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**DRAFT NEW UNECE STANDARD FOR
PECANS KERNELS**

Transmitted by the United States

Note by the secretariat: The following text has been transmitted by the delegation of the United States of America and is reproduced as received.

UNECE STANDARD
concerning the marketing and commercial
quality control of

PECAN KERNELS
Moving in international trade between and to
UNECE member countries

I. DEFINITION OF PRODUCE

This standard applies to pecan kernels of varieties (cultivars) grown from *Carya illinoensis* intended for direct consumption. This standard does not apply to pecan kernels for industrial processing or for use in the food industry except when they are intended to be mixed with other product for direct consumption without further processing.

II. PROVISIONS CONCERNING QUALITY

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

A. Minimum requirements

(i) **General provisions**

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

- sufficiently dry to ensure keeping quality;
- intact; slight superficial damage is not considered as a defect,
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- sufficiently developed;
- clean, practically free of any visible foreign matter;
- free from insects or mites whatever their stage of development;
- free of damage caused by pests;
- free from mould;
- free from rancidity;
- free of abnormal external moisture;
- free of foreign smell and/or taste.

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

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

(ii) **Moisture content**

The pecan kernels shall have a moisture content not exceeding 6.5% per cent.¹

¹ *The method to be used should be one of the methods tested collaboratively and shown to give satisfactory results in inter-laboratory trials and which are given in Annexes I and II for dried and dry fruit. The laboratory reference method shall be used in cases of dispute.*

(iii) **Preservatives**

Preservatives may be used in accordance with the legislation of the importing country.

B. Classification

Pecan kernels are classified in the classes defined below:

(i) ***“Extra” Class***

Pecan Kernels in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

They must be:

- Fairly well developed.
- Fairly uniform in colour.
- Fairly uniform in size.
- Not darker than “amber” skin colour.
- Free of pieces of shell and centre wall
- Very slight defects in shape/development.

(ii) ***Class I***

Pecan Kernels in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

They must be:

- At least 50 percent by weight must be whole kernels.
- Kernel and pieces but neither will not pass through a screen 7.93 mm (5/16 inch) round opening.

(iii) ***Class II***

This class includes pecan kernels which do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified above. They may be kernel halves or pieces with no specific requirements for percentage of whole kernels, colour and size.

III. PROVISIONS CONCERNING SIZING

Pecan kernels are sized in by the number of kernels/halves per pound or per 100g or Extra Class, size is determined by Table I², and Class I and II (pieces) sizes are determined by Table II³.

² *The number of halves per pound shall be based upon the weight of half-kernels after all pieces, particles and dust, shell, centre wall, and foreign material have been removed.*

³ *Table II, the size of pieces in a lot may be specified in terms of minimum diameter, or as a range described in terms of minimum and maximum diameters expressed in sixteenths or sixty-fourths of an inch.*

TABLE I

Size classifications for kernels	Number of kernels per pound	Number of kernels per 100g.
Mammoth	250 or less	55 or less
Junior mammoth	251 - 300	55 – 66
Jumbo	301 - 350	66 – 77
Extra large	351 - 450	77 – 99
Large	451 - 550	99 – 121
Medium	551 - 650	121 -143
Small (topper)	651 - 750	143 – 165
Midget	751 - or more	165 – or more

(1) When an exact number of halves per pound is specified, the actual count per pound may vary not more than 5 percent from the specified number; and,

(2) When any size classification shown in Table I or a range in count per pound is specified, no tolerance shall be allowed for counts outside of the specified range.

TABLE II

Size classifications	Maximum diameter (will pass through round opening of following diameter:		Minimum diameter (will not pass through round opening of following diameter:	
	in inches	in mm	in inches	in mm
Mammoth pieces	No limitation	No limitation	8/16	12.5
Extra large pieces	9/16	14.28	7/16	11.11
Halves and pieces	No limitation	No limitation	5/16	7.9
Large pieces	8/16	12.7	5/16	7.9
Medium pieces	6/16	9.52	3/16	4.76
Small pieces	4/16	6.25	2/16	3.17
Midget pieces	3/16	4.76	1/16	1.58
Granules	2/16	3.17	1/16	1.58

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

Defects allowed	Tolerances allowed (per cent by number or weight of defective fruit)		
	Extra Class	Class I	Class II
a) Total Tolerance for pecan kernels not satisfying the minimum requirements, Of which no more than:	6	6	
- Shell center wall and foreign material	0.05	0.05	0.05
- Dark amber or dark colored kernels	3	3	3
- Other defects of which	3	3	3
- Serious damage	.5	.5	.5
b) Total Tolerance for Pieces Particles and Dust	15	15	15
Of which			
- Less than ½ kernel pieces	4	5	5
- Particles and dust	1	1	1

B. Mineral impurities

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

C. Size tolerances

For Extra Class, when count per 100g/pound is specified, 5 per cent, by number or weight, of products not according to the size indicated on the marking; but belonging to the size range immediately above and/or below the size indicated.

V. PROVISIONS CONCERNING PRESENTATION

A. Uniformity

The contents of each package must be uniform and contain only pecan kernels of the same origin, quality and size. The visible part of the contents of the package must be representative of the entire contents. For Extra Class the produce must be of the same variety and/or commercial type.

B. Packaging

Pecan Kernels 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

Pecan kernels may be presented in solid containers. All consumer packages within each master container must be of the same weight.

VI. PROVISIONS CONCERNING MARKING

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

For pecan kernels transported in bulk these particulars must appear on a document accompanying the goods and be attached in a visible position inside the transport vehicle.

A. Identification

Packer)	Name and address or
and/or)	officially issued or
Dispatcher)	accepted code mark ⁴

B. Nature of produce

- Name of the produce;
- Name of the variety and/or commercial type {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 specifications

- Class;
- Size (if sized);
- Crop year (optional or at the request of the importing country)
- 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).
- "Best before" followed by the date (optional)

E. Official control mark (optional)

⁴ 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 I

DEFINITIONS OF TERMS AND DEFECTS FOR PECAN KERNELS

<i>Kernel:</i>	One of the separated halves of an entire pecan kernel with not more than One-eighth of its original volume missing, exclusive of the portion which formerly connected the two halves of the kernel.
<i>Piece:</i>	A portion of a kernel which is less than seven-eighths of a half-kernel, but which will not pass through a round opening two-sixteenths inch in diameter.
<i>Particles and dust:</i>	For all size designations except "midget pieces" and "granules," fragments of kernels which will pass through a round opening two-sixteenths inch in diameter.
<i>Well dried</i>	The portion of kernel is firm and crisp, not pliable or leathery.
<i>Fairly well developed:</i>	The kernel has at least a moderate amount of meat in proportion to its width and length.
<i>Poorly developed:</i>	The kernel has a small amount of meat in proportion to its width and length.
<i>Fairly uniform in colour:</i>	90 percent or more of the kernels in the lot have skin colour within the range of one or two colour classifications.
<i>Fairly uniform in size:</i>	In a representative sample of 100 halves, the 10 smallest halves weigh not less than one-half as much as the 10 largest halves.
<i>Damage:</i>	<p>Any specific defect described in this section; or an equally objectionable variation of any one of these defects, or any other defect, or any combination of defects, which materially detracts from the appearance or the edible or marketing quality of the individual portion of the kernel or of the lot as a whole. The following defects should be considered as damage:</p> <ul style="list-style-type: none">(a) Adhering material from inside the shell when attached to more than one-fourth of the surface on one side of the half-kernel or piece;(b) Dust or dirt adhering to the kernel when conspicuous;(c) Kernel which is not well dried;(d) Kernel which is "dark amber" or darker color;(e) Kernel having more than one dark kernel spot, or one dark kernel spot more than one-eighth inch in greatest dimension;(f) Shrivelling when the surface of the kernel is very conspicuously wrinkled;

- (g) Internal flesh discoloration of a medium shade of grey or brown extending more than one-fourth the length of the half-kernel or piece, or lesser areas of dark discoloration affecting the appearance to an equal or greater extent; and,
- (h) Poorly developed kernel.

Serious damage:

Any specific defect described in this section; or an equally objectionable variation of any one of these defects, or any other defect, or any combination of defects, which seriously detracts from the appearance or the edible or marketing quality of the individual portion of kernel or of the lot as a whole. The following defects shall be considered as serious damage:

- (a) Any plainly visible mould;
- (b) Rancidity when the kernel is distinctly rancid to the taste. Staleness of flavour shall not be classed as rancidity;
- (c) Decay affecting any portion of the kernel;
- (d) Insects, web, or frass or any distinct evidence of insect feeding on the kernel;
- (e) Internal discoloration which is dark grey, dark brown, or black and extends more than one-third the length of the half-kernel or piece;
- (f) Adhering material from inside the shell when attached to more than one-half of the surfaces on one side of the half-kernel or piece;
- (g) Dark kernel spots when more than three are on the kernel, or when any dark kernel spot or the aggregate of two or more spots affect an area of more than 10 percent of the surface of the half-kernel or piece;
- (h) Dark skin discoloration, darker than "dark brown, when covering more than one-fourth of the surface of the half-kernel or piece;