

UNECE STANDARD DDP-17

concerning the marketing and
commercial quality control of

CASHEW KERNELS **1999 EDITION**



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NOTE

Working Party on Agricultural Quality Standards

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The new Standard for Cashew Kernels is based on document TRADE/WP.7/1999/7/Add.5, reviewed and adopted by the Working Party at its fifty-fifth session.

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Please contact us at the following address with any comments or enquiries:

Agricultural Standards Unit
Trade and Timber Division
United Nations Economic Commission for Europe
Palais des Nations
CH-1211 Geneva 10, Switzerland
E-mail: agristandards@unece.org

UNECE Standard DDP-17 concerning the marketing and commercial quality control of Cashew Kernels

I. Definition of produce

This standard applies to cashew kernels of varieties (cultivars) grown from ... (*Anacardium occidentale* L.) obtained by shelling and peeling the true fruits of the cashew tree), intended for direct consumption or for food when intended to be mixed with other products for direct consumption without further processing. This standard does not apply to cashew kernels that are processed by salting, sugaring, flavouring, roasting or other industrial processes.

Cashew kernels may be presented as:

- (a) Whole: whole kernels of characteristic shape.¹ The presence of a small hole at the proximal end of the kernel or a central split or crack is not considered a defect. Up to one eighth of the kernel can be missing.
- (b) Broken: Kernels where more than one eighth of the original kernel is broken off. Designations of broken as follows:
 - (i) Butts: Kernels of not less than 3/8th of a whole kernel which have been broken crosswise but the cotyledons are still naturally attached.
 - (ii) Splits: Kernels of not less than 3/8th of a whole kernel which have been split lengthwise naturally.
 - (iii) Pieces: Kernels which have broken into more than two pieces.

II. Provisions concerning quality

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

However, if applied at stages following export, the holder shall be responsible for observing the requirements of the standard. The holder/seller of products not in conformity with this standard may not display such products or offer them for sale, or deliver or market them in any other manner.

A. Minimum requirements²

In all classes subject to the special provisions for each class, and the tolerances allowed, the cashew kernels must be:

- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;

¹ Kernels with no more than one eighth of the kernel broken off can also be considered as whole.

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 (Inshell Nuts and Nut Kernels) and dried produce <http://www.unece.org/trade/agr/standard/dry/StandardLayout/StandardLayoutDDP_e.pdf>.

- clean, practically free from any visible foreign matter
- whole kernels and splits must be sufficiently developed; no extremely shrunken or shrivelled kernels or with desiccated [dehydrated], dried out or tough portions affecting more than [5]% per cent of the kernel except for kernels³
- whole kernels and splits must be free from blemishes, areas of discolouration or spread stains in pronounced contrast with the rest of the kernel affecting in aggregate more than 5% per cent of the surface of the kernel
- free from living pests, whatever their stage of development
- free from damage caused by pests, including the presence of dead insects and/or mites, their debris or excreta
- free from mould filaments visible to the naked eye
- free from rancidity⁴
- free of abnormal external moisture
- free of foreign smell and/or taste.

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

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

B. Moisture content

Cashew kernels shall have a moisture content not exceeding 5.0 per cent.⁵

C. Classification

In accordance with the defects allowed in section "IV. Provisions concerning tolerances", Cashew kernels are classified into the following classes..⁶

(i) "Extra" class

Cashew kernels in this class must be of superior quality. They must be characteristic of the variety and/or commercial type. Their colour should be white, pale ivory, pale ash-grey or light yellow and should be uniform.

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 and its presentation in the package.

³ Except for cashew kernels described as third quality special scorched, blemished and dessert.

⁴ Method of rancidity to be determined.

⁵ The moisture content is determined by one of the methods given in annex II of the Standard Layout – Determination of the moisture content for dry produce <http://www.unece.org/trade/agr/standard/dry/StandardLayout/StandardLayoutDDP_e.pdf>. The laboratory reference method shall be used in cases of dispute.

[⁶ Optional designations for each class are described in Annex I to this document.]

(ii) Class I

Cashew kernels in this class must be of good quality. They must be characteristic of the variety and/or commercial type. Their colour may be of light brown, light ivory, yellow, light ash-grey or deep ivory as a result of overheating.

(iii) Class II

This class includes cashew kernels which do not qualify for inclusion in the higher classes, but which satisfy the minimum requirements specified above. Immature and speckled kernels are permitted provided they do not affect the characteristic shape of the kernel. Their colour may be light or deep brown, amber, light or deep blue. The kernels may be discoloured and black spotted.

III. Provisions concerning sizing

Sizing of cashew kernels is optional.

When sized, size is determined by one of the following:

a) Count for whole kernels the number of whole cashew kernels per pound or per kilogram.

Size code	Maximum number of kernels per pound	per kilogram
150	150	325
180	180	395
210	210	465
240	240	530
280	280	620
320	320	706
400	400	880
450	450	990
500	500	1100

b) Screening for cashew kernel pieces is based on the following designations:

Designation	Characteristic
Large pieces:	do not pass through a sieve of aperture 4.75mm
Small pieces: ⁷	pass through a sieve of aperture 4.75mm but do not pass through a sieve of aperture 2.80mm.
Very Small Pieces: ⁸	pass through a sieve of aperture 2.80mm but do not pass through a sieve of aperture 2.36mm.
"Baby bits" or "granules":	Plemules and fragments of kernels which pass through a sieve of aperture 2.80mm but do not pass through a sieve of aperture 1.70mm.

⁷ [These pieces may also be designated "Medium Brazilian Pieces".]

⁸ [These pieces may also be designated "Small Brazilian Pieces".]

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

<i>Permitted defects^a</i>	<i>Tolerances allowed (per cent by weight of kernels)</i>		
	<i>Extra</i>	<i>Class I</i>	<i>Class II</i>
Total tolerances	8	11	14
Superficial damage	1	2	5
Immature or shrivelled (deformed)	1	2	5
Coloured kernels of next lower grade (NLG)	5	7.5	- ^a
Speckled or spotted (black or brown)	0.5	0.5	- ^b
Presence of testa	1	1	5
Insect damage	0.5	0.5	1
Mouldy, rancid or rotten	0.0	0.5 ^c	1 ^c
Foreign matter	0.05	0.05	0.05

^a The definition of the defects are listed in Annex II to this document.

^b No limit (see Classification for Class II).

^c For brokens, rancidity is to be determined as free fatty acid and/or peroxide value. The maximum tolerated for free fatty acid is 1% (expressed as oleic acid) and for peroxide, the maximum tolerated is 5 meq/kg (milliequivalents of oxygen per kilogram), both on the basis of extracted oil.

<i>Defects allowed</i>	<i>Tolerances allowed (percentage of defective produce, by number or weight)</i>		
	<i>Extra</i>	<i>Class I</i>	<i>Class II</i>
(a) Tolerances for produce not satisfying the minimum requirements: of which no more than:	8	11	14
Not sufficiently developed, shrunken and shrivelled	1	2	5
Mouldy, rancid or rotten	0.0	0.5	1
Pest damage	0.5	1.0	1.5
Living pests	0	0	0
Speckled or spotted (black or brown)	3	5	[10] ^a
Presence of testa (adhering skin)	1	1	5

<i>Defects allowed</i>	<i>Tolerances allowed (percentage of defective produce, by number or weight)</i>		
	<i>Extra</i>	<i>Class I</i>	<i>Class II</i>
(b) Size tolerances			
For whole kernels not conforming to the size indicated, if sized	10	10	10
For pieces not conforming to the size indicated, if sized	5	5	5
[(c) Tolerances for other defects]			
Among whole kernels: foreign matter, loose skin (by weight)	0.25/0.1	0.5/0.25/0 .1	0.5/0.25
Among kernel pieces: foreign matter, loose skin (by weight) or	0.5/0.25	0.5/0.25	0.5/0.25
Foreign matter, including loose skin (by weight)	0.25/0.1	0.5/0.25/0 .1	0.5/0.25
Cashew Kernels belonging to commercial types other than that indicated	5	7.5	10

^a Except for cashew kernels described as third quality special scorched, blemished and dessert.

V. Provisions concerning presentation

A. Uniformity

The contents of each package must be uniform and contain only cashew kernels of the same quality and size (if sized) and variety or commercial type if indicated.

The visible part of the contents of the package (or lot for each package presented in bulk) must be representative of the entire contents. For "extra" class and "class I", the kernels must be of the same variety and/or commercial type.

B. Packaging

Cashew kernels must be packed in such a way as to protect the produce properly. The materials used inside the package must be 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 the printing or labelling has been done with non-toxic ink or glue.

Packages must be free of all foreign matter in accordance with the table of tolerances in section "IV. Provisions concerning tolerances".

C. Presentation

Cashew kernels: 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 package⁹ must bear the following particulars in letters grouped on the same side, legibly and indelibly marked and visible from the outside:

A. Identification

Packer and/or Dispatcher:

Name and physical address (e.g. street/city/region/postal code and, if different from the country of origin, the country) or a code mark officially recognized by the national authority¹⁰.

B. Nature of Produce

- "Cashew kernels", if the contents not visible from outside
- Name of the commercial type
- name of the produce
- name of the variety and/or commercial type (optional){according to the nature of the produce}
- type or style {according to the definitions of the standard}.

C. Origin of produce

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

D. Commercial specification

- Class ("extra", class I or class II or alternative acceptable designations as described in Annex I)
- Style ("whole", "butts", "splits" or "pieces")
- Size designation (if sized) expressed in accordance with section III
- Crop year (optional)
- Best before" followed by the date (optional).
- Net weight, or the number of package units, followed by the net weight in the case of packages containing such units.

⁹ According to the Geneva Protocol, footnote 2, "Package units of produce prepacked for direct sale to the consumer shall not be subject to these marking provisions but shall conform to the national requirements. However, the markings referred to shall in any event be shown on the transport packaging containing such package units".

¹⁰ 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, and the code mark should be preceded by the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.

E. Official control mark (optional)

Adopted 1999

Inclusion of new Annex I 2002

Annexes

[Annex I

Designations of classes

Designations for each class are shown in the table below.

<i>Class</i>	<i>Quality</i>	<i>Colour</i>	<i>Optional Designation</i>
Extra	Superior quality characteristic of variety or commercial type	White Pale Ivory Pale ash-grey Light yellow	"White"
Class I	Good quality	Light Brown Light Ivory Light ash-grey Deep ivory Yellow	"Scorched"
Class II	Do not qualify for inclusion in higher classes, but which satisfy minimum requirements specified above.	Light Brown Amber Light Blue	"Scorched Seconds"
	Immature and speckled kernels are permitted provided they do not affect the characteristic shape of the kernel.	Deep Brown Deep Blue Discoloured Black spotted	"Dessert"]

Annex II

Definitions of defects

A. Defects of kernels

Superficial damage:	Damage adversely affecting the appearance of the product, including blemishes and areas of discoloration. Scraped kernels, where characteristic shape is not affected are not considered defective.
Intrinsic defects:	Shrivelled or immature kernels: the kernel is materially shrunken, wrinkled and tough. These are considered a defect only when the kernel is deformed and does not have its characteristic shape.
Spotted or speckled:	the presence of black or brown spots or specks.

B. Other defects from external causes

Insect damage:	Containing dead insects, mites, insect fragments, webbing, frass, excreta, or visible damage caused by boring and feeding of insects and animal parasites.
Mould:	Mould filaments either on the inside or the outside of the kernel visible to the naked eye.
Rancidity:	Oxidation or free fatty acid production in the lipids producing a disagreeable flavour.
Decay:	Significant decomposition caused by the action of micro-organisms.
Foreign Matter:	Any matter or material not usually associated with the product; excludes mineral impurities.
Testa:	Skin adhering to any portion of the kernel.
