

PAKISTAN STANDARD SPECIFICATION
FOR

FRUIT JUICES AND NECTARS



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**PSQCA Complex, Standardization Wing II, 1st Floor,
Plot - ST-7/A, Block-3, Scheme No.36,
Gulistan-e-Johar, Karachi**

**PAKISTAN STANDARD SPECIFICATION
FOR
FRUIT JUICES AND NECTARS**

0. FOREWORD

- 0.1 This Pakistan Standard was adopted by the Pakistan Standards & Quality Control Authority; Standards Development Centre on **02 April, 2009** after the draft finalized by the Fruit Vegetable Products Technical Committee had been approved by the National Standards Committee For Agricultural & Food Products.
- 0.2 In the preparation of this standard the views of the Consumers, Manufacturers, Technologists and Testing Authorities have been taken into consideration.
- 0.3 The assistance has been derived from (CODEX STAN-247-2005) and Prevention of food adulteration (II amendment), India is acknowledged with thanks.
- 0.4 For the purpose of deciding whether a particular requirement of this standard is complied with the final value observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with PS: 103 for Methods of Rounding Off Numerical Values, the number of significant places retained in the rounded off value shall be the same as that of the specified value in the standard

1. SCOPE

This Standard applies to all products as defined in Clause 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.

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) PS: 1825 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.

It may contain some food additives in an amount recommended or GMP.
It may be called as 100% pure fruit juice

ANNEX

MINIMUM BRIX¹¹ LEVEL FOR RECONSTITUTED JUICE

Botanical Name	Fruit's Common Name	Minimum Brix (TSS) Level for Reconstituted Fruit Juices and Reconstituted Purée
Actinidia deliciosa (A. Chev.) C. F. Liang & A. R. Ferguson	Kiwi	(*) ¹³
Anacardium occidentale L.	Cashewapple	11.5
Ananas comosus (L.) Merrill Ananas sativis L. Schult. f.	Pineapple	12.8 ¹⁴ 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 bellow 10°Brix for pineapple juice and apple juice.
Annona muricataL.	Soursop	14.5
Annona squamosa L	Sugar Apple	14.5

Averrhoa carambola L.	Starfruit	7.5
Carica papaya L.	Papaya	(*) ¹³
Chrysophyllum cainito	Star Apple	(*) ¹³
Citrullus lanatus (Thunb.) Matsum. & Nakai var. Lanatus	Water Melon	8.0
Citrus aurantifolia (Christm.) (swingle)	Lime	8.0 ¹⁴

¹¹ 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.

¹² 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.

¹³ 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.

¹⁴ Acid corrected as determined by the method for total titratable acids.

Botanical Name	Fruit's Common Name	Minimum Brix (TSS) Level for Reconstituted Fruit Juices and Reconstituted Purée
Citrus aurantium L.	Sour Orange	(*) ¹³
Citrus limon (L.) Burm. f. Citrus limonum Rissa	Lemon	8.0 ¹⁴
Citrus paradisi Macfad	Grapefruit	10.0 ¹⁴
Citrus paradisi, Citrus grandis	Sweetie grapefruit	10.0
Citrusreticulata Blanca	Mandarine/ Tangerine	11.8 ¹⁴
Citrus sinensis (L.)	Orange	11.8 – 11.2 ¹⁴ 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.
Cocos nucifera L.15	Coconut	5.0
Cucumis melo L.	Melon	8.0
Cucumis melo L subsp. melo var. inodorus H. Jacq.	Casaba Melon	7.5
Cucumis melo L. subsp. melo var.	Honeydew Melon	10.0

inodorus H. Jacq		
Cydonnia oblonga Mill.	Quince	11.2
Diospyros khaki Thunb.	Persimmon	(*) ¹³
Empetrum nigrum L.	Crowberry	6.0

¹⁵ This product is 'coconut water' which is directly extracted from the coconut without expressing the coconut meat.

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Botanical Name	Fruit's Common Name	Minimum Brix (TSS) Level for Reconstituted Fruit Juices and Reconstituted Purée
Eriobotrya japonica	Loquat	(*) ¹³
Eugenia syriaca	Guavaberry Birchberry	(*) ¹³
Eugenia uniflora Rich.	Suriname Cherry	6.0
Ficus carica L.	Fig	18.0
Fortunella Swingle sp.	Kumquat	(*) ¹³
Fragaria x. ananassa Duchesne (Fragaria chiloensis Duchesne x Fragaria virginiana Duchesne)	Strawberry	7.5
Genipa americana	Genipap	17.0
Hippophae elaeagnifolia	Sea Buckthorn	(*) ¹³
Hippophae rhamnoides L.	Buckthornberry = Sallow-thornberry	6.0
Litchi chinensis Sonn.	Litchi/Lychee	11.2
Lycopersicon esculentum L.	Tomato	5.0
Malpighia sp. (Moc. & Sesse)	Acerola (West Indian Cherry)	6.5
Malus domestica 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 bellow 10°Brix for pineapple juice and apple juice.
Malus prunifolia (Willd.) Borkh. Malus sylvestris Mill.	Crab Apple	15.4
Mammea americana	Mammee Apple	(*) ¹³
Mangifera indica L	Mango	13.5
Morus sp.	Mulberry	(*) ¹³
Musa species including M. acuminata and M. paradisiaca but excluding otherplantains	Banana	(*) ¹³
Passiflora edulis	Yellow Passion Fruit	(*) ¹³

Passiflora edulis Sims. f. edulis Passiflora edulis Sims. f. Flavicarpa O. Def.	Passion Fruit	12 ¹⁴
Passiflora quadrangularis	Passion Fruit	(*) ¹³
Phoenix dactylifera L.	Date	18.5
Pouteria sapota	Sapote	(*) ¹³
Prunus armeniaca L.	Apricot	11.5
Prunus avium L.	Sweet Cherry	20.0

Prunus cerasus L.	Sour Cherry	14.0
Prunus cerasus L. cv. Stevnsbaer	Stonesbaer	17.0
Prunus domestica L. subsp. domestica	Plum	12.0
Prunus domestica L. subsp. domestica	Prune	18.5
Prunus domestica L. subsp. domestica	Quetsche	12.0
Prunus persica (L.) Batsch var. nucipersica (Suckow) c. K. Schneid.	Nectarine	10.5
Prunus persica (L.) Batsch var. persica	Peach	10.5
Prunus spinosa L.	Sloe	6.0
Psidium guajava L.	Guava	8.5
Punica granatum L.	Pomegranate	12.0

Pyrus arbustifolia (L.) Pers.	Aronia/ Chokeberry	(*) ¹³
Pyrus communis L.	Pear	12.0
Ribes nigrum L.	Black Currant	11.0
Ribes rubrum L.	Red Currant	10.0
Ribes rubrum L.	White Currant	10.0
Ribes uva-crispa	Red Gooseberry	(*) ¹³
Ribes uva-crispa L.	Goosberry	7.5
Ribes uva-crispa L.	White Goosberry	(*) ¹³
Rosa canina L.	Cynorrhodon	(*) ¹³
Rosa sp. L.	Rosehip	9.0
Rubus chamaemorus L.	Cloudberry	9.0

Rubus chamaemorus L. Morus hybrid	Mulberry	(*) ¹³
Rubus fruitcosus L.	Blackberry	9.0
Rubus hispidus (of North America) R. caesius (of Europe)	Dewberry	10.0
Rubus idaeus L. Rubus strigosus Michx.	Red Raspberry	8.0
Rubus loganobaccus L. H. Bailey	Loganberry	10.5
Rubus occidentalis L.	Black Raspberry	11.1

Rubus ursinus Cham. & Schltl.	Boysenberry	10.0
Rubus vitifolius x Rubus idaeus Rubus baileyanis	Youngberry	10.0
Sambucus nigra L. Sambucus canadensis	Elderberry	10.5
Solanum quitoense Lam.	Lulo	(*) ¹³
Sorbus aucuparia L.	Rowanberry	11.0
Sorbus domestica	Sorb	(*) ¹³
Spondia lutea L.	Cajá	10.0
Spondias tuberosa Arruda ex Kost.	Umbu	9.0
Syzygiun jambosa	Pome Apple	(*) ¹³
Tamarindus indica	Tamarind (Indian date)	13.0
Theobroma cacao L.	Cocoa pulp	14.0
Theobroma grandiflorum L.	Cupuaçu	9.0

Vaccinium macrocarpon Aiton Vaccinium oxycoccos L.	Cranberry	7.5
Vaccinium myrtillus L. Vaccinium corymbosum L. Vaccinium angustifolium	Bilberry/ Blueberry	10.0
Vaccinium vitis-idaea L.	Lingonberry	10.0
Vitis Vinifera L. or hybrids thereof Vitis Labrusca or hybrids thereof	Grape	15.0
	Other:	13.5

Fruit juice is obtained as follows:

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

2.1.2 Concentrated Fruit Juice

Concentrated fruit juice is the product that complies with the definition given in Clause 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 is 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 physical² 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.

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

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.

2.1.4 Fruit Purée (Pulp) for use in the manufacture of Fruit Juices and Nectars

Fruit purée for use in the manufacture of Fruit Juices and Nectars 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)

Fruit purée may have restored aromatic substances¹ and volatile flavour components, all of which must be obtained by suitable physical means², 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 for use in the manufacture of Fruit Juices and Nectars

Concentrated fruit purée for use in the manufacture of Fruit Juices and Nectars 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 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.

2.1.6 Fruit Nectar

Fruit Nectar is the unfermented but fermentable product obtained by adding water with or without the addition of sugars and other additives. Aromatic substances, volatile flavour components, pulp and cells 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.

It may contain some food additives in an amount recommended or GMP.

ANNEX

**MINIMUM JUICE AND/OR PURÉE CONTENT FOR FRUIT NECTARS (% V/V)
12 AT 200C**

Botanical Name	Fruit's Common Name	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Actinidia deliciosa (A. Chev.) C. F. Liang & A. R. Ferguson	Kiwi	(*) ¹³
Anacardium occidentale L.	Cashewapple	25.0
Ananas comosus (L.) Merrill Ananas sativis L. Schult. f.	Pineapple	40.0
Annona muricata L.	Soursop	25.0
Annona squamosa L.	Sugar Apple	25.0
Averrhoa carambola L.	Starfruit	25.0
Carica papaya L.	Papaya	25.0
Chrysophyllum cainito	Star Apple	(*) ¹³
Botanical Name	Fruit's Common Name	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Citrullus lanatus (Thunb.) Matsum. & Nakai var. Lanatus	Water Melon	40.0
Citrus aurantifolia (Christm.) (swingle)	Lime	According to the legislation of the importing country

11 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.

12 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.

13 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.

14 Acid corrected as determined by the method for total titratable acids.

Botanical Name	Fruit's Common Name	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Citrus aurantium L.	Sour Orange	50.0
Citrus limon (L.) Burm. f. Citrus limonum Rissa	Lemon	According to the legislation of the importing country
Citrus paradisi Macfad	Grapefruit	50.0
Citrus paradisi, Citrus grandis	Sweetie grapefruit	50.0
Citrusreticulata Blanca	Mandarine/ Tangerine	50.0
Citrus sinensis (L.)	Orange	50.0
Cocos nucifera L.15	Coconut	25.0
Cucumis melo L.	Melon	35.0
Cucumis melo L subsp. melo var. inodorus H. Jacq.	Casaba Melon	25.0
Cucumis melo L. subsp. melo var. inodorus H. Jacq	Honeydew Melon	25.0
Cydonia oblonga	Quince	25.0

Mill.		
Diospyros khaki Thunb.	Persimmon	40.0
Empetrum nigrum L.	Crowberry	25.0

¹⁵ This product is 'coconut water' which is directly extracted from the coconut without expressing the coconut meat.

Botanical Name	Fruit's Common Name	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Eriobotrya japonica	Loquat	(*) ¹³
Eugenia syriaca	Guavaberry Birchberry	(*) ¹³
Eugenia uniflora Rich.	Suriname Cherry	25.0
Ficus carica L.	Fig	25.0
Fortunella Swingle sp.	Kanquats	(*) ¹³
Fragaria x. ananassa Duchesne (Fragaria chiloensis Duchesne x Fragaria virginiana Duchesne)	Strawberry	40.0
Genipa americana	Genipap	25.0
Hippophae elaeagnaceae	Sea Buckthorn	25.0
Hippophae rhamnoides L.	Buckthornberry = Sallow-thornberry	25.0
Litchi chinensis Sonn.	Litchi/Lychee	20.0
Lycopersicon esculentum L.	Tomato	50.0
Malpighia sp. (Moc. & Sesse)	Acerola (West Indian Cherry)	25.0

Malus domestica Borkh.	Apple	50.0
Malus prunifolia (Willd.) Borkh. Malus sylvestris Mill.	Crab Apple	25.0
Mammea americana	Mammee Apple	(*) ¹³
Mangifera indica L	Mango	25.0
Morus sp.	Mulberry	30.0
Musa species including M. acuminata and M. paradisiaca but excluding otherplantains	Banana	25.0
Passiflora edulis	Yellow Passion Fruit	(*) ¹³

Passiflora edulis Sims. f. edulis Passiflora edulis Sims. f. Flavicarpa O. Def.	Passion Fruit	25.0
Passiflora quadrangularis	Passion Fruit	(*) ¹³
Phoenix dactylifera L.	Date	25.0
Pouteria sapota	Sapote	(*) ¹³
Prunus armeniaca L.	Apricot	40.0
Prunus avium L.	Sweet Cherry	25.0
Prunus cerasus L.	Sour Cherry	25.0
Prunus cerasus L. cv. Stevensbaer	Stonesbaer	25.0
Prunus domestica L. subsp. domestica	Plum	50.0

Prunus domestica L. subsp. domestica	Prune	25.0
Prunus domestica L. subsp. domestica	Quetsche	25.0
Prunus persica (L.) Batsch var. nucipersica (Suckow) c. K. Schneid.	Nectarine	40.0
Prunus persica (L.) Batsch var. persica	Peach	40.0
Prunus spinosa L.	Sloe	25.0
Psidium guajava L.	Guava	25.0
Punica granatum L.	Pomegranate	25.0

Pyrus arbustifolia (L.) Pers.	Aronia/ Chokeberry	(*) ¹³
Pyrus communis L.	Pear	40.0
Ribes nigrum L.	Black Currant	30.0
Ribes rubrum L.	Red Currant	30.0
Ribes rubrum L.	White Currant	30.0
Ribes uva-crispa	Red Gooseberry	30.0
Ribes uva-crispa L.	Goosberry	30.0
Ribes uva-crispa L.	White Goosberry	30.0
Rosa canina L.	Cynorrhodon	40.0
Rosa sp. L.	Rosehip	40.0
Rubus chamaemorus L.	Cloudberry	30.0
Rubus chamaemorus L. Morus hybrid	Mulberry	40.0
Rubus fruitcosus L.	Blackberry	30.0
Rubus hispidus (of North America) R.	Dewberry	25.0

caesius (of Europe)		
Rubus idaeus L. Rubus strigosus Michx.	Red Raspberry	40.0
Rubus loganobaccus L. H. Bailey	Loganberry	25.0
Rubus occidentalis L.	Black Raspberry	25.0

Botanical Name	Fruit's Common Name	Minimum Juice and/or Purée Content (% v/v) for Fruit Nectars
Rubus ursinus Cham. & Schtdl.	Boysenberry	25.0
Rubus vitifolius x Rubus idaeus Rubus baileyanus	Youngberry	25.0
Sambucus nigra L. Sambucus canadensis.	Elderberry	50.0
Solanum quitoense Lam.	Lulo	(*) ¹³
Sorbus aucuparia L.	Rowanberry	30.0
Sorbus domestica	Sorb	30.0
Spondia lutea L.	Cajá	25.0
Spondias tuberosa Arruda ex Kost.	Umbu	25.0
Syzygiun jambosa	Pome Apple	(*) ¹³
Tamarindus indica	Tamarind (Indian date)	Adequate content to reach a minimum acidity of 0.5
Theobroma cacao L.	Cocoa pulp	50.0
Theobroma grandiflorum L.	Cupuacu	35.0
Vaccinium macrocarpon Aiton Vaccinium oxycoccos	Cranberry	30.0

L.		
Vaccinium myrtillus L. Vaccinium corymbosum L. Vaccinium angustifolium	Bilberry/ Blueberry	40.0
Vaccinium vitis-idaea L.	Lingonberry	25.0
Vitis Vinifera L. or hybrids thereof Vitis Labrusca or hybrids thereof	Grape	40.0
	Other:	15

2.1.7 Fruit drinks and Fruit beverages

Fruit Drinks and fruit beverages means an unfermented but fermentable product which is prepared from juice or Pulp/Puree or concentrated juice or pulp of sound mature fruit, by blending it with water or milk and processed by heat, in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage.

2. The product may contain permissible food additives. The product shall meet the following requirements:-

(i) Total Soluble solid (m/m)	Not less than 10.0 percent
(ii) Fruit juice content (m/m)	
(a) All beverage/drink	Not less than 10.0 percent

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 PSQCA drinking water

3.1.2 Other Permitted Ingredients

Other permissible food additives are allowed according to the local standards and codex listing.

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.

4. PROCESSING AIDS –Practices (GMP) Maximum Level of Use in line with Good Manufacturing

Function	Substance
Antifoaming Agent	Polydimethylsiloxane ⁵

Clarifying Agents
Filtration Aids

Adsorbent clays
(bleaching, natural or activated earths)

Flocculating Agents

Adsorbent resins
Activated carbon (only from plants)
Bentonite
Calcium hydroxide⁶
Cellulose
Chitosan
Colloidal silica
Diatomaceous earth
Gelatin (from skin collagen)
Ion exchange resins (cation and anion)
Kaolin
Perlite
Polyvinylpyrrolidone
Potassium tartrate⁶
Precipitated calcium carbonate⁶
Rice hulls
Silicasol
Sulphur dioxide^{6, 7}
Tannin

5

10 mg/l is the maximum residue limit of the compound allowed in the final product.

6

Only in grape juice.

7

10 mg/l as residual SO₂. 5

Function	Substance
Enzyme ⁸ 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).
Packing gas ⁹	Nitrogen
	Carbon dioxide

5. CONTAMINANTS

5.1 PESTICIDE RESIDUES

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

5.2 OTHER CONTAMINANTS

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

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.

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 25-1997).

7. PACKING AND MARKING

7.1 **PACKING** — the product shall be packed in hygienically suitable containers.

7.2 **MARKING** — Each container shall be clearly marked or labelled with following particulars.

- a) Name of the product.
- b) Name and address of the manufacturer.
- c) Net weight /volume (Average weight principle will be applicable) .
- d) Date of manufacture.
- e) Date of expiry.
- f) List of Ingredients (in descending order).
- g) This Pakistan Standard number, Mark & Licence number.
- h) Batch or code number.

8. LABELLING

The Pakistan Standard for the Labelling of Prepackaged Foods (PS:1485) shall apply.

If any juice, nectar or drink contains two or more than two fruits, the name of the product shall be designated with that fruit which has higher fruit content (in percentage) OR may also be called as “mixed fruit juice/nectar/drink” or “fruit juice/nectar/drink blend” or a “fruit juice/nectar/drink mixture”.

9. TEST METHOD:

The relevant Testing Method of ISO, CAC and of other internationally recognized standard methods may be taken into account for analysis purpose.

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PAKISTAN STANDARDS & QUALITY CONTROL AUTHORITY
STANDARDS DEVELOPMENT CENTRE

(AGRICULTURE & FOOD DIVISION)

NO.PSQCA/SDC-2/Pub/NSCAF/2008-09

Dated: 05-11-2019.

AMENDMENT NO.1

PS: 4973-2009

FOR

FRUIT JUICE AND NECTARS

Ref. Clause 2.1.7, Page No.21:

Read as follows:

Sl. No	Name of the Food Additive	Maximum Level
i.	Total Soluble Solids (m/m).	Not less than 5.0 percent
ii.	Fruit Juice Content (m/m).	Not less than 5.0 percent.
a.	All Beverage / Drink	Not less than 5.0 percent

(Naseem-us-Sami)
 Dy. Director (Agri. & Food)