

འབྲུག་ཤིང་འབྲས་ཁུ་བ་དང་སྦྱང་གི་གནས་ཚད།

**BHUTAN STANDARD**

**Fruit juices and nectars**



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**BHUTAN STANDARDS BUREAU**

The National Standards Body of Bhutan

THIMPHU 11001

འབྲུག་ཤིང་འབྲས་ཁུ་བ་དང་སྤྱང་གི་གནས་ཚད།

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## **FOREWORD**

This Bhutan standard for Fruit Juices and Nectars was developed by Bhutan Standards Bureau after the draft finalized by the Food and Agriculture Technical Committee, TC 02 and approved by the Bhutan Standards Bureau Board (BSB Board) on [Day Month](#) 2021.

The standard specifies the essential compositional, quality factors, microbiological, contaminants and labelling requirements for fruit juices and nectars. The standard is drafted in accordance with the BSB Rule for Structure and Drafting of Bhutan Standards, 2017. Some of the elements of this standard may be the subject of copyrights. BSB shall not be held responsible for such copyrights.

This standard is subject to systematic review after five years to keep pace with the market trends, industrial and technological developments. Any suggestions and further information may be directed to the concerned Technical Committee.

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## **Introduction**

The growth of Small and Medium Enterprises (SMEs) and them venturing into processing and value addition of agricultural products in addition to few existing commercial industries in the country. The increased availability of seasonal fruits and vegetables has attracted more processors in this sector over the years. Fruit juices and similar products are among the most popular value added horticultural products in the Bhutanese markets in perspective of both processors and consumers. This surge in growth of food processing sector in the past few years has impelled the development of national standard for value added agricultural products which are already in the market. This will not only assure quality and safe products to the consumers but will also help the processors to explore regional and international markets for their products.

Fruit juices are liquid, non-alcoholic beverages with a certain degree of clarity and viscosity obtained from the edible part of fruit which is sound and ripe. Juices are preserved by chilling, freezing or pasteurizing of one or more kinds combined together. Fruit juices have the essential physical, chemical, organoleptic, and nutritional characteristics of the fruit(s) from which it comes. Juices are also converted into fruit juice concentrates by removal of water naturally present in the juices. The concentrated juice is usually frozen and later reconstituted by adding water. Fruit juices can be classified into different categories depending on the methods of production, preparation for consumption and the types of preservation methods used. Fruit juices are further used for preparation of fruit nectars.

This standard is developed after referencing international standards and other relevant national standards to provide uniform basis for production of fruit juices and fruit nectars. The use of standard remains voluntary, and when referenced by regulatory authorities as a basis for legislation, the standards becomes mandatory.

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## BHUTAN STANDARD FOR FRUIT JUICES AND NECTARS

### 1 Scope

This Bhutan standard prescribes the requirements, sampling and test methods for fruit juices and nectars intended for direct human consumption or further processing.

### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BTS 326 ISO 763 *Fruit and vegetable products — Determination of ash insoluble in hydrochloric acid*

BTS 327 ISO 2173 *Fruit and vegetable products — Determination of soluble solids — Refractometric method*

BTS 328 ISO 1842 *Fruit and vegetable products — Determination of pH*

BTS 329 ISO 6634 *Fruits, vegetables and derived products — Determination of arsenic content — Silver diethyldithiocarbamate spectrophotometric method*

BTS 330 ISO 7952 *Fruits, vegetables and derived products — Determination of copper content — Method using flame atomic absorption spectrometry*

BTS 331 ISO 6636-2 *Fruits, vegetables and derived products — Determination of zinc content — Part 2: Atomic absorption spectrometric method*

BTS 332 ISO 6633 *Fruits, vegetables and derived products — Determination of lead content — Flameless atomic absorption spectrometric method*

BTS 322 ISO 4833-1 *Microbiology of the food chain – Horizontal method for the enumeration of microorganisms – Part 1: Colony count at 30 degrees Celsius by the pour plate technique*

BTS 323 ISO 16649-2 *Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli -- Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

BTS 324 ISO 21527-2 *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2: Colony count technique in products with water activity less than or equal to 0.95*

BTS 269 CXS 1 (Amended 2009) *General guidelines on claims*

BTS 268:2020 CODEX STAN 1-1985 *General standards for the labelling of prepackaged foods.*

BTS 269 CXG 1 (Amended 2009) *General guidelines on claims*

BTS 139:2019 SARS 0014:2018 *Food hygiene- General principles – Code of practice.*

*Bhutan national drinking water quality standards, 2016*

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## **3 Terms and definition**

For the purpose of this document, the following terms and definitions apply;

### **3.1 Adulteration**

Food adulteration is an act of intentionally debasing the quality of food either by the admixture or substitution of inferior substances or by the removal of some valuable ingredients.

### **3.2 Extraneous matter**

Any foreign substances in foods associated with objectionable condition or practices in production, storage and/or distribution of foods.

### **3.3 Fruit juice**

Fruit juice is the unfermented but fermentable liquid obtained from the edible part of sound, appropriately mature and fresh fruit or a mixture of two or more fruits maintained in sound condition by suitable means including post-harvest surface treatments.

#### **3.3.1 Concentrated fruit juice**

Concentrated fruit juice is a product obtained by physical removal of water 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 A, *Table A.2*.

#### **3.3.2 Reconstituted fruit juice**

Reconstituted fruit juice is a product obtained by reconstituting concentrated juice with potable water. The soluble solids content of a fruit juice prepared from a fruit must have a Brix level of at least the level specified in *Table A.2*.

#### **3.3.3 Water extracted fruit juice**

Fruit juice obtained by diffusion with water from pulpy whole fruit where the juice cannot be extracted by physical means or from dehydrated whole fruit such as prunes or raisins.

#### **3.3.4 Fruit puree**

Fruit purée is the unfermented but fermentable product obtained by suitable processes such as by sieving, grinding, milling the edible part of the whole or peeled fruit without removing the juice.

*NOTE: Fruit purée may have restored 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 cells obtained by suitable physical means from the same kind of fruit may be added.*

#### **3.3.5 Concentrated fruit puree**

Concentrated fruit puree 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 specified in Annex A, *Table A.2*.

#### **3.3.6 Dehydrated/powdered fruit juice**

Dehydrated fruit juice or powdered fruit juice is the product obtained from fruit juice of one or more species by the physical removal of virtually all of its water content.



### 3.4 Fruit nectar

Fruit nectar is unfermented but fermentable product obtained from products described in *clause 3.3* by adding water with or without addition of sugar, honey or syrups and other permitted sweeteners. A mixed fruit nectar is obtained from two or more different kinds of fruit.

### 3.5 Contaminants

Contaminant means any biological/chemical/physical, or other substances not intentionally added to food which may compromise food safety or suitability.

## 4 Essential composition and quality factors

### 4.1 Composition

#### 4.1.1 Basic Ingredients

**4.1.1.1** 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 blending with the juice of the same kind of fruit.

**4.1.1.2** The preparation of fruit juice that requires reconstitution of concentrated juices must be in accordance with the minimum Brix level established in the Annex A, *Table A.2*, exclusive of the solids of any added optional ingredients and additives. If there is no Brix level specified, minimum Brix shall be calculated on the basis of the soluble solids content of the single strength juice used to produce such concentrated juice.

**4.1.1.3** For reconstituted juice and nectar, the potable water used in reconstitution shall, at a minimum, meet the Bhutan Drinking Water Quality Standards, 2016.

**4.1.1.4** The Fruit nectars must meet the requirements defined for fruit nectars in Annex A, *Table A.2*.

### 4.2 Other permitted ingredients

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

**4.2.1** Sugars and syrups as defined in the CODEX STAN 212-1999 may be added to fruit juices and Nectars as defined in *clause 3.3* and *3.4* respectively.

**4.2.2** Honey and/or sugars derived from fruits may be added only to fruit nectars as defined in *clause 3.4*. Other permissible food additives and preservative may be added within the permissible level as specified in BTS 271:2020.

**4.2.3** 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 *clause 3.3*. 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 *clause 3.4*.

### 4.3 Quality factors

#### 4.3.1 General quality requirements

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**4.3.1.1** The product shall have the characteristic colour, aroma and flavour of juice from the same kind of fruit or fruits from which it is made.

**4.3.1.2** Fruit Juices and Nectar may have restored 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 cells obtained by suitable physical means from the same kind of fruit may be added.

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

**4.3.1.4** The product shall be free from seeds, bits of seed and peel unless they are part of product or technologically unavoidable

**4.3.1.5** The product shall be free from extraneous matter and adulterants.

### 4.3.2 Specific quality requirements

The specific quality requirements for fruit juices and nectars is specified in the Annex A, *Table A.1*

## 5 Contaminants

### 5.1 Pesticide

The product shall conform to the limits as defined in FAO/WHO Codex Alimentarius.

### 5.2 Heavy metals

The product shall conform to heavy metal contaminants requirement specified in the *Table 1*. The test methods for determination of listed heavy metals for juices and nectars are not prescribed but recommended. Laboratories may use the other test methods which meet the specific performance criteria and are validated.

**Table 1 – Maximum heavy metal limits**

S/N	Characteristics	Limit	Test method
1	Arsenic (As), <i>mg/kg</i>	0.2	BTS 329 ISO 6634
2	Copper (Cu), <i>mg/kg</i>	1.5	BTS 330 ISO 7592
3	Zinc (Zn), <i>mg/kg</i>	5.0	BTS 331 ISO 6636-2
4	Lead (Pb), <i>mg/kg</i>	0.03	BTS 332 ISO 6633

### 5.3 Microbiological

The product shall conform to microbial acceptable limits specified in *Table 2*. The test methods for determination of listed microbes are not prescribed but recommended. Laboratories may use the other test methods which meet the specific performance criteria and are validated.

Table B.2 –Maximum microbial contaminants limits

S/N	Characteristics	Limit	Test Methods
1	Total Plate Count, cfu/mL max.	10 <sup>3</sup>	BTS 322 ISO 4833-1
3	<i>Escherichia coli</i>	Absent	BTS 323 ISO 16649-2
4	Yeast and moulds, cfu/mL	30	BTS 324 ISO 21527-2

## 5 Packaging and labelling

### 5.1 Packaging

The product shall be packed in food grade materials that will safeguard the hygienic, nutritional and organoleptic qualities of the product.

### 5.2 Labelling

In addition to the provision of the labelling in BTS 268:2020 CODEX STAN 1-1985, the following specific provision must apply;

**5.2.1** The products shall be labelled “concentrated” if the product is prepared as defined in clause 3.3.1

**5.2.2** For products defined in clause 3.3 to 3.3.6 where one or more of the optional sugar or syrup ingredients are added, the product name shall include the statement called “sugar(s) added” after the product name.

**5.2.3** When sweeteners are added 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.

**5.2.4** For the concentrated products to be reconstituted before consumption, the label must bear appropriate directions for reconstitution on a volume/volume basis with water to the applicable Brix value specified in *Table A.2* for reconstituted juice.

**5.2.5** The product shall be identified by the name of fruit when prepared from single fruit. If more than one fruit is used, the product is identified as mixed product and shall be labelled accordingly.

**5.2.6** 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.

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

**5.2.8** Any added essential nutrients declaration/claim should be in accordance with BTS 269 CXG 1(Amended 2009).

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

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**5.2.10** 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.

## 6 Hygiene

The product should be prepared and handled in accordance with BTS 139:2019 SARS 0014:2018.

## 7 Sampling

### 7.1 Scale of sampling

All containers in a consignment belonging to the same batch of manufacture shall constitute a lot. If the consignment is declared to consist of different batches of manufacture, containers of the same batch shall be grouped together and each group so formed shall constitute a separate lot.

Sample shall be tested from each lot for ascertaining conformity to the requirements of this standard.

### 7.2 Sample size

The number of containers to be selected from a lot for testing for microbiological and other requirements shall depend on the size of the lot and shall be in accordance with *Table 3*.

**Table 3 – Sample size determination**

S/N	Number of containers to be selected for sampling Number of containers in the lot, N	Number of containers to be selected (n)	
		Microbiological	Other test
1	≥1300	12	18
2	1301 to 3200	18	24
3	≥3201	24	30

### 7.3 Sampling method

The containers to be selected for testing shall be chosen at random from the lot by the following procedure. Starting from any container, count them as 1,2,3..... up to r. Every  $r^{\text{th}}$  containers thus counted shall be withdrawn, r being the integral part of  $N/n$ , where N is the total number of containers in the lot and n is the total number of container to be chosen (see Table 3).

### 7.4 Test samples and reference samples

#### 7.4.1 Samples for microbiological tests

The sample containers selected for microbiological tests shall be divided at random into three equal sets and labelled with all particulars of sampling. One of these sets of sample containers shall be for the buyer; another for the supplier and the third set is the reference.

#### **7.4.2 Samples for other tests**

The sample containers selected for other tests shall be divided at random into three equal sets and labelled with all the particulars of the sample. One of these sets of sample containers shall be for the buyer, another for the supplier and third is the reference.

#### **7.4.3 Reference samples**

Reference samples shall consist of a set of sample containers for microbiological tests and a set of sample containers for other tests and shall bear the seals of the buyer and supplier or as agreed to between the two.

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## ANNEX A

(Normative)

Table A.1 – Requirement for fruit juices and nectars

S/N	Characteristics	Requirements	Test methods
1	Acid insoluble ash, mg/kg, max.	20	BTS 326 ISO 763
2	Brix, minimum	Refer <i>Table A.2</i>	BTS 327 ISO 2173
3	pH, max	4.5	BTS 328 ISO 1842

Table A.2 - Minimum Brix<sup>1</sup> level requirements for Reconstituted juice and Reconstituted purée and Minimum juice and/or purée content of common fruit juices and nectars (% v/v)<sup>2</sup> at 20°C

Botanical Name	Fruit's Common Name	Minimum Brix Level for Reconstituted Fruit Juices and Reconstituted Purée	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
<i>Actinidia deliciosa</i> (A. Chev.) C. F. Liang & A. R. Ferguson	Kiwi	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Anacardium occidentale</i> L.	Cashewapple	11.5	25.0
<i>Ananas comosus</i> (L.) Merrill <i>Ananas sativus</i> L. Schult. f.	Pineapple	12.817 It is recognized that in different countries, 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 these countries introduced into international trade will be acceptable, provided it meets the authenticity methodology listed in the General Standard for Fruit Juices and Nectars and the level will not be below 10°Brix for pineapple juice and apple juice.	40.0

<b>Table A.2 cont.</b>			
<i>Annona muricata</i> L.	Soursop	14.5	25.0
<i>Annona squamosa</i> L.	Sugar Apple	14.5	25.0
<i>Averrhoa carambola</i> L.	Carambola / Starfruit	7.5	25.0
<i>Carica papaya</i> L.	Papaya	(*) <sup>3</sup>	25.0
<i>Chrysophyllum cainito</i>	Star Apple	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Citrullus lanatus</i> (Thunb.) Matsum. & Nakai var. <i>Lanatus</i>	Water Melon	8.0	40.0
<i>Citrus aurantifolia</i> (Christm.) (swingle)	Lime	8.0 <sup>4</sup>	According to the legislation of the importing country
<i>Citrus aurantium</i> L.	Sour Orange	(*) <sup>3</sup>	50.0
<i>Citrus limonum</i> Rissa	Lemon	8.0 <sup>4</sup>	According to the legislation of the importing country
<i>Citrus paradisi</i> Macfad	Grapefruit	10.0 <sup>4</sup>	50.0
<i>Citrus paradisi</i> , <i>Citrus grandis</i>	Sweetie grapefruit	10.0	50.0
<i>Citrus reticulata</i> Blanca	Mandarine/ Tangerine	11.8 <sup>4</sup>	50.0
<i>Citrus sinensis</i> (L.)	Orange	11.8–11.2 <sup>2</sup> and consistent with the application of national legislation of the importing country but not lower than 11.2. It is recognized that in different countries, the Brix level may naturally differ from this range of values. In cases where the Brix level is consistently lower than this range of values, reconstituted juice of lower Brix from these countries introduced into international trade will be acceptable, provided it meets the authenticity methodology listed in the General Standard for Fruit Juices and Nectars and the level will not be below 10°Brix.	50.0
<i>Cocos nucifera</i> L.18	Coconut	5.0	25.0
<i>Cucumis melo</i> L.	Melon	8.0	35.0

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<i>Cucumis melo</i> L subsp. <i>melo</i> var. <i>inodorus</i> H. Jacq.	Casaba Melon	7.5	25.0
<i>Cucumis melo</i> L. subsp. <i>melo</i> var. <i>inodorus</i> H. Jacq	Honeydew Melon	10.0	25.0
<i>Cydonia oblonga</i> Mill.	Quince	11.2	25.0
<i>Diospyros khaki</i> Thunb.	Persimmon	(*) <sup>3</sup>	40.0
<i>Empetrum nigrum</i> L.	Crowberry	6.0	25.0
<i>Eriobotrya japonica</i>	Loquat	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Eugenia syriaca</i>	Guavaberry Birchberry	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Eugenia uniflora</i> Rich.	Suriname Cherry	6.0	25.0
<i>Ficus carica</i> L.	Fig	18.0	25.0
<i>Fortunella Swingle</i> sp.	Kumquat	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Fragaria x. ananassa</i> Duchense( <i>Fragaria chiloensis</i> Duchesne x <i>Fragaria virginiana</i> Duchesne)	Strawberry	7.5	40.0
<i>Genipa americana</i>	“Genipap”	17.0	25.0
<i>Hippophae elaeagnaceae</i>	Sea Buckthorn	(*) <sup>3</sup>	25.0
<i>Hippophae rhamnoides</i> L.	Buckthornberry = Sallow-thornberry	6.0	25.0
<i>Hippophae salicifolia</i> D.Don	Sea Buckthorn	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Litchi chinensis</i> Sonn.	Litchi/Lychee	11.2	20.0
<i>Lycopersicon esculentum</i> L.	Tomato	5.0	50.0
<i>Malpighia</i> sp. (Moc. & Sesse)	Acerola (West Indian Cherry)	6.5	25.0



<i>Malus domestica</i> Borkh.	Apple	11.5 It is recognized that in different countries, 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 these countries introduced into international trade will be acceptable, provided it meets the authenticity methodology listed in the General Standard for Fruit Juices and Nectars and the level will not be below 10°Brix for pineapple juice and apple juice.	50.0
<i>Malus prunifolia</i> (Willd.) Borkh. <i>Malus sylvestris</i> Mill.	Crab Apple	15.4	25.0
<i>Mammea americana</i>	Mammee Apple	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Mangifera indica</i> L.	Mango	13.5	25.0
<i>Morus</i> sp.	Mulberry	(*) <sup>3</sup>	30.0
<i>Musa</i> species including <i>M. acuminata</i> and <i>M. paradisiaca</i> but excluding other plantains	Banana	(*) <sup>3</sup>	25.0
<i>Passiflora edulis</i>	Yellow Passion Fruit	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Passiflora edulis</i> Sims. f. <i>edulis</i> <i>Passiflora edulis</i> Sims. f. <i>Flavicarpa</i> O. Def.	Passion Fruit	12 <sup>4</sup>	25.0
<i>Passiflora quadrangularis</i>	Passion Fruit	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Phoenix dactylifera</i> L.	Date	18.5	25.0
<i>Pouteria sapota</i>	Sapote	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Prunus armeniaca</i> L.	Apricot	11.5	40.0
<i>Prunus avium</i> L.	Sweet Cherry	20.0	25.0
<i>Prunus cerasus</i> L.	Sour Cherry	14.0	25.0
<i>Prunus cerasus</i> L. cv. Stevnsbaer	Stonesbaer	17.0	25.0
<b>Table A.2 cont.</b>			

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<i>Prunus domestica</i> L. subsp. <i>domestica</i>	Plum	12.0	50.0
<i>Prunus domestica</i> L. subsp. <i>domestica</i>	Prune	18.5	25.0
<i>Prunus domestica</i> L. subsp. <i>domestica</i>	Quetsche	12.0	25.0
<i>Prunus persica</i> (L.) Batsch var. <i>nucipersica</i> (Suckow) c. K. Schneid.	Nectarine	10.5	40.0
<i>Prunus persica</i> (L.) Batsch var. <i>persica</i>	Peach	10.5	40.0
<i>Prunus spinosa</i> L.	Sloe	6.0	25.0
<i>Psidium guajava</i> L.	Guava	8.5	25.0
<i>Punica granatum</i> L.	Pomegranate	12.0	25.0
<i>Pyrus arbustifolia</i> (L.) Pers.	Aronia/Chokeberry	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Pyrus communis</i> L.	Pear	12.0	40.0
<i>Ribes nigrum</i> L.	Black Currant	11.0	30.0
<i>Ribes rubrum</i> L.	Red Currant	10.0	30.0
<i>Ribes rubrum</i> L.	White Currant	10.0	30.0
<i>Ribes uva-crispa</i>	Red Gooseberry	(*) <sup>3</sup>	30.0
<i>Ribes uva-crispa</i> L.	Goosberry	7.5	30.0
<i>Ribes uva-crispa</i> L.	White Goosberry	(*) <sup>3</sup>	30.0
<i>Rosa canina</i> L.	Cynorrhodon	(*) <sup>3</sup>	40.0
<i>Rosa</i> sp. L.	Rosehip	9.0	40.0
<i>Rubus chamaemorus</i> L.	Cloudberry	9.0	30.0
<i>Rubus chamaemorus</i> L. <i>Morus</i> hybrid	Mulberry	(*) <sup>3</sup>	40.0
<i>Rubus fruitcosus</i> L.	Blackberry	9.0	30.0
<i>Rubus hispidus</i> (of North America) <i>R. caesius</i> (of Europe)	Dewberry	10.0	25.0
<i>Rubus idaeus</i> L. <i>Rubus strigosus</i> Michx.	Red Raspberry	8.0	40.0
<i>Rubus loganobaccus</i> L. H. Bailey	Loganberry	10.5	25.0
<i>Rubus occidentalis</i> L.	Black Raspberry	11.1	25.0
<i>Rubus ursinus</i> Cham. & Schltldl.	Boysenberry	10.0	25.0

<i>Rubus vitifolius</i> x <i>Rubus idaeus</i> <i>Rubus baileyanus</i>	Youngberry	10.0	25.0
<i>Sambucus nigra</i> L. <i>Sambucus canadensis</i> .	Elderberry	10.5	50.0
<i>Solanum quitoense</i> Lam.	“Lulo”	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Sorbus aucuparia</i> L.	Rowanberry	11.0	30.0
<i>Sorbus domestica</i>	Sorb	(*) <sup>3</sup>	30.0
<i>Spondia lutea</i> L.	“Cajá”	10.0	25.0
<i>Spondias tuberosa</i> Arruda ex Kost.	“Umbu”	9.0	25.0
<i>Syzygiun jambosa</i>	Pome Apple	(*) <sup>3</sup>	(*) <sup>3</sup>
<i>Tamarindus indica</i>	Tamarind (Indian date)	13.0	Adequate content to reach a minimum acidity of 0.5
<i>Theobroma cacao</i> L.	Cocoa pulp	14.0	50.0
<i>Theobroma grandiflorum</i> L.	“Cupuaçu”	9.0	35.0
<i>Vaccinium macrocarpon</i> Aiton <i>Vaccinium oxycoccos</i> L.	Cranberry	7.5	30.0
<i>Vaccinium myrtillus</i> L. <i>Vaccinium corymbosum</i> L. <i>Vaccinium angustifolium</i>	Bilberry/Blueberry	10.0	40.0
<i>Vaccinium vitis-idaea</i> L.	Lingonberry	10.0	25.0
<i>Vitis Vinifera</i> L. or <i>hybrids thereof</i> <i>Vitis Labrusca</i> or <i>hybrids thereof</i>	Grape	16.0	50.0
	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

<sup>1</sup> *For the purposes of the Standard the Brix is defined as the soluble solids content of the juice as determined by the method found in the Section on Methods of Analysis and Sampling.*

<sup>2</sup> *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.*

<sup>3</sup> *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.*

<sup>4</sup> *Acid corrected as determined by the method for total treatable acids*

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