

UNECE STANDARD DF-07

concerning the marketing and commercial
quality control of

PRUNES

moving in international trade between and to
UNECE member countries

I. DEFINITION OF PRODUCE

The standard applies to prunes from certain varieties of plums grown from *Prunus domestica* L. considered suitable for drying to be supplied for consumption which are with or without pits and have been obtained by controlled dehydration.

No sweeteners or sugar may be added.

It does not apply to prunes which have undergone the normal operations connected with special preparation (prunes in juices, syrup or in brandy or stuffed prunes, etc.).

II. PROVISIONS CONCERNING QUALITY

The purpose of the standard is to define the quality requirements at the export control stage, after preparation and packaging.

A. Minimum requirements

- (i) In all classes subject to the special provisions for each class and the tolerances allowed, prunes must be:
- prepared from physiologically ripe fruit
 - whole or without pits, without peduncles
 - fleshy, the flesh being elastic and pliable
 - covered with a wrinkled skin

- sound, fruit being affected by decay or damaged in such a way as to be unfit for consumption being excluded
- clean and practically free from obvious foreign matter ¹
- free from living insects and mites, whatever their stage of development
- free from visible damage by insects, mites or other parasites
- free from foreign smell and/or taste.

The condition of the prunes must be such as to enable them:

- to withstand transport and handling
- to arrive in satisfactory condition at the place of destination.

(ii) **Moisture content**

The moisture content of prunes must not exceed 35 per cent. ²

For prunes with a high moisture content, preservatives may be used depending on the regulations applicable in the importing country.

B. Classification

According to their type of presentation, prunes are classified in one or two classes defined below:

- (i) Whole prunes are classified in one class, called

"PRUNES" - "Class I"

They must be of good quality and characteristic of the variety or commercial type of plum used. They may show slight superficial defects and colour defects, provided that these do not affect the general appearance of the produce or the quality, keeping quality or its presentation in the package.

¹ Ingredients added are not considered as foreign material provided they are not prohibited by the legislation of the importing country.

² Moisture content is determined by one of the methods prescribed in the Annex, "Methods of Determining the Moisture Content of Prunes", attached to this standard.

(ii) Prunes without pits are classified into two classes defined below:

- "Prunes without pits" - "Class I": Prunes in this class must be depitted by an appropriate process such as to minimize the damage to the skin, and the number of cuts necessary to depit the prunes is limited to two cuts
 - "Pressure-pitted prunes" "Type E" or "Class II": Prunes in this class must be pitted by pressure. The number of cuts necessary to depit these prunes is not limited.
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III. PROVISIONS CONCERNING SIZING

Whatever their mode of packaging, "prunes" and "depitted prunes" must previously have undergone sizing determined by the minimum and maximum number of prunes in 500 g (or in 1 lb (453 g)), when the moisture content is marked on the package according to the following scales:

A. European designations "PRUNES"

Designation	Number of prunes	
Number of prunes	per 500 g	
per 453 g		
Giant	not more than 44 prunes	not more than 40 prunes
Very large	from 44 to 55 "	from 40 to 50 "
Large	from 55 to 66 "	from 50 to 6 "
Medium	from 66 to 77 "	from 60 to 70 "
Small	from 77 to 99 "	from 70 to 90 "

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Very small more than 99 " more than 90 "

B. American designations "PRUNES"

Designation Number of prunes per 453 g	Number of prunes per 500 g		
Jumbo	not more than 28 prunes		not more than 25 prunes
Extra large	from 28 to 44 "		from 25 to 40 "
Large	from 44 to 66 "		from 40 to 60 "
Medium	from 66 to 94 "		from 60 to 85 "
Small	from 94 to 110 "		from 85 to 100 "

C. "Pitted Prunes - Class I"

For "pitted prunes" the size is determined by the count taken before the pits have been removed from the prunes.

LARGE: not more than 67 prunes in 500 g (not more than 60 in 453 g)

MEDIUM: more than 67 prunes in 500 g (more than 60 in 453 g).

D. "Pressure Pitted Prunes" "Type E", "Class II"

Sizing of pressure pitted prunes is not obligatory.

IV. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each package for produce not satisfying the requirements of the class indicated.

A. Quality tolerances

Permitted defects ³ (percentages by weight)	PRUNES	PITTED	PRESSURE PITTED
	Class I	Class I	Class II

A. Total Tolerances	12	12	15
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B. Individual defect

within the limits of the total tolerances, the maximum allowed are:

(i) non-characteristic colour and texture	12	12	15
(ii) end cracks	12	12	15
(iii) skin or flesh damage; callouses; heat injury; insect damage	8	2	4
(iv) fermentation	4	2	4
(v) foreign matter of vegetable origin	1	1	1
(vi) slight decay; mould ^{4 5}	1	0.5	2
(vii) fruit infested by insects and mites ⁴	0.5	0.5	0.5

C. For Pitted Prunes

(viii) with whole pits	-	2	4
(ix) with fragments of pits	-	2	4

No tolerance is accepted for live parasites.

³ Defined in the Annex of Definitions attached to this standard.

⁴ The national legislations of Germany and of Switzerland do not permit tolerances for produce affected by mould or rot or the presence of dead or living insects.

⁵ Poland favours a maximum tolerance for slight decay and mould of 0.5 per cent in all classes.

B. Mineral impurities

Not greater than 1 g/kg.

C. Size tolerance

The method of determining size uniformity is specified in the annex to this standard.

V. PROVISIONS CONCERNING PRESENTATION

A. Uniformity

The contents of each package must be uniform and contain only prunes of the same origin, quality and size.⁶

The visible part of the contents of each package must be representative of the entire contents. In addition, prunes in class "I" must be of the same variety or the same commercial type.

B. Packaging

Prunes must be packed in such a way as to protect the product properly.

The materials used inside the package must be new, clean and of a quality such as to avoid causing any external or internal damage to the prunes. The use of materials, particularly paper or stamps bearing trade specifications, is allowed provided the printing or the labelling has been done with non-toxic ink or glue.

Packages must be free from all foreign matter.

C. Presentation

Prunes must be presented:

⁶ The method of determining size uniformity is specified in the Annex of Definitions (B) attached to this standard.

- either in small packages of 0.125 kg, 0.250 kg, 0.500 kg and 1 kg. The use of other units of weight may be allowed depending on the regulations applicable in the importing country
 - or in packages weighing 1.5 kg or more.
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VI. PROVISIONS CONCERNING MARKING

Each package must bear the following particulars in letters grouped on the same side, legibly and indelibly marked and visible from the outside:

A. Identification

Packer)	Name and address or
and/or)	officially issued or
Dispatcher)	accepted code mark. ⁷

B. Nature of the produce

- The word "prunes", "pitted prunes" or "pressure pitted prunes"
- Name of the variety, or commercial designation accepted in reputable commercial practice, for class "I"
- Moisture content indicated by:

"Maximum moisture content 29 per cent" and/or by
"semi-dry" when the moisture content is between 24
per cent and 29 per cent inclusive

"Maximum moisture content 35 per cent" and/or by
"ready to eat", when the moisture content is between
29 per cent and 35 per cent inclusive

- No marking indicating moisture content is necessary if this is equal to or less than 24 per cent.

⁷ The national legislation of a number of European countries requires the explicit declaration of the name and address.

C. Origin of produce

Country of origin and, optionally, district where grown or national, regional or local place name.

D. Commercial specifications

- class
- size (if sized) expressed in keeping with the designations specified in section III "Provisions concerning sizing":

Either as the minimum and maximum number of prunes contained in 500 g (or in 453 g), by "X/Y prunes per 500 g"

Or by the corresponding designation followed by the minimum and maximum number of prunes contained in 500 g (or in 453 g)

- Net weight.

E. Official control mark (optional)

Adopted 1988

ANNEX I
DEFINITIONS OF DEFECTS OF PRUNES

A. Definitions of defects

(a) **End cracks:**

callous growth-cracks, occurring at the ends of prunes, whose total length may be more than 10 mm (25/64 inch) but less than 15 mm (38/64 inch).

(b) **Damage to skin or flesh**

(1) Callous-like growth scars (except end cracks) whose total is more than 10 mm (25/64 inch).

(2) Cracks, splits or breaks down to the stone.

(3) Splits or breaks exposing a substantial part of the flesh and seriously affecting the appearance of the fruit.

(c) **Fermentation:**

the existence of fermentation is evidenced by a distinctly sour taste or odour or by the darkening in colour associated with fermentation or acidity.

(d) **Callosities:**

surface callosities (other than cracks) of more than 10 mm (25/64 inch) in diameter, and areas of thin lacy crackle of more than 20 mm (50/64 inch) in diameter.

(e) **Heat injury:**

damage by sunburn or excessive heat during dehydration which substantially affects the appearance, flavour or normal edibility of the prune.

(f) **Insect damage:**

visible damage caused by insects and animal pests.

(g) **Fruit infested by insects and mites:**

fruit infested by the presence of dead insects and or mites.

- (h) **Peduncle:**
the part of the stem which attaches the plum to the branch.
- (i) **Mould:**
mould filaments visible to the naked eye.
- (j) **Decay:**
decomposition caused by bacteria or fungi making the flesh of the prune unfit for consumption.
- (k) **Foreign matter of vegetable origin:**
leaves, peduncles, twigs, bits of wood, or similar matter.
- (l) **Mineral impurities:**
acid insoluble ash.

B. Uniformity of size

Prunes packed in accordance with the sizing methods established in this standard must be reasonably uniform in size. In a sample of 5 kg of fruit taken from a given consignment, the difference between the number of the smallest prunes and that of the largest prunes per 500 g must not exceed:

- (a) 25 for consignments of prunes of sizes ranging from 44 to 55 prunes per 500 g
- (b) 35 for consignments of prunes of sizes ranging from 55 to 77 prunes per 500 g
- (c) 45 for consignments of prunes containing more than 77 prunes per 500 g.

The difference is calculated by reference to 10 per cent (by weight) of the sample for the smallest prunes and 10 per cent (by weight) for the largest.

ANNEX II

METHODS OF DETERMINING THE MOISTURE CONTENT OF PRUNES

Preparation of the sample

A sample of about 450 g of prunes is taken. The prunes are stoned and the pulp is crushed with a food chopper. The prunes are crushed with the chopper three times in succession, the pulp being carefully mixed after each crushing.

This operation is performed as quickly as possible to avoid loss of moisture.

I. **Oven-drying method** (reference method)

An amount of 2.5 g of pulp is taken from the sample prepared in the above manner and spread as uniformly as possible on the bottom of a metal container about 8.5 cm in diameter equipped with a tight-fitting lid.

The container is weighed and left to dry for six hours in an oven kept at a temperature of 70° Celsius and a pressure not exceeding 100 mm Hg. The metal container must be in direct contact with the metal shelf of the drying oven.

The lid is replaced, and the sample is cooled in a desiccator and then weighed.

During the initial drying phase, a temperature drop in the drying oven should not give cause for concern, since it may be due to the rapid evaporation of the water.

II. **Electric conductivity method**

Alternatively, use may be made of an apparatus functioning according to the so-called conductometric method, which allows an extremely rapid reading.

The use of such an apparatus necessitates a calibration based on a very large number of measurements made on a very large number of samples whose moisture content has been determined by the method described above.

In case of dispute, only the results obtained by the reference method shall be taken into consideration.