	METHOD	CODEX TYPE
AM	3.4	Isocitric acid-D	Enzymatic determination	EN 1139 IFU Method No 54 (1984)	II
QM	3.4	Lactic acid- D and L	Enzymatic determination	EN 12631 (1999) IFU Method No 53 (1983/1996)	II
AM	3.4, 4.1	Malic acid (L-malic/total malic acid ratio in apple juice)	Enzymatic and HPLC	AOAC 993.05, JAOAC 69, 594 (1986) JAOAC 77, 411 (1994)	III
AM	3.4	Malic acid-D	Enzymatic determination	EN 12138 IFU Method No 64 (1995)	II
AM	3.4	Malic acid-D in apple juice	HPLC	AOAC 995.06	III
AM	3.4, 4.1	Malic acid-L	Enzymatic	EN 1138 (1994) IFU Method No 21 (1985)	II
AM	3.4	Naringin and neohesperidin in orange juice	HPLC	AOAC 999.05 JAOAC, Vol. 83, No.5 (2000), pp1155-1165	I
AM	3.4, 4.6	Pectin	Precipitation/photometry	IFU Method No 26 (1964/1996)	I

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Quality Method (QM) or Authenticity Method (AM)	Provision in the Standard	ANALYTE	PRINCIPLE	METHOD	CODEX TYPE
QM	3.4	pH-value	Potentiometric	EN 1132 (1994) IFU Method No 11 (1968/1989)	I
	3.4	Phosphor/Phosphate	Photometric determination	EN 1136 (1994) IFU Method No 50 (1983)	
AM	3.4, 4.4	Preservatives in fruit juices	HPLC	IFU Method No 63 (1995)	II
AM	3.4	Proline	photometric	EN 1141 (1994) IFU Method No 49 (1983)	II
AM	3.1.2 c), 3.4, 4.1	Quinic, malic & citric in cranberry juice cocktail and apple juice	HPLC	AOAC 986.13 JAOAC 69, 594 (1986)	III
QM	3.4	Recoverable oil	Distillation and titration Scott method	AOAC 968.20 IFU Method No 45b	I
QM	3.4	Relative density	Pycnometry	EN 1131 (1993) IFU Method No 1 (1989) & IFU Method No General sheet (1971)	II
QM	3.4	Relative density	Densitometry	IFU Method No 1A	III

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Quality Method (QM) or Authenticity Method (AM)	Provision in the Standard	ANALYTE	PRINCIPLE	METHOD	CODEX TYPE
AM	3.4	Sodium, potassium, calcium, magnesium	Atomic Absorption Spectroscopy	EN 1134 (1994) IFU Method No 33 (1984)	II
QM	3.1.1, 3.4	Soluble solids	Indirect by refractometry	AOAC 983.17 EN 12143 (1996) IFU Method No 8 (1991)	I
AM	3.4	Sorbitol-D	Enzymatic determination	IFU Method No 62 (1995)	II
AM	3.4	Stable carbon isotope ratio in the pulp of fruit juices	Stable isotope mass spectrometry	ENV 13070 (1998) Analytica Chimica Acta 340 (1997)	II
AM	3.4	Stable carbon isotope ratio of sugars from fruit juices	Stable isotope mass spectrometry	ENV 12140 Analytica Chimica Acta.271 (1993)	II
AM	3.4	Stable hydrogen isotope ratio of water from fruit juices	Stable isotope mass spectrometry	ENV 12142 (1997)	II
AM	3.4	Stable oxygen isotope ratio in fruit juice water	Stable isotope mass spectrometry	ENV 12141(1997)	II
QM	3.4	Starch		AOAC 925.38 IFU Method No 73	I

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Quality Method (QM) or Authenticity Method (AM)	Provision in the Standard	ANALYTE	PRINCIPLE	METHOD	CODEX TYPE
AM	3.1.2 a)/b), 3.4	Sucrose	Enzymatic determination	EN 12146 (1996) IFU Method No 56 (1985/1998)	III
AM	3.1.2 a)/b), 3.4	Sucrose	HPLC	EN 12630 IFU Method No 67 (1996)	II
AM	3.4	Sugar -beet derived syrups in frozen concentrated orange juice d ¹⁸ O Measurements in Water	Oxygen isotope ratio analysis	AOAC 992.09	I
QM	3.4	Sulfates	Precipitation/Gravimetry	EN 1142 (1994) IFU Method No 36 (1987)	II
QM	4.2,4.8	Sulphur dioxide by modified Powell	Titrimetry after distillation	EN 13196 not identical with IFU Method No Method No 7A (2000)	I
QM	4.2, 4.8	Sulphur dioxide by Optimized Monier Williams	Titrimetry after distillation	AOAC 990.28	I
AM	3.4, 4.1	Tartaric acid in grape juice	HPLC	EN 12137 (1997) IFU Method No 65 (1995)	II
QM	3.4	Titrateable acids, total	Titrimetry	EN 12147 (1995) IFU Method No Method No 3, (1968)	I
QM	3.4	Total dry matter		EN 12145 (1996) IFU Method No 61 (1991)	I

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Quality Method (QM) or Authenticity Method (AM)	Provision in the Standard	ANALYTE	PRINCIPLE	METHOD	CODEX TYPE
QM	3.4	Total nitrogen	Digestion/titration	EN 12135 (1997) IFU Method No 28 (1991)	I
QM	3.4	Total solids	Microwave oven drying	AOAC 985.26	I
QM	3.4	Vitamin C	Microfluorometry	AOAC 967.22	III
QM	3.4	Vitamin C	DNA	CEN	II

ANNEX**Minimum Brix Level for Reconstituted Juice and Reconstituted Purée and Minimum Juice and/or Purée Content for Fruit Nectars (% v/v)¹**

Fruit's Common Name	Botanical Name	Minimum Brix Level for Reconstituted Fruit Juices and Reconstituted Purée	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Acerola (West Indian Cherry)	<i>Malpighia spp</i> (Moc. & Sesse) ex	6.5	25.0
Apple	<i>Malus Domestica</i> Borkh	11.5 ²	50.0
Apricot	<i>Prunus armeniaca L</i>	11.5	40.0
Aronia/Chokeberry	<i>Pyrus arbustifolia (L.) Pers.</i>	(*) ³	(*) ³
Banana	<i>Musa species</i> (plantains excluded)	(*) ³	25.0
Bilberry/Blueberry	<i>Vaccinium myrtillus L. Vaccinium corymbosum L. Vaccinium angustifolium</i>	10.0	40.0
Blackberry	<i>Rubus Fruitcosus L.</i> (group name)	9.0	30.0
Blackcurrant	<i>Ribes nigrum L.</i>	11.0	30.0
Boysenberry	<i>Rubus ursinus cham. & Schltld.</i>	10.0	25.0
Buckthornberry = Sallowthornberry	<i>Hippophae rhamnoides L.</i>	6.0	25.0
Cocoa pulp	<i>Theobroma cacao L.</i>	14.0	50.0
Cajá	<i>Spondia lutea L.</i>	10.0	25.0
Canneberge		(*) ³	30.0
Casaba Melon	<i>Cucumis melo L subsp. melo var. inodorus H. Jacq.</i>	7.5	25.0
Cashewapple	<i>Anacardium occidentale L.</i>	11.5	25.0
Cloudberry	<i>Rubus chamaemorus L.</i>	9.0	30.0
Coconut	<i>Cocos nucifera L.</i>	5.0	25.0
Crabapple	<i>Maluss prunifolia (Willd.) Borkh</i> <i>Malus sylvestris Mill</i>	15.4	25.0

¹ If a juice is manufactured from a fruit not mentioned in the above list, it must, nevertheless, comply with all the provisions of the Standard, except that the minimum Brix level of the reconstituted juice shall be the Brix level as expressed from the fruit used to make the concentrate.

² It is recognized that in different geographical areas, the Brix level may naturally differ from this value. In cases where the Brix level is consistently lower than this value, reconstituted juice of lower Brix from this origin introduced into international trade will be acceptable, provided it meets the authenticity methodology listed in the General Standards for Fruit Juices and Nectars and the level will not be below 10°Brix for orange juice and apple juice.

³ No data currently available. The minimum Brix level of the reconstituted juice shall be the Brix level as expressed from the fruit used to make the concentrate.

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Fruit's Common Name	Botanical Name	Minimum Brix Level for Reconstituted Fruit Juices and Reconstituted Purée	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Cranberry	<i>Vaccinium macrocarpon</i> Aiton <i>Vaccinium oxycoccos</i> L.	7.5	30.0
Crowberry	<i>Empetrum nigrum</i> L.	6.0	25.0
Cupuaçu	<i>Theobroma grandiflorum</i> L	9.0	35.0
Curdles		(*) ³	50.0
Cynorrhodon		(*) ³	40.0
Date	<i>Phoenix dactylifera</i> L.	18.5	25.0
Dewberry	<i>Rubus hispidus</i> (of North America) <i>R. caesius</i> (of Europe)	10.0	25.0
Elderberry	<i>Sambucus nigra</i> L <i>Sambucus canadensis</i> .	10.5	50.0
Fig	<i>Ficus carica</i> L.	18.0	25.0
Genipap	<i>Genipa americana</i>	17.0	25.0
Goosberry	<i>Ribes uva-crispa</i> L.	7.5	30.0
Granadilla	<i>Passiflora quadrangularis</i>	(*) ³	(*) ³
Grapefruit	<i>Citrus paradisi</i> Macfad	10.0 ⁴	50.0
Guavaberry/ Birchberry	<i>Eugenia syringa</i>	(*) ³	(*) ³
Honeydew Melon	<i>Cucumis melo</i> L. subso. <i>melo</i> var <i>inodorus</i> H. Jacq	10.0	25.0
Kiwi	<i>Actinidia deliciosa</i> (A. Chev.) C. F. Liang & A. R. Ferguson	(*) ³	(*) ³
Kumquat	<i>Fortunella Swingle</i> spp	(*) ³	(*) ³
Lingonberry	<i>Vaccinium vitis-idaea</i> L.	10.0	25.0
Litchi	<i>Litchi chinensis</i> Sonn	11.2	20.0
Loganberry	<i>Rubus . loganobaccus</i> L. H. Bailey	10.5	25.0
Lulo	<i>Solanum quitoense</i> Lam.	(*) ³	(*) ³
Mammee Apple	<i>Mammea americana</i>	(*) ³	(*) ³
Melon	<i>Cucumis melo</i> L.	8.0	35.0
Mulberry	<i>Morus</i> spp.	(*) ³	30.0
Mulberry of Ronces		(*) ³	40.0
Nectarine	<i>Prunus pérsica</i> (L.) Batsch var. <i>nucipersica</i> (Suckow) c. K. Schneid.	10.5	40.0
Nispero/Loquat	<i>Eriobotrya japonesa</i>	(*) ³	(*) ³
Papaya	<i>Carica papaya</i> L.	(*) ³	25.0

⁴ At 20°C, acid corrected.

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Fruit's Common Name	Botanical Name	Minimum Brix Level for Reconstituted Fruit Juices and Reconstituted Purée	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Peach	<i>Prunus persica (L.) Batsch var. Persica</i>	10.5	40.0
Pear	<i>Pyrus communis L.</i>	12.0	40.0
Persimmon	<i>Diospyros khaki Thunb.</i>	(*) ³	40.0
Plum	<i>Prunus domestica L. subsp. Domestica</i>	12.0	50.0
Pome Apple	<i>Syzygium jambosa</i>	(*) ³	(*) ³
Pomegranate	<i>Punica granatum L.</i>	12.0	25.0
Prune	<i>Prunus domestica L. subsp. Domestica</i>	18.5	25.0
Purple Granadilla	<i>Passiflora edulis</i>	(*) ³	(*) ³
Quetsche	<i>Prunus domestica L. subsp. Domestica</i>	12.0	25.0
Quince	<i>Cydonia oblonga Mill</i>	11.2	25.0
Raspberry (Black)	<i>Rubus occidentalis L</i>	11.1	25.0
Raspberry (Red)	<i>Rubus idaeus L. Rubus strigosus Michx.</i>	8.0	40.0
Red Currant	<i>Ribes rubrum L</i>	10.0	30.0
Red Goosberry		(*) ³	30.0
Rosehip	<i>Rosa spp.</i>	9.0	40.0
Rowanberry	<i>Sorbus aucuparia L.</i>	11.0	30.0
Sallowthornberry/ Buckthornberry	<i>Hippophae rhamnoides L.</i>	6.0	25.0
Sapote	<i>Pouteria sapota</i>	(*) ³	(*) ³
Sea Buckthorn	<i>Hippophae elaeagnaceae</i>	(*) ³	25.0
Sloe	<i>Prunus spinosa L</i>	6.0	25.0
Sorb		(*) ³	30.0
Cherry, Sour	<i>Prunus cerasus L.</i>	14.0	25.0
Sour Orange (Sauf citron)		(*) ³	50.0
Soursop/ Guanabana	<i>Annona muricata L.</i>	14.5	25.0
Star Apple	<i>Chrysophyllum cainito</i>	(*) ³	(*) ³
Starfruit	<i>Averrhoa carambola L.</i>	7.5	25.0
Stonesbaer	<i>Prunus cerasus L. cv. Stevnsbaer</i>	17.0	25.0
Strawberry	<i>Fragaria X. Ananassa Duchense (Fragaria Chilensis Duchesne x Fragaria virginiana Duchesne)</i>	7.5	40.0
Sugar Apple	<i>Annona squamosa L</i>	14.5	25.0

APPENDIX II

Fruit's Common Name	Botanical Name	Minimum Brix Level for Reconstituted Fruit Juices and Reconstituted Purée	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Cherry, Suriname	<i>Eugenia uniflora Rich.</i>	6.0	25.0
Cherry, Sweet	<i>Prunus avium (L.) L.</i>	20.0	25.0
Sweet grapefruit (Oroblanco)	<i>Citrus paradisi + Citrus grandis</i>	10.0	50.0
Tomato	<i>Lycopersicum esculentum L.</i>	5.0	50.0
Umbu	<i>Spondias tuberosa Arruda ex Kost.</i>	9.0	25.0
Water Melon	<i>Citrullus lanatus (Thunb.) Matsum. & Nakai var. Lanatus</i>	8.0	40.0
White Currant	<i>Ribes rubrum L.</i>	10.0	30.0
White Goosberry		(*) ³	30.0
Whortleberry		(*) ³	30.0
Youngberry		10.0	25.0
Other: High acidity			Adequate content to reach a minimum acidity of 0.5
Other: High pulp content, or Strong flavour			25.0
Other: Low acidity, Low pulp content, or Low/medium flavour			50.0

**Proposed Draft Minimum Brix Level for Reconstituted Juice
and
Reconstituted Purée and Minimum Juice and/or Purée Content for Fruit Nectars (% v/v)
(AT STEP 5)**

Fruit's Common Name	Botanical Name	Minimum Brix Level for Reconstituted Fruit Juices and reconstituted purée	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Grape	<i>Vitis Vinifera</i> L. or hybrids thereof <i>Vitis Labrusca</i> or hybrids thereof	[16.0]	(*) ¹
Guava	<i>Psidium guajava</i> L.	[8.8]	25.0
Mandarine/Tangerine	<i>Citrus reticulata</i> Blanca	[11.8] ²	50.0
Mango	<i>Mangifera indica</i> L.	[15.1]	25.0
Passionfruit	<i>Pasiflora edulis</i> Sims. f. <i>edulus</i> <i>Passiflora edulis</i> Sims. f. <i>Flavicarpa</i> O. Def.	[13.8] ²	25.0
Tamarind (Indian date)	<i>Tamarindus indica</i>	[13.0]	Adequate content to reach a minimum acidity of 0.5

¹ No data currently available.

² At 20°C, acid corrected.

**Proposed Draft Minimum Brix Level for Reconstituted Juice
and
Reconstituted Purée and Minimum Juice and/or Purée Content for Fruit Nectars (% v/v)
(AT STEP 3)**

Fruit's Common Name	Botanical Name	Minimum Brix Level for Reconstituted Fruit Juices and Reconstituted Purée	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Lemon	<i>Citrus limon</i> (L.) Burm. f. <i>Citrus limonum</i> Rissa	(*) ¹	(*) ¹
Lime	<i>Citrus aurantifolia</i> (Christm.)	(*) ¹	(*) ¹
Orange	<i>Citrus sinensis</i> (L.)	(*) ¹	50.0
Pineapple	<i>Ananas comosus</i> (L.) Merrill <i>Ananas sativis</i> L. Schult. f.	(*) ¹	40.0

¹ No data currently available.