

Specifications for Shelled Brazil Nuts

AFI Nut & Agricultural Products Section

General Requirements

- A. Each shipment to the U.S. shall be of good quality, free of off-tastes and off-aromas and be stored in accordance with good commercial practice. No live infestation is permitted.
- B. The Brazil nuts shall be packed in new, clean, dry, leakproof, containers - vacuum-packed with a modified atmospheric seal. Packaging shall be of sufficient strength to assure the integrity of the product during normal shipment and storage. The outer container shall be free of infestation and visible mold and sealed without staples, unless specified by the end user. Cardboard cartons must be a minimum of 200-pound test, 32 ECT.
- C. No detectable residue is permitted for any pesticide that is not approved for use on Brazil nuts in the importing country. Use of/existence of methyl bromide, Naphthalene and any other chemicals that create a food safety risk and/or tainted taste are prohibited. Only chemicals approved in the receiving country may be used and must comply with the levels in that country.
- D. All cartons must meet the importing country's labeling requirements and shall be clearly marked with the following:
 - 1. Name of the product and trade name or brand name, if any.
 - 2. Name and address of producer or packer.
 - 3. Grade.
 - 4. Gross/net weight.
 - 5. Country of origin.
 - 6. Product, i.e., Brazil nuts.
 - 7. Allergen marking.
 - 8. Lot numbers/production/date codes.
 - 9. Other marks agreed to by buyer and seller.

Shipper's packing list must detail/lot/production/date codes and corresponding quantities for traceability and to ensure representative sampling.

- E. All shipments shall be inspected prior to loading.
- F. Brazil nuts shall be free of hard or sharp foreign objects and hair.

Technical Requirements

Tests for Free Fatty Acids (FFA) and Peroxide Value (PV):

- Samples must be prepared by solvent extraction, Soxhlet or equivalent (Must not be cold-pressed.)

- FFA: Max: 1.5% as Oleic Acid. Test Method AOCS ca 5a-40 or equivalent official method.
 - PV: Max 5 meq/kg. Test Method AOCS Cd 8b-90 or equivalent method.
- A. Aflatoxin: Aflatoxin levels must meet the tolerance set forth by the country in which the goods are sold. A minimum sample of 30 x 454g subsamples should be combined into 3 composite samples, each 4.5 Kg (10 pounds). Each composite sample should be homogenized according to the general scheme in AOAC 977.16. Sample preparation by Immunoaffinity Column and analysis by AOAC 991.31 or another equivalent method.
- B. *E. coli*: Non-Detectable
- C. *Salmonella*: Negative per 2x375g
- D. *Listeria monocytogenes*: Negative per 125g
- E. *Staphylococcus aureus*: Less than 10 CFU/g
- F. Storage Life: Empirical knowledge within the industry suggest it's reasonable to expect a 24-month storage life when temperature for Brazil nuts is 0-10C (32-50F) with relative humidity at 55-70%.
- G. Foreign Material: Hair, glass, metal, stones and other hard or sharp foreign objects are prohibited.
- H. Harmless Extraneous Matter <0.01%

Moisture

Moisture level of the Brazil nuts should be in the range of 2% - 4.5%.

Reference: AACCI 44-15; UNECE DDP Standard Layout Annex II-Method 2 or equivalent method.

Sizing

Size	Kernels per lb
Large or Giants	80-110
Mediums	110-130
Smalls	140-160
Midgets	160-180
Tiny	180-220
Chipped	N/A
Broken	N/A

Color

Light to dark brown skin, creamy white meat.

Definitions

- **Serious damage:** Any of the following or combination of the following which seriously detracts from the appearance, edibility or marketing quality of the nut, or the lot as a whole. Serious damage includes but is not limited to: Insect damage, mold, rancidity, decay or rot spot, and shrivelling.
- **Insect damage:** when the insect, insect fragment, frass or web is present, or the kernel shows definite evidence of insect feeding;
- **Mold** damage is mold filaments visible to the naked eye
- **Rancidity:** Oxidation of lipids or free fatty acid production giving a characteristic disagreeable flavour. An oily appearance of the flesh does not necessarily indicate a rancid condition, but kernels noticeably generally show severe internal discoloration. Rancidity should be confirmed organoleptically.
- **Decay or rot spot** affecting any portion of the kernel;
- **Shriveling:** kernels that are extremely wrinkled or shrunken
- **Scorched centers** are due to overheating during drying
- **Fat diffusion:** Oil spread-stains evident when the kernel is split in half crosswise. Complete fat diffusion is when the spread-stain completely covers the interior portion of the kernel. This defect is permitted in broken grades. An oil ring is not counted as complete fat diffusion.
- **Harmless extraneous matter** is non-hazardous vegetable matter associated with the product
- **Adhering shells:** when attached to the kernel.
- **Whole kernel** must be intact and greater than $\frac{3}{4}$ whole
- **Chipped kernel** is an incomplete, partially split or broken kernel any kernel or portion of a kernel when the kernel is not less than $\frac{3}{4}$ of a whole kernel
- **Broken** is less than $\frac{3}{4}$ of a whole kernel
- **Dirty:** Very apparent adhering or embedded dirt, soil, mud or dust, producing a smudgy, smeared, flecked or coated effect, that seriously detracts from the appearance of the kernel.
- **Blemished** is a noticeable imperfection that significantly impairs the external appearance of the kernel, from any cause or source, either intrinsic or extrinsic.