



**United States
Department of
Agriculture**

**Agricultural
Marketing
Service**

**Fruit and
Vegetable
Division**

**Fresh
Products
Branch**

United States Standards for Grades of Brazil Nuts in the Shell

Effective August 25, 1966
(Reprinted - January 1997)

United States Standards for Grades of Brazil Nuts in the Shell¹

Grade

51.3500 U.S. No. 1.

Size Classifications

51.3501 Size classifications.

Unclassified

51.3502 Unclassified.

Application of Standards

51.3503 Application of standards.

Definitions

51.3504 Well cured.

51.3505 Loose extraneous and foreign material.

51.3506 Clean.

51.3507 Damage.

51.3508 Reasonably well developed.

51.3509 Rancidity.

51.3510 Decay.

51.3511 Serious damage.

Grade

§51.3500 U.S. No. 1.

"U.S. No. 1" consists of well cured whole Brazil nuts in the shell which are free from loose extraneous and foreign material and meet one of the size classifications in §51.3501. The shells are clean and free from damage caused by splits, breaks, punctures, oil stain, mold or other means, and contain kernels which are reasonably well developed, free from rancidity, mold, decay, and from damage caused by insects, discoloration, or other means.

(a) In order to allow for variations incident to proper grading and handling, the following tolerances are provided:

- (1) **For defects of the shell.** Ten percent, by count, may fail to meet the requirements of the grade, including therein not more than 5 percent for serious damage by split, broken or punctured shells, oil stains, mold or other means.
- (2) **For defects of the kernel.** Ten percent, by count, may fail to meet the requirements of the grade, including therein not more than 7 percent for serious damage by any cause: **Provided**, That not more than five-sevenths of the latter amount, or 5 percent, shall be allowed for damage by insects: **Provided further**, That included in this 5 percent tolerance not more than one-half of 1 percent shall be allowed for Brazil nuts with live insects inside the shell.
- (3) **For loose extraneous and foreign material.** One percent, by weight: **Provided**, That such

¹Packing of the product in conformity with the requirements 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.

material is practically free from insect infestation.

Size Classifications

§51.3501 Size classifications.

(a) Extra large: Not more than 15 percent, by count, of the Brazil nuts pass through a round opening 78/64 inch in diameter, including not more than 2 percent which pass through a round opening 74/64 inch in diameter; or count does not exceed 45 nuts per pound (see paragraph (d) of this section);

(b) Large: Not more than 15 percent, by count, of the Brazil nuts pass through a round opening 73/64 inch in diameter, including not more than 2 percent which pass through a round opening 60/64 inch in diameter; or count does not exceed 50 nuts per pound (see paragraph (d) of this section);

(c) Medium: Not more than 15 percent, by count, of the Brazil nuts pass through a round opening 59/64 inch in diameter, including not more than 2 percent which pass through a round opening 50/64 inch in diameter; or count is not less than 51 nuts per pound but not more than 65 nuts per pound (see paragraph (d) of this section) and;

(d) When size is based on count per pound, the 10 smallest nuts per 100 weigh at least 6 percent of the total weight of the 100 nut sample.

Unclassified

§51.3502 Unclassified.

"Unclassified" consists of Brazil nuts in the shell which have not been classified in accordance with the foregoing grade. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

Application of Standards

§51.3503 Application of standards.

The grade of a lot of Brazil nuts shall be determined on the basis of a composite sample drawn at random from containers in various locations in the lot. However, any identifiable portion of the lot in which the Brazil nuts are obviously of a quality or size materially different from that in the majority of containers shall be considered as a separate lot, and shall be sampled and graded separately.

Definitions

§51.3504 Well cured.

"Well cured" means that the shell is free from surface moisture, and that the kernel is firm and crisp, not pliable or leathery.²

§52.3505 Loose extraneous and foreign material.

"Loose extraneous and foreign material" means pieces of pod, pieces of shell, dirt, external insect infestation, or any substance other than Brazil nuts in the shell or Brazil nut kernels.

§51.3506 Clean.

"Clean" means that the shell is practically free from dirt or other adhering substance.

²The average moisture content of whole nuts or of kernels may be determined by moisture meter, subject to verification by oven drying.

§51.3507 Damage.

"Damage" means 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 Brazil nut or of the lot. The following defects shall be considered as damage:

- (a) Insects when an insect or insect fragment, web, or frass is present inside the shell, or the kernel shows distinct evidence of insect feeding;
- (b) Split or broken shells;
- (c) Oil stains when affecting an aggregate area of more than 20 percent of the surface of the shell;
- (d) Mold when more than 20 percent of the surface of the shell is affected by a slight mold growth or when any mold growth materially detracts from the appearance of the shell, or when any mold growth noticeably affects the kernel; and,
- (e) Discoloration when the affected area penetrates more than one-sixteenth inch into the kernel.

§51.3508 Reasonably well developed.

"Reasonably well developed" means that the kernel fills at least one-half of the capacity of the shell.

§51.3509 Rancidity.

"Rancidity" means that state of deterioration in which any portion of the kernel has developed a rancid taste.

§51.3510 Decay.

"Decay" means that any portion of the kernel is decomposed.

§51.3511 Serious damage.

"Serious damage" means 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 Brazil nut. The following defects shall be considered serious damage:

- (a) Split, broken, or punctured shells when the kernel is plainly visible through a split, cracked, or punctured shell without application of pressure;
- (b) Oil stains when affecting an aggregate area of more than 50 percent of the shell;
- (c) Mold when more than 50 percent of the surface of the shell is affected by a slight mold growth or when any mold growth seriously detracts from the appearance of the shell, or when any mold growth noticeably affects the kernel;
- (d) Discoloration when affecting more than 50 percent of the flesh of the kernel; and,
- (e) Rancidity or decay.