

INF.9 Proposal to review UNECE Standard: DF-01, Inshell Walnuts

Contribution from Germany (2005)

This proposal follows the amendments elaborated for the UNECE recommendation for inshell almonds at the session of the Specialized Section for the Standardization of Dry and Dried Fruit in 2004 and 2005.

UNECE STANDARD DDF-01
concerning the marketing and commercial quality control of

INSHELL WALNUTS

I. DEFINITION OF PRODUCE

This standard applies to inshell walnuts free from outer husks, ~~from of~~ varieties (cultivars) grown from *Juglans regia L.*, ~~to be supplied to the consumer intended for direct consumption, walnuts for making oil or to be cracked for extraction of the kernels being excluded.~~

It does not apply to inshell walnuts intended for industrial processing or for use in the food industry.

Inshell walnuts are classified in two types, as defined below:

~~— The expression~~ 'fresh walnuts' or 'early walnuts' ~~means walnuts~~ which have been marketed soon after harvesting and cannot be preserved for a long time, from which the husk has been removed and which have not been treated in any way that tends to change their natural moisture content.

~~— The expression~~ 'dry walnuts' ~~means walnuts~~ which can be preserved for a long time under normal conditions of storage. ⁺

The shell may be washed and bleached provided the treatment applied does not affect the quality of the kernel and it is permitted by the relevant national regulations.

II. PROVISIONS CONCERNING QUALITY

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

A. Minimum requirements ²

(i) In all classes, subject to the special provisions for each class and the tolerances allowed, ~~the~~ inshell walnuts must ~~be~~ display the following characteristics:

(a) ~~Characteristics of the shell~~ The shell must be:

- ~~intact;~~ slight superficial damage and partially open walnuts are not considered as a defect provided the kernel is physically protected;

¹ ~~In the case of transport by closed container, special attention should be paid to air circulation in the container and to the moisture content of the produce.~~

² Definitions of terms and defects are listed in Annex III of the Standard Layout – Recommended Terms and Definition of Defects for Standards of Dry Fruits (Inshell Nuts and Nut Kernels) and Dried Fruits (http://www.unece.org/trade/agr/info/layout_e.pdf). ~~Standard definitions of terms and defects are listed in the Annex of this document~~

- ~~slight superficial damage is not considered as a defect;~~
- ~~partially open walnuts are considered to be intact provided that the kernel is physically protected;~~
- sound; free from defects likely to affect the natural keeping quality of the inshell walnuts;
- clean; practically free of any visible foreign matter [affecting in aggregate more than 5 per cent of the total shell surface];
- ~~free from defects likely to affect the natural keeping quality of the fruit;~~
- free from residues of adhering husk affecting in aggregate more than 5 per cent of the total shell surface.
- free from ~~living~~live insects or mites whatever their stage of development;
- free from ~~attack~~ damage caused by pests, including the presence of dead insects, insect debris or excreta;
- free from mould filaments visible to the naked eye;
- ~~dry;~~ free from abnormal external moisture;
- free from blemishes, areas of discoloration or spread stains in pronounced contrast with the rest of the shell affecting in aggregate more than 25 per cent of the surface of the shell;
- well formed, not noticeably misshapen.

The shells of dry walnuts must show no trace of hulling.

(b) ~~Characteristics of the kernels~~The kernel must be:

- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- ~~firm;~~
- ~~clean, practically free from any visible foreign matter;~~
- sufficiently developed; ~~shrunk~~ or shrivelled kernels, when the affected part represents ~~or kernels with desiccated, dried out or tough portions affecting more than 25 per cent of the kernel and empty shells are to be excluded;~~
- free from ~~living~~live insects or mites whatever their stage of development;
- free from ~~visible damage by insects, mites or other parasites~~damage caused by pests, including the presence of dead insects, insect debris or excreta;
- free from mould filaments visible to the naked eye;
- free from rancidity and/or oily appearance;
- ~~free from mould;~~
- ~~free of abnormal external moisture;~~
- free of foreign smell and/or taste;
- free from blemishes, areas of discoloration or spread stains in pronounced contrast with the rest of the kernel affecting in aggregate more than 25 per cent of the surface of the kernel.
- ~~normally developed, shrivelled kernels are to be excluded.~~

(c) ~~The inshell walnuts must be gathered when sufficiently mature.~~

~~Walnuts must not be empty.~~

~~In the case of Afresh walnuts@, it must be possible to peel off the skin of the kernel easily and the internal central partition must show signs of turning brown.~~

~~In the case of Adry walnuts@, the internal central partition must be dry.~~

~~The shells may be washed and bleached provided that the treatment applied does not affect the quality of the kernels and is permitted by the regulations of the importing country.~~

The condition of the inshell walnuts should be such as to enable them:

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

(ii) Moisture content

The natural moisture content of whole fresh inshell walnuts shall be equal to or greater than 20.0 per cent.

Dry inshell walnuts shall have a moisture content not ~~greater than 12%~~ exceeding 12.0 per cent for the whole nut and ~~8%~~ 8.0 per cent for the kernel.^{3 4}

~~The natural moisture content of whole fresh walnuts shall be equal to or greater than 20%.~~

(iii) Minimum maturity requirements

The inshell walnuts must be ~~gathered when~~ sufficiently mature, which means that.

- In the case of “fresh walnuts”, it must be possible to peel off the skin of the kernel easily and the internal central partition must show signs of turning brown.
- In the case of “dry walnuts”, the internal central partition must be dry.

B. Classification

Inshell walnuts are classified in three classes ~~defined below~~:

- ”Extra”Class,
- Class I,
- Class II.

Classification is based on the defects allowed in Section IV. PROVISIONS CONCERNING TOLERANCES. The tolerances must not affect the general appearance of the produce, the quality, keeping quality and presentation in the package.

~~(i) — “Extra” class~~ Class

~~Inshell walnuts in this class must be of superior quality and uniform in shape and appearance. They must have the characteristics of the variety or of the mixture of certain varieties officially defined by~~

³ *The moisture content is determined by one of the methods given in Annex II of the Standard Layout – Determination of Moisture content for dry ~~produce/fruit(nuts)~~ (http://www.unece.org/trade/agr/info/layout/laydry_e.pdf). The laboratory reference method shall be used in cases of dispute.*

⁴ *Reservation from Romania, requesting 10% and 6% respectively.*

~~the producing country and specified in the marking.~~

~~They must be practically free from defects with the exception of very slight superficial defects provided that these do not affect the general appearance of the produce, the quality, the keeping quality or its presentation in the package.~~

~~This class may not include inshell walnuts whose variety cannot be guaranteed, nor a mixture which is not defined.~~

~~Furthermore, only Only walnuts of the most recent harvest can be included in this class.~~

~~The defects allowed in Section IV. PROVISIONS CONCERNING TOLERANCES must not affect the general appearance of the produce, the quality, keeping quality and presentation in the package.~~

~~(ii) — **Class I**~~

~~Inshell walnuts in this class must be of good quality. They must embody the characteristics of the variety, of a commercial type or of a mixture of certain varieties officially defined by the producing country and specified in the marking.~~

~~Slight defects may be allowed provided that these do not affect the general appearance of the produce, the quality, the keeping quality or its presentation in the package.~~

~~This class may not include inshell walnuts whose variety cannot be guaranteed, nor a mixture which is not defined.~~

~~The defects allowed in Section IV. PROVISIONS CONCERNING TOLERANCES must not affect the general appearance of the produce, the quality, keeping quality and presentation in the package.~~

~~(iii) — **Class II**~~

~~This class comprises inshell walnuts which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified above. Inshell walnuts in this class must be of marketable quality.~~

~~The defects allowed in Section IV. PROVISIONS CONCERNING TOLERANCES must not affect the essential characteristics of the produce as regards the quality, keeping quality and presentation. Defects may be allowed provided that the inshell walnuts retain their essential characteristics as regards general appearance, quality, keeping quality and presentation.~~

III. PROVISIONS CONCERNING SIZING

Remark: The provisions concerning sizing are simplified with regard to the size groups. In the existing standard the size codes refer to distinctive 2 mm steps. But in case the produce is graded in a country using inch instead of mm, this does not work. Therefore, the proposal is to define the range but not the steps.

Size is ~~defined~~ determined by the maximum diameter of the equatorial section of the shell, by means of round-holed or elongated-holed screens.

~~either by an interval determined by the minimum diameter and the maximum diameter (sizing) or by an indication of the minimum diameter followed by Aand above@ or Aand +@ (screening).~~

The minimum size is 27 mm for Classes Extra and I and 24 mm for Class II.

Uniformity in size is expressed by:

- a size range defined by a minimum and maximum size in millimeters which must not exceed 2 mm of difference [or 3 mm of difference for oblong varieties whose height is at least 1.25 times the maximum diameter of the equatorial section]
- screening defined as a minimum size in diameter.

Class	Sizing ^a	Screening ^a
Extra and I	32 to 34 mm	34 mm and above
	30 to 32 mm	32 mm and above
	28 to 30 mm	30 mm and above
	27 to 30 mm for oblong varieties ^e	28 mm and above ^b
II	24 to 28 mm	27 mm and above for oblong varieties ^{b,e}
	24 to 27 mm for oblong varieties ^e	24 mm and above

^a——— *In addition to this sizing and screening table, provided that the size is also expressed in the marking, any size name may be used optionally.*

^b——— *Products classified in Class I may exceptionally be marketed with a screening of 26mm and above.*

^e——— *The varieties of oblong walnuts have a shell whose height is at least 1.25 times the maximum diameter of the equatorial section.*

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

In the calculation of tolerances, whatever the class, two half-empty walnuts or four quarter-empty walnuts are counted as one empty walnut.

Defects allowed ^a	Tolerances allowed (percentage by number of defective fruit) per cent of defective inshell walnuts by number count or weight (with regard to the total inshell weight basis)		
	Extra	Class I	Class II
(a) Total tolerances for defects of the shell inshell walnuts not satisfying the minimum requirements for the shell (by number) of which no more than: - _____ inshell walnuts [with residue of adhering husk or] damaged by pests, mould, rotting or deterioration	7 [5]	10	15
- _____ of which rancid, rotten or damaged by insects —pests, rotting, deterioration ^e	3 <u>2</u>	6 <u>5</u>	8 <u>7</u>
- _____ of which mouldy walnuts	0.5 <u>3</u>	4 <u>1</u>	6 <u>2</u>
- _____ not sufficiently developed or empty nuts	3 <u>3</u>	5 <u>5</u>	7 <u>7</u>
(c) Tolerances for other defects (not included in total tolerances)			
- _____ foreign matter including loose shells, shell fragments, fragments of husk, dust (by weight)	1 <u>1</u>	2 <u>2</u>	3 <u>3</u>
- _____ living live insects and mites (by number)	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>
- _____ inshell walnuts belonging to other varieties than that indicated on the package (by number)	10 <u>10</u>	10 <u>10</u>	10 <u>10</u>

^a ~~_____~~ The definitions of defects are listed in the Annex to this document.

^b ~~_____~~ For fresh walnuts, the tolerances for defects of the kernel are as follows: ~~A~~Extra @ Class: 8%; Class I: 12%; Class II: 15%.

^e ~~_____~~ Living insects or animal pests are not permitted in any class.

B. ~~Mineral impurities~~

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

B. Size tolerances

For all classes, ~~a maximum of 10%~~ 10 per cent, by number count or weight, of inshell walnuts not conforming to the ~~size indicated~~ sizing requirements but conforming to the size immediately below and/or above the size indicated in the marking is tolerated within the limits such that are allowed.

- the nuts correspond to the sizes immediately below or above when the size is designated by an interval determined by the minimum diameter and the maximum diameter ~~(sizing)~~;
- the nuts correspond to the size immediately below when the size is designated by an indication of the minimum diameter followed by "and above" or "and +" (screening).

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

The contents of each package must be uniform and contain only inshell walnuts of the same origin, ~~crop year and quality~~, crop year (if indicated), size and variety (if indicated). ~~In a single package stated to contain a given variety, a defined mixture of varieties or commercial type, a maximum of 10% of inshell walnuts may belong to other varieties or commercial types.~~

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

B. Packaging

Inshell walnuts 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 and stamps bearing trade specifications, is allowed provided that the printing or labelling has been done with a non-toxic ink or glue.

Stickers individually affixed on the produce shall be such that, when removed, they neither leave visible traces of glue, nor lead to skin defects.

Question: Should this paragraph, included in the Standard Layout for Fresh Fruit and Vegetables be included to the dry and dried fruit standards where appropriate?

Packages must be free of all foreign matter.

C. Presentation

~~The weight of the packages constituting a batch must be identical.~~⁵ Inshell walnuts must be presented in bags or solid containers. All sales packages within each package must be of the same weight.

VI. PROVISIONS CONCERNING MARKING

Each package⁶ 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 produce

- "Fresh walnuts" or "Early walnuts" (in the case of fresh walnuts);
- "Walnuts" or "Dry walnuts" (in the case of dry walnuts);
- Name of the variety ~~or of the mixture defined for the AExtra@ class; name of the variety, defined mixture or commercial type for class I~~ (optional / mandatory for "Extra" Class);

C. Origin of produce

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

D. Commercial specifications

- Class;
- Size ~~, which may be given either~~ expressed by:
 - the minimum and maximum diameters, or
 - the minimum diameter followed by the words "and above" or "and +";
- Size name (optional);
- Crop year ~~(optional)~~ mandatory for Classes "Extra" class and class I, optional for class II;
- Net weight, ~~or number of consumer packages, followed by the net unit weight in the case of~~ transport packages containing such units;
- Date of packaging ~~(mandatory for fresh walnuts)~~ and optional for dry walnuts;

⁵ ~~The regulations of certain importing countries require compliance with a specific range of net weights for closed packages.~~

⁶ Consumer packages for direct sale to the consumer shall not be subject to these marking provisions but shall conform to national requirements of the importing country. However, the markings referred to shall in any event be shown on the transport packaging containing such package units.

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

- ~~___~~ —“Best before” followed by the date (optional);
- ~~___ for fresh walnuts the indication~~ “To be consumed quickly, store preferably in a cool place”, or the indication “Preservation very limited, store preferably in a cool place”, [for fresh walnuts](#).

E. Official control mark (optional)

This standard was first published as UNECE Standard for Unshelled Walnuts in 1970

Revised 1983, 1991, 1999, 2002, [2003](#)

~~Alignment with the Standard Layout 2003~~

ANNEX: DEFINITIONS OF TERMS AND DEFECTS FOR INSHELL WALNUTS

Based on Annex III of the Standard Layout

A. Defects of the shell:

Any defect affecting the appearance including:

- staining or discolouration: abnormal colour which covers 20% of the surface of the shell of an individual nut and which is of a brown, reddish brown, grey or other colour in pronounced contrast with the colour of the rest of the shell or the majority of shells in the lot;
- adhering dirt, when affecting more than 5 % of the shell surface;
- adhering husk, when affecting more than 10% of the shell surface;
- husking damages: pronounced marks on the shell caused by the operation of mechanically removing the husk.

B. Defects of the edible part (kernel):

Any defects affecting the appearance of the kernel, including blemishes or areas of discolouration: discolouration which affects more than one quarter of the kernel and which is in pronounced contrast with the colour of the rest of the kernel.

Shrivelled kernels: Kernel which is seriously shrunken, wrinkled and tough.

Ripening defects

for fresh nuts: Kernel which is not sufficiently firm, of which for fresh walnuts: the skin cannot easily be peeled off and/or of which the internal central partition does not show signs of turning brown.

Rancidity: Oxidation of lipids or free fatty acid production producing a disagreeable flavour.

Empty nuts: Condition of the walnut in which the kernel has not developed.

C. Defects of the shell and kernel

Mould: Mould filaments visible to the naked eye.

Decay: Significant decomposition caused by the action of micro organisms.

Insect damage: Visible damage caused by insects or other animal parasites or the presence of dead insects or insect debris.

Foreign matter: Any matter or material not usually associated with the product.

Mineral impurities: Acid insoluble ash.

Foreign smell or taste: Any odour or flavour that is not characteristic of the product.