

§ 4-4-47

STANDARDS FOR HAWAII-GROWN SHELLED MACADAMIA NUTS*

This UNOFFICIAL COPY of standards for shelled macadamia nuts, rewritten for easy interpretation, is based on Chapter 4-41, Hawaii Administrative Rules, Standards for Fresh Fruits and Vegetables. The general provisions of this Chapter, summaries of standards for other fruits and vegetables, and official copies of the complete chapter are available in each county.

HAWAII NO. 1 (GRADE A)

Basic Requirements

Well developed (1)

Clean (2)

Dry (3)

Free From

Loose extraneous material (4)

Mold

Decay

Off-odor or off-flavor by any cause (5)

Insect infestation (6)

Rodent injury

Loose foreign matter (7)

Hollow center

Free From Damage (8) Caused By

Adhering shell

Insect scar

Discolored area

Dark center or other means

Moisture Requirement

Average moisture content of the kernels shall not exceed 1-1/2 percent, by weight.

TOLERANCES (Weight Basis)

FOR TOTAL DEFECTS: Not more than 5 percent of the kernels may fail to meet the requirements of this grade.

FOR DIRT, MOLD, DECAY, AND SERIOUS DAMAGE (9): Not more than a total of 1 percent of the kernels may be affected.

FOR LOOSE EXTRANEEOUS MATERIAL: Not more than 0.5 percent may be affected.

*Numbers in parentheses following grade terms indicate where such terms are defined under "Definitions."

FOR INSECT INFESTATION AND OFF-ODOR OR OFF-FLAVOR BY ANY CAUSE: Not more than 0.1 percent each; provided, there shall be no tolerance for live insect.

FOR LOOSE FOREIGN MATTER: Not more than 0.1 percent.

Table 1. Grade Tolerances

Total Defects	Dirt, Mold Decay, Serious Damage	Loose Extraneous Material	Off-Odor or Off-Flavor	Insect Infestation (Not Live)	Loose Foreign Matter	Live Insect
5%	1% total	0.5%	0.1%	0.1%	0.1%	None

APPLICATION OF TOLERANCES. The tolerances provided in these standards are on a lot basis and shall be applied to a composite sample representative of a lot. However, any identifiable container or group of containers in which the macadamia nuts are obviously of a quality materially inferior from that in the majority of the containers shall be considered as a separate lot.

OFF-GRADE. "Off-grade" is not a grade within the meaning of these standards, but is a descriptive term applicable to shelled macadamia nuts which have a market value, and designates a quality lower than the lowest applicable Hawaii grade for shelled macadamia nuts.

STYLE CLASSIFICATIONS. Style of shelled macadamia nuts shall be specified in accordance with the following requirements, based on weight, for which no part of any tolerance shall be allowed:

1. STYLE I (WHOLES) shall consist of not less than 90 percent whole kernels (10) with the remaining units of such size that not more than 1 percent will pass through a 1/4 inch square opening.
2. STYLE II (WHOLES AND HALVES) shall consist of at least 50 percent whole kernels (10) with the remaining units of such size that not more than 2 percent will pass through a 5/16 inch square opening.
3. STYLE III (COCKTAIL) shall consist of at least 90 percent half (11) or larger kernels, included therein at least 25 percent whole kernels (10), with the remaining units of such size that not more than 2 percent will pass through a 1/4 inch square opening.
4. STYLE IV (HALVES AND PIECES) shall consist of at least 50 percent half kernels (11) with the remaining units of such size that not more than 2 percent will pass through a 1/4 inch square opening, and not more than 5 percent are larger than half kernels.
5. STYLE V (LARGE DICED) shall consist of units which are smaller than half kernels (11) but of such size that not more than 5 percent will pass through a 5/16 inch by 1 inch opening, included therein not more than 2 percent that will pass through a 3/32 inch square opening.

6. STYLE VI (CHIPS) shall consist of units of such size that at least 95 percent will pass through a 5/16 inch by 1 inch opening but not more than 2 percent will pass through a 3/32 inch square opening.
7. STYLE VII (BITS, DICED) shall consist of units which are smaller than half kernels (11) and of such size that at least 95 percent will pass through a 5/16 inch square opening but not more than 10 percent will pass through a 3/32 inch square opening.
8. STYLE VIII (FINES) shall consist of broken, chipped, or chopped kernels of such size that all units will pass through a 1/4 inch square opening and most will also pass through a 3/32 inch square opening.

MINIMUM EXPORT GRADE. Shelled macadamia nuts for export shall meet the requirements of Hawaii No. 1 shelled macadamia nuts.

DEFINITIONS.

- (1) "Well developed" means the kernel is plump and not shriveled or excessively soft.
- (2) "Clean" means the kernel is practically free from dirt or other foreign material, or the general appearance of the lot is not more than appreciably affected by dirt or other foreign or extraneous substance.
- (3) "Dry" means the kernel is free from surface moisture.
- (4) "Loose extraneous material" means any loose substance which will pass through a 3/32 inch square opening in Styles I, II, III and IV.
- (5) "Off-odor or off-flavor by any cause" means the macadamia nut kernel possesses an odor or flavor which is not characteristic of macadamia nuts and which appreciably affects the eating quality of the kernel.
- (6) "Insect infestation" means an insect or insect fragment, web, or frass is present.
- (7) "Loose foreign matter" means any loose substance, other than macadamia kernels, which will not pass through a 1/16 inch square opening.
- (8) "Damage" means any specific defect described in Table 2, Classification of Defects; 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 shipping quality of the shelled macadamia nuts.
- (9) "Serious damage" means any specific defect described in Table 2, Classification of Defects; 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 shipping quality of the macadamia nuts.
- (10) "Whole kernel" means:

- (a) The kernel is not split or separated into halves.
- (b) The kernel contour is not more than materially affected by a missing portion or portions.
- (c) Not more than 1/4 of the kernel is chipped-off or missing.

(11) "Half kernel" means the approximate half of a whole kernel with not more than 1/8 of its mass chipped-off or missing.

Table 2. Classification of Defects

FACTOR	DAMAGE	SERIOUS DAMAGE
Adhering shell	Shell specks affect appearance or eating quality more than slightly; or any shell piece present exceeds 1/32 inch both in length and width.	Shell specks seriously affect appearance or eating quality; or any shell piece present exceeds an area 1/16 inch in diameter.
Insect scar	Any feeding scar present exceeds an area 3/32 inch in diameter; or 2 or more feeding scars present within a 1/2 inch area.	Any feeding scar or an aggregate of such scars within a 1/2 inch area exceeds an area 1/8 inch in diameter.
Discolored area	When any markedly discolored spot is present; any more than slightly discolored spot exceeds an area 3/32 inch in diameter; any more than slightly discolored spot exceeds an area 1/8 inch in length or width; a markedly discolored ring is present; or speckles affecting appearance more than slightly are present.	When any dark brown or black spot, or an aggregate of such spots within a 1/2 inch area, exceeds an area 1/16 inch in diameter; any markedly discolored or prominent spot (abnormalities such as an area encircled by a reddish brown line), or an aggregate of such spots within a 1/2 inch area, exceeds an area 3/16 inch in diameter; or speckles seriously affecting appearance are present.
Shriveling		When excessive.
Dark Center	Naturally exposed kernel center is appreciably dark or discolored.	Naturally exposed kernel center is markedly dark or discolored.