



**United States
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Agriculture**

**Agricultural
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Service**

**Fruit and
Vegetable
Programs**

**Fresh
Products
Branch**

United States Standards for Grades of Shelled Pistachio Nuts

Effective December 23, 2004

United States Standards for Grades of Shelled Pistachio Nuts

General

51.2555 General

Grades

51.2556 Grades

Tolerances

51.2557 Tolerances

Application of Tolerances

51.2558 Application of Tolerances

Size Classifications

51.2559 Size Classifications

Definitions

51.2560 Definitions

Average Moisture Content

51.2561 Average Moisture Content

Metric Conversion Table

51.2562 Metric Conversion Table

§ 51.2555 General.

(a) Compliance with the provisions of these standards shall not excuse failure to comply with provisions of applicable Federal or State laws.

(b) These standards are applicable to raw, roasted, salted or salted/roasted pistachio kernels.

§ 51.2556 Grades.

(a) "U.S. Fancy," "U.S. Extra No. 1," and "U.S. No. 1" consists of pistachio kernels which meet the following requirements:

(1) Well dried, or very well dried when specified in connection with the grade.

(2) Free from:

(i) Foreign material, including in-shell nuts, shells, or shell fragments.

(3) Free from damage by:

(i) Immature kernels;

(ii) Kernel spotting; and

(iii) Other defects.

(4) Free from serious damage by:

(i) Mold;

(ii) Minor insect or vertebrate injury;

(iii) Insect damage;

(iv) Rancidity;

(v) Decay; and,

(vi) Other defects.

(5) Unless otherwise specified, kernels shall meet the size classification of Jumbo Whole Kernels (See §51.2559).

(b) [Reserved]

§ 51.2557 Tolerances.

(a) In order to allow for variations incident to proper grading and handling, the tolerances, by weight, in Table 1 are provided.

Table 1 - Tolerances

Factor (tolerances by weight)	U.S. Fancy	U.S. Extra No. 1	U.S. No. 1
	Percent	Percent	Percent
(a) Damage	2.0	2.5	3.0
(b) Serious Damage (Minor Insect or Vertebrate Injury, Mold, Rancid, Decay)	1.5	2.0	2.5
(1) Insect Damage, included in (b)	.3	.4	.5
(c) Foreign Material	.03	.05	.1

§51.2558 Application of Tolerances

The tolerances for the grades apply to the entire lot and shall be based on a composite sample representative of the lot. Any container or group of containers which have kernels obviously different in quality or size from those in the majority of containers shall be considered a separate lot and shall be sampled separately.

§ 51.2559 Size Classifications.

(a) The size of pistachio kernels may be specified in connection with the grade in accordance with one of the following size classifications.

(1) Jumbo Whole Kernels: 80 percent or more by weight shall be whole kernels and not more than 5 percent of the total sample shall pass through a 24/64 inch round hole screen with not more than 1 percent passing through a 16/64 inch round hole screen.

(2) Large Whole Kernels: 80 percent or more, by weight, shall be whole kernels and not more than 2 percent of the total sample shall pass through a 16/64 inch round hole screen.

(3) Large Split Kernels: 75 percent or more, by weight, shall be half kernels split lengthwise and not more than 5 percent of the total sample shall pass through a 16/64 inch round hole screen.

(4) Whole and Broken Kernels: means a mixture of any combination of whole kernels or pieces. The percentage of whole kernels and/or pieces may be specified. Not more than 5 percent of the total sample shall pass through a 5/64 inch round hole screen.

(b) [Reserved]

§ 51.2560 Definitions.

(a) *Well dried* means the kernel is firm and crisp.

(b) *Very well dried* means the kernel is firm and crisp and the average moisture content of the lot does not exceed 7 percent or is specified (See §51.2561).

- (c) *Foreign material* means leaves, sticks, in-shell nuts, shells or pieces of shells, dirt, or rocks, or any other substance other than pistachio kernels. No allowable tolerances for metal or glass.
- (d) *Whole kernel* means 3/4 of a kernel or more.
- (e) *Splits* means more than 3/4 of a half kernel split lengthwise.
- (f) *Damage* means any specific defect described in paragraph (f) (1) through (2) of this section or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which materially detracts from the appearance or the edible or marketing quality of the individual kernel or of the lot. (For tolerances, see §51.2557, Table I.)
 - (1) *Immature kernels* are excessively thin kernels and can have black, brown or gray surface with a dark interior color and the immaturity has adversely affected the flavor of the kernel.
 - (2) *Kernel spotting* refers to dark brown or dark gray spots aggregating more than one-eighth of the surface of the kernel.
- (g) *Serious damage* means any specific defect described in paragraph (g) (1) through (5) of this section, or an equally objectionable variation of any one of these defects, any other defect, or any combination of defects, which seriously detracts from the appearance or the edible or marketing quality of the individual kernel or of the lot. (For tolerances see §51.2557 Table I.)
 - (1) *Mold* which is readily visible on the kernel.
 - (2) *Minor insect or vertebrate injury* means the kernel shows conspicuous evidence of feeding.
 - (3) *Insect damage* is an insect, insect fragment, web or frass attached to the kernel. No live insects shall be permitted.
 - (4) *Rancidity* means the kernel is distinctly rancid to taste. Staleness of flavor shall not be classed as rancidity.
 - (5) *Decay* means one-sixteenth or more of the kernel is decomposed.

§ 51.2561 Average Moisture Content

- (a) Determining average moisture content of the lot is not a requirement of the grades, except when kernels are specified as “very well dried.” It may be carried out upon request in connection with grade analysis or as a separate determination.
- (b) Kernels shall be obtained from a randomly drawn composite sample. Official certification shall be based on the air-oven method or other officially approved methods or devices. Results obtained by methods or devices not officially approved may be reported and shall include a description of the method or device and owner of any equipment used.

§ 51.2562 Metric Conversion Table

Use the following table for metric conversion:

Inches	Millimeters
5/64	1.98
16/64	6.35
24/64	9.53
Ounces	Grams
1	28.35
2	56.7

