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Specialized Section on Standardization of
Dry and Dried Produce (Fruit)

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REPORT ON ITS FIFTY-FIRST SESSION

Addendum 2

REVISED UNECE STANDARD FOR DRIED FIGS

Note by the secretariat: The table of tolerances was corrected in line with the original decision of the Specialized Section concerning this standard (see document AGRI/WP.1/GE.2/R.91/Rev.1).

UNECE STANDARD DF-14
concerning the marketing and commercial
quality control of

DRIED FIGS

I. DEFINITION OF PRODUCE

This standard applies to the figs dried from ripe fruits of cultivars grown from *figus carica domestica* L. and intended for direct consumption. It does not apply to dried figs intended for processing.

II. PROVISIONS CONCERNING QUALITY

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

A. Minimum requirements

(i) In all classes subject to the special provisions for each class, the dried figs must be:

- intact, except the stem and the eye (ostiolum) ends of the figs may be cut off, and the fruit itself may be cut through as required by marketing and manipulating practices (i.e. layer);
- sound, produce not affected by rotting or deterioration such as to make it unfit for consumption;
- free of abnormal external moisture;
- free of foreign smell and/or taste; ¹
- free of living insects or mites whatever their stage of development, fumigated or otherwise disinfested;

and, subject to the tolerances indicated, they must be :

- free of damaged, sunscalded, split or torn fruit;
- clean, practically free of any visible foreign matter; ²
- free of visible damage by insects, mites or other parasites;
- free of mould and fermentation;
- free of dead insects, maggots, mites or other parasites.

¹ *A slight smell of sulphur dioxide (SO₂) is not considered "abnormal"*

² *Ingredients such as sugar or flour are not considered as foreign matter, and may be used subject to the legislation of the importing country.*

- (ii) The dried figs shall have a moisture content of not greater than 26 per cent unless treated with suitable preservatives in accordance with the legislation of the importing country, in which case the moisture content should not exceed 30 per cent^{3 4}.

The condition and development of the dried figs must be such as to enable them

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

- (iv) When figs are treated with preserving agents or products for disinfestation, this shall be done in accordance with the legislation of the importing country.

B. Classification

Dried figs, including dried figs shaped by hand, are classified in three classes according to their quality:

(i) ***"Extra" Class***

Dried figs in this class must be of superior quality. They must have the characteristics of the variety and/or commercial type. In colour and size they must be uniform. They shall be practically free from defects within tolerances. They may have very slight blemishes provided that these do not detract from the general appearance of the produce, the quality, the conservation (keeping quality), or the presentation in the package. They must have very well developed sugary tissue and softness of the skin appropriate to the export period and variety. The number of fruit per kilogramme must not exceed 65.

(ii) ***Class I***

Dried figs in this class must be of good quality. They must have the characteristics of the variety and/or commercial type. They must be sweet and practically uniform in colour. They must have well developed sugary tissue and softness of the skin according to the export period and variety. The number of fruit per kilogramme must not exceed 120.

(iii) ***Class II***

This class includes dried figs which do not qualify for inclusion in the higher classes but which satisfy the minimum quality requirements specified above. Defects of the skin, provided that they do not detract from the eating quality, are permitted.

³ The moisture content shall be determined by one of the two methods indicated in the Annex to this standard.

⁴ Reservation of Greece in favour of 24 per cent for untreated dried figs (26 per cent for treated dried figs).

III. PROVISIONS CONCERNING SIZING

Sizing is determined by the number of fruit per kilogramme. The number of fruits in each size are shown in the following table:⁵

Size Number	Number of fruit per kilogramme
1	Up to - 40
2	41 - 45
3	46 - 50
4	51 - 55
5	56 - 60
6	61 - 65
7	66 - 70
8	71 - 80
9	81 - 100
10	101 - 120
11	121 and over

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 defect	Tolerances allowed (percentage of defective fruit, by weight in a minimum sample unit of 1000g)		
	Extra	Class I	Class II
Total tolerance	10	15	30
(1) Damage by			
(a) Insects	9	12	16
(b) Sunscald	8	10	25
(c) Split or torn			
(d) Excessively dried			
(e) Other similar defects			
(2) Mouldy or rancid	3	4	5
(3) Foreign matter	0.5	0.5	0.5

No tolerance is permitted for live insects, maggots or other animal pests. The presence of the pollinating bee (*Blastophaga psenes* L.) very occasionally trapped within the figs is not considered as a defect. Definitions of the defects may be found in Annex II to this standard.

⁵ *Reservation by Greece against the table on sizing which it considered created sub-divisions of quality classifications.*

B. Mineral impurities

Must not exceed 1g/kg by weight.

C. Size tolerances

Size tolerances of dried figs in a minimum sample of 1000 g.

<u>Number</u>	<u>Size weight range in grammes between the largest and smallest figs</u>
1 - 2	12
3 - 6	10
7 - 9	8
10 - 11	6

Dried figs exceeding the weight range given above should not be more than 20 per cent by weight in a minimum sample of 1000 g.

V. PROVISIONS CONCERNING PRESENTATION**A. Uniformity**

The contents of each package must be uniform in colour and contain only fruit of the same origin, variety and quality class.

The visible part of the contents of the package must be representative of the entire contents, particularly as regards the size and quality of the dried figs, of the average composition of the package.

B. Packaging

The dried figs must be packed in such a way so as to protect the produce 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 produce. The use of materials, particularly of paper and stamps bearing trade specifications is allowed provided the printing or labelling has been done with non-toxic ink or glue. Printed instructions on the paper should appear on the outside so as not to come in contact with the produce. Packages must be free of all foreign matter.

C. Presentation

Dried figs may be presented in large or small packages in accordance with the weight requirements of the importing countries.

VI. PROVISIONS CONCERNING MARKING

Each package or compartmented 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 officially issued or
and/or) accepted code mark ⁶
Dispatcher)

B. Nature of the produce

- "Dried figs", together with the commercial name or type if required.

C. Origin of the produce

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

D. Commercial specifications

- class;
- size or number of figs per kg; ⁷
- crop year(optional);
- net weight, or the number of pre-packages, followed by the net unit weight in the case of packages containing such units;
- preservative (if used);
- "Naturally" dried (optional);
- "Best by end date" (optional).

E. Official control mark (optional)

Adopted 1996
Correction to the table of tolerances 2004

⁶ *The national legislation of a number of European countries requires the explicit declaration of the name and address.*

⁷ *The delegate of Greece expressed its reservation in favour of optional marking for size and number of fruit per kilogramme.*

ANNEX: METHODS OF DETERMINING THE MOISTURE CONTENT OF DRIED FIGS

Based on Annex I of the Standard Layout

METHOD I - LABORATORY REFERENCE METHOD⁸**1. Definition**

The moisture content of dried fruit is defined as being the loss of mass determined under the experimental conditions described in this annex.

2. Principle

The principle of the method is the heating and drying of a sample of dried fruit at a temperature of $70^{\circ}\text{C} \pm 1^{\circ}\text{C}$ at a pressure not exceeding 100 mm Hg.

3. Apparatus

Usual laboratory apparatus is used together with the following items:

- 3.1 Electrically heated constant-temperature oven, capable of being controlled at $70^{\circ}\text{C} \pm 1^{\circ}\text{C}$ at a pressure of 100 mm Hg.
- 3.2 Dishes with lids, of corrosion-resistant metal of about 8.5 cm in diameter.
- 3.3 Mincer, either hand or mechanically operated.
- 3.4 Desiccator, containing an effective desiccant.
- 3.5 Precision balance.

4. Procedure

- 4.1 Preparation of the sample

Take approximately 50 g of dried fruit from the laboratory sample, and mince these twice with the mincer.

⁸ This method is the same as that prescribed by the AOAC: *Official Methods of Analysis, XIIIth edition, 1980, 22.013 - Moisture in Dried Fruits, Official Final Action.*

4.2 Test portion

Place 2 g of finely divided asbestos⁹ into the dish, tare the dish with its lid and the asbestos, dried beforehand. Weigh, to the nearest 0.01 g about 5 g of prepared sample.

4.3 Determination

Moisten the sample and the asbestos thoroughly with a few ml of hot water. Mix the sample and the asbestos together with a spatula. Wash the spatula with hot water to remove the sample residues from it, letting the residues and the water fall into the dish.

Heat the open dish on a boiling-water bath (bain-marie) to evaporate the water to dryness. Then place the dish, with the lid alongside it, in the oven and continue drying for six hours at 70° C under a pressure not exceeding 100 mm Hg, during which time the oven should not be opened. During drying admit a slow current of air (about two bubbles per second) to the oven, the air having been dried by passing through H₂SO₄. The metal dish must be placed in direct contact with the metal shelf of the oven. After drying, remove the dish, cover it immediately with its lid and place it in the desiccator. After cooling to ambient temperature, weigh the covered dish to the nearest 0.01 g.

5. Calculation and expression of results

The moisture content of the sample, as percentage by mass is calculated as follows :

$$\text{Moisture content} = \frac{(M_1 - M_2)}{(M_1 - M_0)} \times 100$$

Where:

M₀: is the mass of the empty dish with its lid and containing the asbestos, g.

M₁: is the mass of the dish with its lid, asbestos and test portion before drying, g.

M₂: is the mass of the dish with its lid after drying, g.

The results are expressed to one decimal place.

Duplicate determinations should agree to 0.2% moisture.

⁹ *Dried sand which has previously been washed in hydrochloric acid and then rinsed thoroughly with water may be used in the place of the asbestos. Analysts using this technique should note that it is a deviation from the AOAC procedure, and should mention this in their report.*

METHOD II - RAPID OR ORDINARY METHOD

1. Principle

A rapid method based on the principle of electrical conductivity.

2. Procedure

Follow the method described in Official Methods of the Association of Official Analytical Chemists (AOAC), 13th ed. (1980), 22.014 – Dried Fruit Moisture Tester (AOAC, Washington, D.C.)

ANNEX: DEFINITIONS OF TERMS AND DEFECTS FOR DRIED FIGS

Based on Annex III of the Standard Layout

Insect damaged	-	Damage caused by insects and animal parasites, or the presence of dead insects or insect debris visible to the naked eye.
Mouldy	-	Mould filaments visible to the naked eye.
Fermentation	-	Damage by fermentation to the extent that the characteristic appearance and/or flavour is substantially affected.
Sunscauld	-	More than one-third of the surface of the fruit is affected.
Split or torn	-	More than one-third of the length of the fruit is affected.
Excessively dried	-	Fruits with a hard rubbery texture, lacking taste.
Foreign matter	-	Any matter or material not usually associated with the product.