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**SPECIALIZED SECTION ON STANDARDIZATION OF  
DRY AND DRIED PRODUCE**

Texts for adoption as revised/new UNECE standards

Blanched almond kernels

Note by the secretariat

This text is submitted to the Working Party for approval as a new Standard for Blanched almond kernels.

It is based on document ECE/TRADE/C/WP.7/2008/17, the text of which was agreed upon at the June 2009 session of the Specialized Section on Standardization of Dry and Dried Produce.

This document is being issued pursuant to paragraph 5 of the Working Party's Terms of Reference.

**UNECE STANDARD DDP-21**  
concerning the marketing and commercial quality control of  
**BLANCHED ALMOND KERNELS**

**I. DEFINITION OF PRODUCE**

This standard applies to whole sweet blanched almond kernels of varieties (cultivars) grown from *Prunus amygdalus* Batsch, syn. *Prunus dulcis* (Mill.) D.A. Webb, from which the tegument or skin of the kernel (episperm) has been removed, 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 blanched almond kernels that are processed by salting, sugaring, flavouring, or roasting or for industrial processing, nor to bitter blanched almond kernels marketed under this denomination.

**II. PROVISIONS CONCERNING QUALITY**

The purpose of the standard is to define the quality requirements of blanched almond 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 requirements<sup>1</sup>**

In all classes, subject to the special provisions for each class and the tolerances allowed, the blanched almond kernels must display the following characteristics:

- intact; however, slight superficial damage is not considered as a defect
- sound; produce affected by rotting or deterioration such as to make it unfit for human consumption is excluded
- clean; practically free of any visible foreign matter
- free of adhering skin exceeding an aggregated area of 6 mm in diameter

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<sup>1</sup> 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](http://www.unece.org/trade/agr/standard/dry/StandardLayout/StandardLayoutDDP_e.pdf)>.

- sufficiently developed. Shrunken and shrivelled kernels which are extremely flat and wrinkled, or with dehydrated, dried out or tough portions affecting more than 25 per cent of the kernel, are to be excluded
- free from blemishes, areas of discoloration or spread stains in pronounced contrast with the rest of the kernel affecting in aggregate more than 10 per cent of the surface of the kernel
- well formed (see specific tolerances for twins or doubles)
- free from mould filaments visible to the naked eye
- 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 of abnormal external moisture
- free of foreign smell and/or taste
- free from rancidity
- free from gum (resinous substance) exceeding an aggregate area of 6 mm in diameter
- free from brown (slightly depressed brown spots caused by the stings of insects such as the box elder bug (*Leptocoris trivittatus* Say), exceeding an aggregate area of 3 mm in diameter.

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

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

#### **B. Moisture content**<sup>2</sup>

The blanched almond kernels shall have a moisture content not exceeding 6.5 per cent.

#### **C. Classification**

In accordance with the defects allowed in section “IV. Provisions concerning tolerances”, blanched almond kernels are classified into the following classes:

“Extra” Class, Class I, Class II

The defects allowed must not affect the general appearance of the produce as regards quality, keeping quality and presentation in the package.

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<sup>2</sup> 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](http://www.unece.org/trade/agr/standard/dry/StandardLayout/StandardLayoutDDP_e.pdf)>. The laboratory reference method shall be used in cases of dispute.

### III. PROVISIONS CONCERNING SIZING

Sizing of blanched almond kernels is optional.

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

- Screening, are determined by the minimum diameter of the equatorial section of the blanched almond kernel, by means of round-holed or elongated-holed screens.
- Count, are determined by the number of the blanched almond kernels per 100 grams or per ounce (28.3495 g).

(i) Sizing is expressed by an interval defined by a minimum and maximum size in millimetres, which must not exceed 2 mm of difference. When a range in count is specified, the blanched almond kernels shall be fairly<sup>3</sup> uniform in size, and the average count shall be within the range specified.

(ii) Screening is expressed by a reference to a minimum size, in millimetres, followed by the words “and plus” or other equivalent wording, or by a reference to a maximum number of kernels per 100 grams or per ounce, followed by the words “and less” or other equivalent wording.

### IV. PROVISIONS CONCERNING TOLERANCES

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

#### A. Quality tolerances

Defects allowed	Tolerances allowed		
	Percentage of defective blanched almond kernels by weight		
	Extra	Class I	Class II
<b>(a) Tolerances for blanched almond kernels not satisfying the minimum requirements, Of which no more than</b>	5	10	15
- Not sufficiently developed, shrunken and shrivelled	0.5	1.5	3
- Mouldy	0.5	0.5	1
- Rancid or damaged by pests, rotting or deterioration	3	5	10
- Gum, brown spot, blemishes and	3	5	10

<sup>3</sup> Fairly uniform in size means that, in a representative sample, the weight of 10 per cent, by count, of the largest whole kernels shall not exceed 1.7 times the weight of the 10 per cent, by count, of the smallest whole kernels.

Defects allowed	Tolerances allowed		
	Percentage of defective blanchéd almond kernels by weight		
	Extra	Class I	Class II
discoloration			
- Bitter almonds (by count or by weight)	1	3	4
- Split, broken and halves <sup>4</sup>	5	7	10
- Pieces <sup>5</sup>	2	3	5
- Living pests	0	0	0
<b>(b) Size tolerances</b>			
For produce not conforming to the size indicated, if sized	20	20	20
<b>(c) Tolerances for other defects</b>			
- Heat damage	3	6	10
- Foreign matter including loose shells, shell fragments, fragments of hull, dust (by weight)	0.10	0.15	0.20
- Blanchéd almonds belonging to other varieties and/or commercial types than that indicated on the package	10	10	20
- Chipped and scratched <sup>6</sup>	5	10	15
- Kernels with residues of adhering skin	2	3	6
- Doubles or twins <sup>7</sup>	5	15	20

## V. PROVISIONS CONCERNING PRESENTATION

### A. Uniformity

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

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

<sup>4</sup> Split or broken kernels are mechanically damaged kernels from which more than one quarter of the kernel is missing. A half is a longitudinally split almond kernel of which the two halves (cotyledons) are separated.

<sup>5</sup> Pieces are small fragments of blanchéd almond kernels which pass through a 10 mm round meshed sieve.

<sup>6</sup> Chipped is a mechanically damaged kernel from which less than one quarter of the kernel is missing. Scratched is a kernel with mechanical marks on its surface; it is not considered as a defect scratched areas of less, in aggregate, than the equivalent of a circle of 3 mm in diameter.

<sup>7</sup> When the marking indicates "without doubles" or "without twins", these tolerances shall be reduced to 1 per cent for Extra Class and 3 per cent for Class I and Class II.

## **B. Packaging**

Blanched almond 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**

Blanched almond 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 package<sup>8</sup> 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 authority<sup>9</sup>.

### **B. Nature of produce**

- “Blanched almond kernels” or “Blanched almonds”
- Name of the variety and/or commercial type (optional)
- Additional specifications (“without doubles” or “without twins”, etc., when appropriate).

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<sup>8</sup> 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.

<sup>9</sup> The national legislation of a number of countries requires the explicit declaration of the name and address. However, in cases where a code mark is used, the reference “packer and/or dispatcher” (or equivalent abbreviations) must be indicated in close connection with the code mark, and the code mark should be preceded with the ISO 3166 alpha country code of the recognizing country, if not the country of origin.

**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 by:
  - the minimum and the maximum diameters measured in millimetres, or
  - the minimum diameter followed by the words “and plus” or other equivalent wording, or
  - the maximum diameter, followed by the words “and less” or other equivalent wording, or
  - the minimum and the maximum count per 100 grams or per ounce
- crop year (optional)<sup>10</sup>
- “Best before” followed by the date (optional).

**E. Official control mark (optional)**

Adopted 2009

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<sup>10</sup> Reservation by France requesting that the crop year be marked.