



**United States  
Department of  
Agriculture**

**Agricultural  
Marketing  
Service**

**Fruit and  
Vegetable  
Division**

**Fresh  
Products  
Branch**

# **United States Standards for Grades of Shelled Walnuts (*Juglans regia*)**

**Effective September 1, 1968**  
*(Reprinted - January 1997)*

# United States Standards for Grades of Shelled Walnuts (*Juglans regia*)<sup>1</sup>

---

## **General**

51.2275 Application.

51.2276 Color chart.

## **Grades**

51.2277 U.S. No. 1.

51.2278 U.S. Commercial.

## **Unclassified**

51.2279 Unclassified.

## **Tolerances for Grade Defects**

51.2280 Tolerances for grade defects.

## **Color Requirements**

51.2281 Color classifications.

51.2282 Tolerances for color.

51.2283 Off color.

## **Size Requirements**

51.2284 Size classifications.

51.2285 Tolerances for size.

## **Application of Tolerances**

51.2286 Application of tolerances.

## **Definitions**

51.2287 Well dried.

51.2288 Clean.

51.2289 Shell.

51.2290 Insect injury.

51.2291 Rancidity.

51.2292 Damage.

51.2293 Serious damage.

51.2294 Very serious damage.

51.2295 Half kernel.

51.2296 Three-fourths half kernel.

## **General**

### **§51.2275 Application.**

The standards contained in this subpart apply only to walnuts commonly known as English or Persian walnuts (*Juglans regia*). They do not apply to walnuts commonly known as black walnuts (*Juglans nigra*).

---

<sup>1</sup>Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

**§51.2276 Color chart.**

The color chart (USDA Walnut Color Chart) to which reference is made in §§51.2281 and 51.2282 illustrates the four shades of walnut skin color listed as color classifications.

(a) **Availability of color chart.** The USDA Walnut Color Chart cited in this subpart has been filed with the original document and is available for inspection in the Office of the Federal Register. The color chart is also available for inspection in the Fruit and Vegetable Division, AMS, U.S. Department of Agriculture, South Building, Washington, D.C. 20250, in any field office of the Fresh Fruit and Vegetable Inspection Service of the Fruit and Vegetable Division, or upon request of any authorized inspector of such Service. Copies of the color chart may be purchased from Munsell Color Co., Inc., 2441 North Calvert Street, Baltimore, Md. 21218.

**Grades**

**§51.2277 U.S. No. 1.**

"U.S. No. 1" consists of portions of walnut kernels which are well dried, clean, free from shell, foreign material, insect injury, decay, rancidity, and free from damage caused by shriveling, mold, discoloration of the meat or other means. (See §51.2280.)

(a) Color shall be specified in connection with this grade in terms of one of the color classifications. (See §§51.2276, 51.2281 and 51.2282.)

(b) Size shall be specified in connection with this grade in terms of one of the size classifications. (See §§51.2284 and 51.2285.)

**§51.2278 U.S. Commercial.**

"U.S. Commercial" consists of portions of walnut kernels which meet the requirements of U.S. No. 1 grade, except for increased tolerances. (See §51.2280.)

(a) Color of walnuts in this grade shall be not darker than "amber" classification, and color need not be specified. However, color may be specified in connection with the grade in terms of one of the color classifications. (See §§51.2276, 51.2281 and 51.2282.)

(b) Size shall be specified in connection with this grade in terms of one of the size classifications. (See §§51.2284 and 51.2285.)

**Unclassified**

**§51.2279 Unclassified.**

"Unclassified" consists of portions of walnut kernels which have not been classified in accordance with either of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no grade has been applied to the lot.

**Tolerances for Grade Defects**

**§51.2280 Tolerances for grade defects.**

(a) All percentages shall be calculated on the basis of weight.

(b) In order to allow for variations, other than for color and size, incident to proper grading and handling, tolerances shall be permitted for the respective grades as indicated in Table I:

Table I

| Grade                | Tolerances for grade defects |  |   |   |
|----------------------|------------------------------|--|---|---|
|                      | Total defects                | Serious damage                           | Very serious damage                       | Shell and foreign material                        |
|                      | Percent                      | Percent                                  | Percent                                   | Percent   |
| U.S. No. 1-----      | 5                            | 2 (included in 5 percent total defects). | 1 (included in 2 percent serious damage). | 0.05 (included in 1 percent very serious damage). |
| U.S. Commercial----- | 8                            | 4 (included in 8 percent total defects). | 2 (included in 4 percent serious damage). | 0.05 (included in 2 percent very serious damage). |

**Color Requirements**

**§51.2281 Color classifications.**

The following classifications are provided to describe the color of any lot: "Extra Light", "Light", "Light Amber" or "Amber". The portions of kernels in the lot shall not be darker than the darkest color permitted in the specified classification as shown on the color chart.

**§51.2282 Tolerances for color.**

- (a) All percentages shall be calculated on the basis of weight.
- (b) In order to allow for variations incident to proper grading and handling, tolerances shall be permitted for the respective color classifications as indicated in Table II:

Table II

| Color classification | Tolerances for color                 |   |   |   |
|----------------------|--------------------------------------|---|---|---|
|                      | Darker than extra light <sup>1</sup> | Darker than light <sup>1</sup>                              | Darker than light amber <sup>1</sup>                  | Darker than amber <sup>1</sup>                              |
| Extra light-----     | 15 percent                           | 2 percent (included in 15 percent darker than extra light). | -----   | -----   |
| Light-----           | -----                                | 15 percent  | 2 percent (included in 15 percent darker than light). | -----   |
| Light amber-----     | -----                                | -----   | 15 percent  | 2 percent (included in 15 percent darker than light amber). |
| Amber-----           | -----                                | -----   | -----   | 10 percent.   |

<sup>1</sup>See illustration of this term on color chart.

**§51.2283 Off color.**

The term "off color" is not a color classification, but shall be applied to any lot which fails to meet the requirements of the "Amber" classification.

## Size Requirements

### §51.2284 Size classification.

The following classifications are provided to describe the size of any lot: "Halves", "Pieces and Halves", "Pieces" or "Small Piece". The size of portions of kernels in the lot shall conform to the requirements of the specified classification as defined below:

- (a) **Halves.** Lot consists of 85 percent or more, by weight, half kernels, and the remainder three-fourths half kernels. (See §51.2285.)
- (b) **Pieces and halves.** Lot consists of 20 percent or more, by weight, half kernels, and the remainder portions of kernels that cannot pass through a sieve with 24/64 inch round openings. When a lot exceeds this minimum requirement, the actual percentage of halves may be specified. (See §51.2285.)
- (c) **Pieces.** Lot consists of portions of kernels that cannot pass through a sieve with 24/64 inch round openings. (See §51.2285.)
- (d) **Small pieces.** Lot consists of portions of kernels that pass through a sieve with 24/64 inch round openings, but that cannot pass through a sieve with 8/64 inch round openings. When desired, the actual size ranges within such size ranges may be specified. (See §51.2285.)

### §51.2285 Tolerances for size.

- (a) All percentages shall be calculated on the basis of weight.
- (b) In order to allow for variations incident to proper sizing and handling, tolerances shall be permitted for the respective size classifications as indicated in Table III:

Table III

| Size classification             | Tolerances for size               |   |                                    |                                    |                                   |
|---------------------------------|-----------------------------------|---|------------------------------------|------------------------------------|-----------------------------------|
|                                 | Smaller than three-fourths halves | Will not pass through 24/64 inch round hole | Pass through 24/64 inch round hole | Pass through 16/24 inch round hole | Pass through 8/64 inch round hole |
|                                 | Percent                           | Percent                                     | Percent                            | Percent                            | Percent                           |
| Halves-----                     | 5                                 | -----                                       | -----                              | 1 (included in 5 percent).         | -----                             |
| Pieces and halves <sup>1</sup>  | -----                             | -----                                       | 18                                 | 3 (included in 18 percent).        | 1 (included in 3 percent).        |
| Pieces-----                     | -----                             | -----                                       | 25                                 | 5 (included in 25 percent).        | 1 (included in 5 percent).        |
| Small pieces <sup>2</sup> ----- | -----                             | 10  | -----                              | -----                              | 2.                                |

<sup>1</sup>No part of any tolerance shall be used to reduce the percentage of halves required or specified in a lot of "pieces and halves."

<sup>2</sup>The tolerances of 10 percent and 2 percent for "small pieces" classification shall apply, respectively, to any smaller maximum or any larger minimum sizes specified.

## Application of Tolerances

### §51.2286 Application of tolerances.

The tolerances provided in these standards are on a lot basis, and they shall be applied to a

composite sample representative of the lot. However, any container or group of containers in which the walnuts are obviously of a quality materially different from that in the majority of containers shall be considered a separate lot, and shall be sampled separately.

#### **Definitions**

##### **§51.2287 Well dried.**

"Well dried" means that the portion of kernel is firm and crisp, not pliable or leathery.

##### **§51.2288 Clean.**

"Clean" means that the appearance of the individual portion of kernel, or of the lot as a whole, is not materially affected by adhering dust, dirt or other foreign material.

##### **§51.2289 Shell.**

"Shell" means the outer shell and/or the woody partition from between the halves of the kernel, and any fragments of either.

##### **§51.2290 Insect injury.**

"Insect injury" means that the insect, web, frass or other evidence of insects is present on the portion of kernel.

##### **§51.2291 Rancidity.**

"Rancidity" means that the portion of kernel is noticeably rancid to the taste. Rancidity should not be confused with a slightly astringent flavor of the pellicle (skin) or with staleness (the stage at which the flavor is flat but not objectionable).

##### **§51.2292 Damage.**

"Damage" means any defect, other than color, which materially affects the appearance, or the edible or shipping quality of the individual portion of kernel, or of the lot as a whole. Any one of the following defects or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect shall be considered as damage:

- (a) Shriveling when more than one-eighth of the portion of kernel is severely shriveled, or a greater area is affected by lesser degrees of shriveling producing an equally objectionable appearance, except that kernels which are thin in cross-section but which are otherwise normally developed shall not be considered as damaged;
- (b) Mold when plainly visible;
- (c) Discoloration of the meat when more than one-eighth the volume of the portion of kernel is severely discolored, or a greater volume is affected by lesser degrees of discoloration producing an equally objectionable appearance;
- (d) Not well dried; and,
- (e) Not clean.

##### **§51.2293 Serious damage.**

"Serious damage" means any defect, other than color, which seriously affects the appearance, or the edible or shipping quality of the individual portion of kernel or of the lot as a whole. Any one of the following defects or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect shall be considered as serious damage:

- (a) Shriveling when more than one-fourth of the kernel is severely shriveled, or a greater area is affected by lesser degrees of shriveling producing an equally objectionable appearance;
- (b) Mold when plainly visible on more than one-eighth of the surface of the kernel in the aggregate; and,

(c) Discoloration of the meat when more than one-fourth the volume of the portion of kernel is severely discolored, or a greater volume is affected by lesser degrees of discoloration producing an equally objectionable appearance.

**§51.2294 Very serious damage.**

"Very serious damage" means any defect, other than color, which very seriously affects the appearance, or the edible or shipping quality of the individual portion of kernel or of the lot as a whole. Any one of the following defects or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect shall be considered as very serious damage:

- (a) Shriveling when more than 50 percent of the portion of kernel is severely shriveled;
- (b) Mold when plainly visible on more than one-fourth of the surface of the portion of kernel in the aggregate;
- (c) Discoloration of the meat when more than one-half the volume of the portion of kernel is severely discolored;
- (d) Insect injury;
- (e) Rancidity or decay; and,
- (f) Shell, or any foreign material.

**§51.2295 Half kernel.**

"Half kernel" means the separated half of a kernel with not more than one-eighth broken off.

**§51.2296 Three-fourths half kernel.**

"Three-fourths half kernel" means a portion of a half of a kernel which has more than one-eighth but not more than one-fourth broken off.