
**Pomegranate fruit — Specification and
test methods**

Grenade — Spécifications et méthodes d'essai

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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Pomegranate fruit — Specification and test methods

1 Scope

This International Standard specifies requirements and test methods for pomegranate fruit of the tree *Punica granatum* (L.) destined for human consumption.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

pomegranate

fruit of the tree *Punica granatum* (L.)

2.2

pest-infested pomegranate

pomegranate damaged by insect and/or mite infestation

2.3

spoiled pomegranate

pomegranate damaged by bruises, or darkened in colour, frozen, sun-burnt or showing the presence of visible decomposition caused by bacteria, fungi, visible mould hyphae or any other indications of disease

2.4

immature pomegranate

pomegranate obtained from an unripe pomegranate having poor flavour, hard tissues and undesirable appearance

2.5

fermented pomegranate

pomegranate damaged by fermentation to the extent that the characteristic appearance and/or flavour is substantially affected

2.6

extraneous matter

dirt, pieces of skin, calyx, leaf, peduncle, twigs, bits of wood or any other foreign matter among or on the pomegranate

3 Requirements

3.1 Description

Pomegranates shall be sound and clean. Annex C contains some characteristic compositional data.

3.2 Odour and taste

Pomegranates shall have an odour and taste characteristic of the variety. They shall be free from foreign odour and odour traces coming from abnormal fermented pomegranates.

3.3 Freedom from insects, moulds, etc.

Pomegranates shall be free from mites or other parasites and moulds, and shall be practically free from dead insects, insect fragments and rodent contamination visible to the naked eye.

4 Classification

4.1 General

Pomegranates shall be classified on the basis of colour and the presence of defects, extraneous matter and other features, as specified in Table 1. They may also be separated into sizes.

Pomegranates are classified into three classes defined in 4.2.1 to 4.2.3.

4.2 Classes

4.2.1 Extra class

Pomegranates in this class shall be of superior quality. Pomegranates in this class shall not exceed the allowable percentages for the various defects given in Table 1.

4.2.2 Class I

Pomegranates in this class shall be of good quality. They shall be characteristic of the variety and/or commercial type.

The following slight defects are allowed, provided that the pomegranate retains its essential characteristic as regards general appearance, quality and presentation: skin defect, coloration defects.

4.2.3 Class II

This class includes pomegranates which do not qualify for inclusion in the higher classes but which satisfy the requirements specified in Table 1.

The following defects are allowed, provided that the pomegranate retains its essential characteristics as regards general appearance, quality and presentation: skin defect, coloration defects.

Table 1 — Requirements for pomegranate classes

	Extra	Class I	Class II
Pest-infested fruits , max. number of damaged fruits/100 fruits (%)	1	2	3
Spoiled fruits , max. number of spoiled fruits/100 fruits (%)	2	3	4
Immature fruits , max. number of immature fruits/100 fruits (%)	1	2	3
Extraneous matter mass fraction, % (max.)	0,5	1,0	1,5
Colour	light reddish	reddish	brown
Fermented fruits , max. number of fermented fruits/100 fruits (%)	1	2	3
Fruit mass (g)	> 480	380 to 480	< 380

4.3 Tolerances

Subject to agreement between the interested parties, tolerances with respect to characteristic and size may be allowed in each package (or in each lot for product transported in bulk) for product not satisfying the requirements of the class indicated.

5 Sampling

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It is important that the laboratory receive a sample which is truly representative and has not been damaged or changed during transport or storage.

6 Test methods

Samples of pomegranates shall be tested for conformity of the product to the requirements of Table 1 by the test method specified in Annex A.

The phenolic compounds content shall be tested in accordance with Annex B.

7 Packing and marking

7.1 Packing

Pomegranates shall be packed in clean, sound and dry containers made of materials which do not affect the product. If wooden boxes are used, they shall be lined with a suitable paper.

For direct consumption, small consumer packages may be used. The quantities packed in such packages are usually 1,0 kg, 2,0 kg or 5 kg net mass but, if required, other quantities may be used. A suitable number of such small packages shall be placed in large wooden or cardboard cases.

The size of the packages and the number of small packages packed in a case shall be subject to agreement between the purchaser and vendor.

However, the mass of the large containers or cases shall not be more than 15 kg.

7.2 Marking

The container and case shall be marked or labelled with the following particulars:

- a) the name of the product or variety, and the trademark or brand name, if any;
- b) the name and address of the producer or packer, trade mark;
- c) the code or batch number;
- d) the net mass, or gross mass (according to the request of the importing country);
- e) the class of product;
- f) the producing country;
- g) the expiry date;
- h) any other marking required by the purchaser, such as year of harvest and date of packing (if known);
- i) a reference to this International Standard (optional).

8 Contaminants

The contents of contaminants (heavy metals, pesticide residues, etc.) of the pomegranate fruit shall not exceed the maximum limits established by the Codex Alimentarius Commission for this commodity and/or shall comply with relevant food safety legislation in force in the target country:

- iron 15,0 mg/kg max.; [ISO 23393:2006](https://standards.iteh.ai/catalog/standards/sist/861ecf64-724e-4b4a-9326-e8bfa9d35a56/iso-23393-2006)
- copper 5,0 mg/kg max.; <https://standards.iteh.ai/catalog/standards/sist/861ecf64-724e-4b4a-9326-e8bfa9d35a56/iso-23393-2006>
- arsenic 0,2 mg/kg max.;
- lead 0,2 mg/kg max.;
- zinc 5,0 mg/kg max.

9 Hygienic requirements

9.1 It is recommended that the pomegranate fruit be prepared in accordance with the appropriate sections of the Recommended International Code of Practice — General Principles of Food Hygiene ^[1] and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to the product.

9.2 The product

- a) shall be free from microorganisms in amounts which may represent a hazard to health;
- b) shall be free from parasites which may represent a hazard to health, such as
 - 1) total mesophilic aerobic bacteria 1×10^5 cfu/g max.,
 - 2) *Escherichia coli* 0 cfu/g max.,
 - 3) mould-yeast 1×10^3 cfu/g max.,
 - 4) *Salmonella* 0 cfu per 25 g max.,
 - 5) *Staphylococcus aureus* 0 cfu/g max.

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