

PS : 1739 – 2009

ICS No: 67.160.20

PAKISTAN STANDARD SPECIFICATION
FOR
APPLE JUICE (1ST REVISION)

only for research purposes
not for sale
copyright www.psqca.com.pk



The logo for Pakistan Standards features a green square with a white star and crescent, a white checkmark, and a white scale of justice. Below the square, the text "Pakistan Standards" is written in a bold, black, sans-serif font.

(ALL RIGHTS RESERVED)

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

PAKISTAN STANDARDS & QUALITY CONTROL AUTHORITY
(STANDARDS DEVELOPMENT CENTRE)
(Agriculture & Food Division)

CHAIRMAN

1. Mr. Zuzzer A. Shamsuddin,
Director,

PCSIR Laboratory & Complex,
Food & Food System,
PCSIR
Karachi

MEMBERS

2. Kishwar Shabina,
Public Analyst,

KMC Food Laboratories,
Karachi
3. Dr. Shahina Naz,

Dept. of Food Science & Technology,
University of Karachi,
Karachi
4. Dr. Rahmanullah Siddiqi,
Assistant Professor,

Dept. of Food Science & Technology,
University of Karachi,
Karachi
5. Mr. Abdul Qadir Khairi,
Soil Chemist,

Sindh Horticulture Research Institute,
Mirpurkhas
6. Muhammad Azlam,
Director, PHRO,

Ayub Agriculture Research Institute,
Faisalabad
7. Mr. Tajammul Haussain Chuslu,
Executive Director,

Naurus (Pvt.) Ltd.,
C-1/B Naurus Chowrangi,
SITE., **Karachi**
8. Mr. Ataullah Khan,
Director Quality Control,

Naurus (Pvt.) Ltd.,
C-1/B Naurus Chowrangi,
SITE.,
Karachi
9. Dr. M. Samee Haider,
Senior Scientific Officer,

PCSIR Labs. Complex,
Karachi
10. Mr. Asad Naeem Khan,
Manager QA/Development

Shangrila (Pvt.) Ltd.,
F-33 SITE II, Scheme 33 Super highway,
Karachi

11. M. Muneer Hussain
Sr. Deputy Manager
Research & Analyst & Quality Control,
National Foods Ltd.,
F-160 SITE., **Karachi.**
12. Sana Waqar,
Assistant Manager R&D
National Foods Ltd.,
F-/160-C, SITE,
Karachi
13. Mr. Waseem A. Mahmood,
Director Marketing,
(PFPA) Secretary
Shezan international Ltd.,
56-bund Road,
Lahore
14. Mr. Rana Maqbool Ejaz,
Manager Production
Shezan International Ltd.,
56-Bund Road,
Lahore
15. Mr. Mushir M. Syed,
Manager Quality Systems
Engro Foods (Pvt.) Ltd.,
Harbor Front Building,
Clifton – **Karachi**
16. Mr. Mujeeb-ur-Rehman,
Field Officer
Standards Development Centre,
PSQCA
Karachi
17. Mr. Ayaz Soomro,
Field Officer
Standards Development Centre,
PSQCA
Karachi
- SECRETARIAT**
1. Mr. Naseem-us- Sami
Asstt. Director (Agri & Food) &
Secretary to the Committee
Standard Development Centre
PSQCA
Karachi.
3. Ms. Yasmin Khanam
Examiner (Agri. & Food)
Standard Development Centre
PSQCA
Karachi.
-

**PAKISTAN STANDARD SPECIFICATION
FOR
APPLE JUICE (1st Revision)**

0. FOREWORD

- 0.1 This Pakistan Standard was adopted by the Pakistan Standards & Quality Control Authority; Standards Development Centre on 2nd April, 2009 after the draft finalized by the Fruit Vegetable Products Technical Committee had been approved by the Agricultural & Food Products National Standards Committee for.
- 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) with thanks.
- 0.4 This Standard was published in 1985, the committee felt it to revise in the light of latest development in the industry. 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 (R) 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.
- 0.5 All the ingredients preparation, processing, packaging storage and for transportation shall be according to PS: 3733 for Halaal Food Management System Requirement for any Organization in the Food Chain.

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 by GMP.

It may be called as 100% pure fruit juice

ANNEXURE
MINIMUM BRIX¹¹ LEVEL FOR RECONSTITUTED JUICE

Botanical Name	Fruit's Common Name	Minimum Brix (TSS) Level for Reconstituted Fruit Juices and Reconstituted Purée
Malus domestica Borkh.	Apple	<p style="text-align: center;">11.5</p> <p>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 the level will not be below 10°Brix for apple juice.</p>

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

Fruit juice is obtained as follows:

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

2.2 Fruit Purée (Pulp) for use in the manufacture of Fruit Juices

Fruit purée for use in the manufacture of Fruit Juices 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 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.

2.1.4 Concentrated Fruit Purée for use in the manufacture of Fruit Juices

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

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 COMPOSITION

3.1.1 Basic Ingredients

For reconstituted juice, 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 (PS :1932 for 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 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 should be subject to testing for authenticity, composition, and quality where applicable and where required.

4. CONTAMINANTS

4.1 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 for these products.

4.2 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.

5. HYGIENE

5.1 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 of PSQCA, PS: 3944, Code of Practice – General Principles of Food Hygiene.

5.2 Chemical Requirement:

Acidity calculated (as Malic Acid) shall not be less than 0.3 g and not more than 0.8 g in 100 ml at 20 °C.

5.2.1

MICROBIOLOGICAL LIMITS

S.#	Organism	Limits
1	Total plate count	Less than 1000 cfu/gram
2	Coliforms	Less than 10 cfu/gram
3	E.coli/g	Absent
4	Listeria Monocytogenes/25g	Absent
5	Yeast/Mold	Less than 100 cfu/gram

6. PACKING AND MARKING

6.1 **PACKING** — The product shall be packed in hygienically suitable containers.

6.2 **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.

7. 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”.

8. TEST METHOD:

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

9. SAMPLING

- 9.1 In accordance with PS: 630 for Method of Sampling and Test for Fruit and Vegetable Products.
-