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REVISION OF UN/ECE STANDARDS

INSHELL ALMONDS

Transmitted by Spain

Note by the secretariat : The Working Party authorized the Specialized Section to review the UN/ECE standard for Inshell Almonds. The delegation of Spain offered to serve as rapporteur and has prepared a draft text aligned to the revised standard layout and containing some further suggestions for amendments.

REVISED UN/ECE STANDARD
concerning the marketing and commercial quality control of

INSHELL ALMONDS

moving in international trade between and to
UN/ECE member countries

I. DEFINITION OF PRODUCE

This standard applies to sweet inshell almonds of varieties (cultivars) grown from *Prunus amygdalus* B., from which the pericarp or fleshy husk has been removed, intended for direct consumption. It does not apply to inshell almonds intended for industrial processing or for use in the food industry.

Inshell almonds are classified into three commercial types as defined below, according to the hardness of the shell: ¹

- Soft type: inshell almonds which can be cracked with the fingers.
- Semi-soft type: inshell almonds which need a nutcracker to be cracked.
- Hard type: inshell almonds which can be cracked only with a hammer or similar devices.

II. PROVISIONS CONCERNING QUALITY

The purpose of the standard is to define the quality requirements of sweet inshell almonds 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, inshell almonds must be *{meet the following minimum requirements}*:
 - (a) Characteristics of the shell *{The shell must be}*:
 - intact; slight cracks and superficial damage are not considered as a defect; ²
 - well formed; the shell is not noticeably misshapen;
 - sound; produce affected by rotting or deterioration such as to make it

¹ Other denominations commonly used in international trade are accepted, as are “Paper type” or “Mollares” for the Soft type, and “Fitass” or “Semi-mollares” for the Semi-soft type.

² Small outer parts of the shell may be missing, provided that the kernel is protected.

- unfit for consumption is excluded;
- clean, practically free of adhering dirt and any other visible foreign matter;
- free from residues of the pericarp or husk;
- free of damage caused by pests;
- free from gum;
- free from blemishes or discoloration rendering them unfit for consumption;³
- free of foreign smell;
- dry; free of abnormal external moisture.

(b) Characteristics of the kernel *{The kernel must be}*:

- sweet; bitter almonds are excluded;
- intact;
- sound; kernels affected by rotting or deterioration rendering them unfit for consumption are excluded;
- clean;
- sufficiently developed; empty shells and shrunken or shrivelled kernels are to be excluded;⁴
- free from living or dead insects or mites whatever their stage of development;
- free of damage caused by pests;
- free from gum and brown spot;
- free from blemishes and discoloration rendering them unfit for consumption;
- free from mould;
- free from rancidity;
- free of foreign smell and/or taste;
- sufficiently dry to ensure keeping quality (see moisture content).

Inshell almonds must be harvested when fully ripe.

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

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

³ *The almond shells may be brushed and bleached, provided that the treatment applied does not affect the quality of the kernel and is permitted by the regulations of the importing country.*

⁴ *Twin or double kernels are not considered as a defect.*

- (ii) Moisture content

The kernel of the inshell almonds shall have a moisture content not greater than 9 per cent. ⁵

B. Classification

Inshell almonds are classified in the two classes defined below: *{Extra Class ??}*:

- (i) ***Class I***

Inshell almonds in this class must be of good quality. They must be of similar varietal characteristics ⁶ and, when appropriate, of the variety or group of varieties indicated on the marking, ⁷ and belong to either the soft or semi-soft commercial types.

Slight superficial defects of the shell and slight defects in shape or development may be allowed provided these do not affect the general appearance of the produce, the quality, keeping quality and presentation in the package.

- (ii) ***Class II***

This class includes inshell almonds which do not qualify for inclusion in Class I but satisfy the minimum requirements specified above. They can belong to the soft, semi-soft or hard commercial types, but not to mixed commercial types.

Superficial defects of the shell and defects in shape or development may be allowed, provided the inshell almonds retain their essential characteristics as regards the quality, keeping quality and presentation.

⁵ *The moisture content is determined by one of the methods given in Annex I of this document. The laboratory reference method shall be used in cases of dispute.*

⁶ *Similar varietal characteristics means that the kernels in each lot are similar in shape and reasonably uniform in degree of hardness of the shell.*

⁷ *The reference to a variety or group of varieties is optional both in Class I and Class II. When this reference is expressed in the marking or in the commercial documents, the inshell almonds must be characteristic of the variety or group of varieties.*

III. PROVISIONS CONCERNING SIZING

Sizing is optional for inshell almonds in both Class I and Class II, which can be either sized or screened. Sizing and screening are determined by the maximum diameter of the equatorial section of the shell, by means of round-holed screens.⁸ *{No minimum size ??}*

- (i) Sizing is expressed by an interval defined by a maximum and minimum size in millimetres. All sizes are allowed.
- (ii) Screening is expressed by a reference to a minimum size in millimetres, followed by the words “and above” or “and plus”, or by a reference to a maximum size in millimetres, preceded or followed by the words “under” or “and less”. For produce presented to the final consumer under the specification screened, the reference “under” or “and less” is not allowed.

IV. PROVISIONS CONCERNING TOLERANCES

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

⁸ *In addition to this system other optional sizing and screening systems may be used, such are those based on the number of inshell almonds per 100 g or per ounce.*

A. Quality tolerances

Defects allowed ⁹	Tolerances allowed (per cent of defective fruit by weight) ^a	
	Class I	Class II
(a) Total tolerances for defects of the shell, ^b of which:	10	15
almonds with adhering husk	3	5
loose shells and shell fragments	1	3
dust and foreign matter	0.25	0.25
(b) Total tolerances for defects of the kernel, ^c of which:	10	15
bitter almonds and kernels having bad smell or taste	3	4
shrunken or shrivelled and not sufficiently developed kernels	7	10
rancid, rotten, mouldy and damaged by insects or other pests ^d	5	7
(c) Empty nuts ^e	5	8

^a All tolerances, except those for empty nuts, are calculated on the weight basis.

^b All tolerances for defects of the shell are calculated on the total inshell weight basis.

^c All tolerances for defects of the kernel are calculated on the decorticated weight basis.

^d Living pests are inadmissible in any class.

^e Empty nuts tolerances are calculated by count.

There may be a maximum of 5 per cent, by weight, in Class I and 10 per cent in Class II of inshell almonds belonging to different commercial type, from the same local production area.

When a variety or a group of varieties is indicated in the marking, there is a maximum tolerance of 10 per cent, by weight, for Class I and 20 per cent for Class II of inshell almonds belonging to different varieties.

B. Mineral impurities

Ashes insoluble in acid must not exceed 1g/kg.

⁹ Standard definitions of the defects are listed in Annex II.

C. Size tolerances

When applicable, a maximum tolerance of 20 per cent, by weight, of inshell almonds not conforming to the size or screen indicated on the marking is allowed.

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

The contents of each package must be uniform and contain only sweet inshell almonds of the same origin, crop year, quality and commercial type, and, when applicable, variety or group of varieties and size.

The visible part of the contents of the package must be representative of the entire contents.

B. Packaging

Inshell almonds must be packed in such a way 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 or stamps bearing trade specifications is allowed provided that the printing or labelling has been done with non-toxic ink or glue.

Packages must be free of all foreign matter.

C. Presentation

Inshell almonds must be presented in bags¹⁰ or solid containers. All pre-packages within each package must be of the same weight.

VI. PROVISIONS CONCERNING MARKING

Each package¹¹ must bear the following particulars in letters grouped on the same side, legibly and indelibly marked and visible from the outside:

¹⁰ *When using textile or mesh bags, special attention should be paid to protect the produce against external moisture and contamination, by the use of external packages, internal paper or plastic film bags.*

¹¹ *Package units of produce prepacked for direct sale to the consumer shall not be subject to these marking provisions but shall conform to national requirements. However the markings referred to shall in any event be shown on the transport packaging containing such package units.*

A. Identification

Packer) Name and address or
and/or) officially issued or
Dispatcher) accepted code mark ¹²

B. Nature of produce

- Name of the produce; "Inshell almonds" or "*Almonds in the shell*"
- Commercial type
- Name of the variety or group of varieties (optional)

C. Origin of produce

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

D. Commercial specifications

- Class;
- Size or screen (optional); expressed in millimetres
- Net weight, or the number of pre-packages, followed by the net unit weight in the case of packages containing such units (optional or at the request of the importing country).
- Crop year (optional);
- "Best before" followed by the date (optional)

E. Official control mark (optional)

¹² *The national legislation of a number of European countries requires the explicit declaration of the name and address. In the case where a code mark is used, the reference "packer and/or dispatcher" (or equivalent abbreviations) has to be indicated in close connection with the code mark.*

ANNEX II**DEFINITIONS OF TERMS AND DEFECTS FOR INSHELL ALMONDS**

Bitter almond:	almond kernel with a characteristic bitter taste produced by hydrocyanic acid (HCN), a natural compound of bitter almond varieties.
Double or twin:	almond kernel of characteristic shape, with one side flat or concave, as a consequence of the development of two kernels in the same shell.
Clean:	practically free from plainly visible adhering dirt or other foreign material.
Well formed:	the shell is not noticeably misshapen and, when appropriate, its shape concords with the characteristic varietal or commercial type.
Empty shell:	almond shell containing no kernel (aborted kernel).
Sufficiently developed:	almond kernel of normal shape, without aborted or dried out portions; shrunken and shrivelled kernels are not sufficiently developed.
Shrunken or shrivelled:	almond kernel which is extremely flat and wrinkled, or with desiccated, dried out or tough portions, when the affected portion represents more than one eighth of the kernel.
Adhering husk:	residues of the pericarp or husk adhered on the surface of the shell, affecting in aggregate more than 5 per cent of the shell surface; the presence of lesser portions of the pericarp are not considered as a defect.
Mould:	mould filaments visible to the naked eye, either on the shell or on the kernel.
Rancidity:	oxidation of lipids or free fatty acid production giving a characteristic disagreeable flavour.
Rotten:	significant decomposition or decay caused by the action of micro-organisms or other biological processes, normally accompanied by changes in texture and/or colour.
Insect or pest damage:	visible damage or contamination caused by insects, mites, rodents or other animal pests, including the presence of dead insects, insect debris or excreta.
Living pests:	presence of living pests (insects, mites or others) at any stage of development (adult, nymph, larva, egg, etc.).

Gummy:	resinous appearing substance on the surface of the shell or on the kernel, covering in aggregate an area more than the equivalent of a circle of 10 mm of diameter.
Brown spot:	brown or dark spots on the almond kernel, either single or multiple, covering in aggregate an area more than the equivalent of a circle of 6 mm of diameter, affecting or not the endosperm.
Blemish and discoloration (shells):	apparent and spread very dark or black discoloration affecting in aggregate more than one half of the surface of the shell; colour variations between shells are not considered as a defect.
Blemish and discoloration (kernels):	apparent and spread discoloration, other than gum and brown spot, including dark or black colour, affecting in aggregate more than one quarter of the surface of the almond kernel; colour variations between kernels are not considered as a defect.
Abnormal external moisture:	presence of water, moisture or condensation directly on the surface of the product.
Foreign smell and/or taste:	any odour or taste that is not characteristic of the product.
Loose shells and shell fragments:	shell halves or split empty shells, and fragments of almond shell or almond husk.
Foreign matter:	any visible and/or apparent matter or material, including dust, not usually associated with the product, except mineral impurities.