

aflatoxin level of Test Sample #1 is above 25 ppb, the lot fails and the accredited laboratory shall fill out a failed lot notification report as specified in §983.40. If the aflatoxin level of Test Sample #1 is above 5 ppb and below 25 ppb, the accredited laboratory may at the handler's discretion analyze Test Sample #2 and the test results of Test Samples #1 and #2 will be averaged. Alternatively, the handler may elect to withdraw the lot from testing, rework the lot, and re-submit it for testing after re-working. If the handler directs the laboratory to proceed with the analysis of Test Sample #2, a lot will be certified as negative to aflatoxin and the laboratory shall issue an aflatoxin inspection certificate if the averaged results of Test Sample #1 and Test Sample #2 is at or below 10 ppb. If the averaged aflatoxin level of the Test Samples #1 and #2 is at or above 20 ppb, the lot fails and the accredited laboratory shall fill out a failed lot notification report as specified in §983.40. If the averaged aflatoxin level of Test Sample #1 and #2 is above 10 ppb and below 20 ppb, the accredited laboratory may, at the handler's discretion, analyze Test Sample #3 and the results of Test Samples #1, #2 and #3 will be averaged. Alternatively, the handler may elect to withdraw the lot from testing, re-work the lot, and re-submit it for testing after a re-working. If the handler directs the laboratory to proceed with the analysis of Test Sample #3, a lot will be certified as negative to aflatoxin and the laboratory shall issue an aflatoxin inspection certificate if the averaged results of Test Samples #1, #2 and #3 is at or below 15 ppb. If the averaged aflatoxin results of Test Samples #1, #2 and #3 is above 15 ppb, the lot fails and the accredited laboratory shall fill out a failed lot notification report as speci-

fied in §983.40. The accredited laboratory shall send a copy of the failed lot notification report to the committee and to the failed lot's owner within 10 working days of any failure described in this section. If the lot is certified as negative as described in this section, the aflatoxin inspection certificate shall certify the lot using a certification form identifying each lot by weight, grade and date. The certification expires for the lot or remainder of the lot after 12 months.

(5) *Certification of aflatoxin levels.* Each accredited laboratory shall complete aflatoxin testing and reporting and shall certify that every lot of California pistachios shipped domestically does not exceed the aflatoxin levels as required in §983.38(d)(4). Each handler shall keep a record of each test, along with a record of final shipping disposition. These records must be maintained for three years beyond the crop year of their applicability, and are subject to audit by the Secretary or the committee at any time.

(6) *Test samples that are not used for analysis.* If a handler does not elect to use Test Samples #2 or #3 for certification purposes the handler may request the laboratory to return them to the handler.

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**§ 983.39 Minimum quality levels.**

(a) *Maximum defect and minimum size.* No handler shall ship for domestic human consumption, pistachios that exceed permissible maximum defect and minimum size levels shown in the following Table 3 of this paragraph.

TABLE 3.—MAXIMUM DEFECT AND MINIMUM SIZE LEVELS

Factor	Maximum permissible defects (percent by weight)	
	Inshell	Kernels
<b>EXTERNAL (SHELL) DEFECTS</b>		
1. Non-splits & not split on suture .....	10.0	.....
(i) Maximum non-splits allowed .....	4.0	.....
2. Adhering hull material .....	2.0	.....
3. Dark stain .....	3.0	.....

TABLE 3.—MAXIMUM DEFECT AND MINIMUM SIZE LEVELS—Continued

Factor	Maximum permissible defects (percent by weight)	
	Inshell	Kernels
4. Damage by other means, other than 1, 2 and 3 above, which materially detracts from the appearance or the edible or marketing quality of the individual shell or the lot .....	10.0	.....
<b>INTERNAL (KERNEL) DEFECTS</b>		
1. Damage .....	6.0	3.0
Immature kernel (Fills <75%—>50% of the shell)		
Kernel spotting (Affects 1/8 aggregate surface)		
2. Serious damage .....	4.0	2.5
Minor insect or vertebrate injury/insect damage, insect evidence, mold, rancidity, decay		
(i) Maximum insect damage allowed .....	2.0	0.5
Total external or internal defects allowed .....	9.0	.....
<b>OTHER DEFECTS</b>		
1. Shell pieces and blanks (Fills <50% of the shell) .....	2.0	.....
(i) Maximum blanks allowed .....	1.0	.....
2. Foreign material—No glass, metal or live insects permitted .....	0.25	0.1
3. Particles and dust .....	0.25	.....
4. Loose kernels .....	6.0	.....
	Minimum permissible defects (percent by weight)	
Maximum allowable inshell pistachios that will pass through a 39/64ths inch round hole screen .....	5.0	.....

(b) *Definitions applicable to permissible maximum defect and minimum size levels:*

The following definitions shall apply to inshell pistachio and pistachio kernel maximum defect and minimum size:

(1) *Loose kernels* means kernels or kernel portions that are out of the shell and which cannot be considered particles and dust.

(2) *External (shell) defects* means any abnormal condition affecting the hard covering around the kernel. Such defects include, but are not limited to, non-split shells, shells not split on suture, adhering hull material or dark stains.

(3) *Damage by external (shell) defects* shall also include any specific defect described in paragraphs (b)(3)(i) through (iv) 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 edibility or the marketing quality of the individual shell or the lot.

(i) *Non-split shells* means shells are not opened or are partially opened and will not allow an 18/1000 (.018) inch thick

by 1/4 (.25) inch wide gauge to slip into the opening.

(ii) *Not split on suture* means shells are split other than on the suture and will allow an 18/1000 (.018) inch thick by 1/4 (.25) inch wide gauge to slip into the opening.

(iii) *Adhering hull material* means an aggregate amount of hull covers more than one-eighth (1/8) of the total shell surface, or when readily noticeable on dyed shells.

(iv) *Dark stain* on raw or roasted nuts means an aggregate amount of dark brown, dark gray or black discoloration that affects more than one-eighth of the total shell surface. Pistachios that are dyed or color-coated to improve their marketing quality are not subject to the maximum permissible defects for dark stain. Speckled discoloration on the stem end, bottom quarter of the nut is not considered damage.

(4) *Internal (kernel) defects* means any damage affecting the kernel. Such damage includes, but is not limited to evidence of insects, immature kernels, rancid kernels, mold or decay.

(i) *Damage by internal (kernel) defects* shall also include any specific defect described in paragraphs (b)(4)(i)(A) and (B) 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 edibility or the marketing quality of the individual kernel or of the lot.

(A) *Immature kernels* in inshell are excessively thin kernels, or when a kernel fills less than three-fourths, but not less than one-half of the shell cavity. "Immature kernels" in shelled pistachios 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.

(B) *Kernel spotting* refers to dark brown or dark gray spots aggregating more than one-eighth of the surface of the kernel.

(ii) *Serious damage by internal (kernel) defects* means any specific defect described in paragraphs (b)(4)(ii)(A) through (E) of this section, or an equally objectionable variation of any one of these defects, which seriously detracts from the appearance or the edibility or the marketing quality of the individual kernel or of the lot.

(A) *Minor insect or vertebrate injury* means the kernel shows conspicuous evidence of feeding.

(B) *Insect damage* means an insect, insect fragment, web or frass attached to the kernel. No live insects shall be permitted.

(C) *Mold* that is readily visible on the shell or kernel.

(D) *Rancidity* means the kernel is distinctly rancid to taste. Staleness of flavor shall not be classed as rancidity.

(E) *Decay* means  $\frac{1}{16}$ th or more of the kernel surface is decomposed.

(5) *Other defects* means defects that cannot be considered internal defects or external defects. Such defects include, but are not limited to shell pieces, blanks, foreign materials or particles and dust. The following shall be considered other defects:

(i) *Shell pieces* means open inshell without a kernel, half shells or pieces of shell which are loose in the sample.

(ii) *Blanks* means a non-split shell not containing a kernel or containing a kernel that fills less than one-half of the shell cavity.

(iii) *Foreign material* means leaves, sticks, loose hulls or hull pieces, dirt, rocks, insects or insect fragments not attached to nuts, or any substance other than pistachio shells or kernels. Glass, metal or live insects shall not be permitted.

(iv) *Particles and dust* means pieces of nut kernels that will pass through  $\frac{5}{64}$  inch round opening.

(v) *Undersized* means inshell pistachios that fall through a  $\frac{30}{64}$ -inch round hole screen.

(c) *Minimum quality certificate*. Each shipment for domestic human consumption must be covered by a USDA certificate certifying a minimum quality or higher. Pistachios that fail to meet the minimum quality specifications shall be disposed of in such manner as described in §983.40.

(d) *Transfers between handlers*. Transfers between handlers within the production area are exempt from the minimum quality regulation of this section.

(e) *Minimum quality testing procedures*. To obtain a minimum quality certificate, each lot to be certified shall be uniquely identified, shall be traceable from testing through shipment by the handler and shall be subjected to the following procedure:

(1) *Sampling of pistachios for maximum defects and minimum size*. The gross weight of the inshell and kernel sample, and number of samplings required to meet the minimum quality regulation, is shown in Table 4 of this paragraph (e)(1). These samples shall be drawn from the lot that is to be certified pursuant to §983.38(d)(1) under the supervision of an inspector or as approved under an alternative USDA recognized inspection program.

TABLE 4.—INSHELL AND KERNEL PISTACHIO LOT SAMPLING INCREMENTS FOR MINIMUM QUALITY CERTIFICATION

Lot weight (lbs.)	Number of incremental samples for the lot sample	Total weight of lot sample (grams)	Weight of inshell and kernel test sample (grams)
220 or less .....	10	500	500
221-440 .....	15	500	500
441-1100 .....	20	600	500
1101-2200 .....	30	900	500
2201-4400 .....	40	1200	500
4401-11,000 .....	60	1800	500
11,001-22,000 .....	80	2400	1000
22,001-150,000 .....	100	3000	1000

(2) *Testing of pistachios for maximum defect and minimum size.* The sample shall be analyzed according to USDA protocol, current or as subsequently revised, to insure that the lot does not exceed maximum defects and meets at least the minimum size levels as specified in Table 3 of paragraph (a) of this section. For inshell pistachios, those nuts with dark stain, adhering hull, and those exhibiting apparent serious defects shall be shelled for internal kernel analysis. The USDA protocol currently appears in USDA inspection instruction manual "Pistachios in the Shell, Shipping Point and Market Inspection Instructions," June 1994; revised September 1994, HU-125-9(b). Copies may be obtained from the Fresh Products Branch, Agricultural Marketing Service, USDA. Contact information may be found at <http://www.ams.usda.gov/fv/fvstand.htm>.

(f) *Certification of minimum quality.* Each inspector shall complete minimum quality testing and reporting and shall certify that every lot of California pistachios or portion thereof shipped domestically meets minimum quality levels. A record of each test, along with a record of final shipping disposition, shall be kept by each handler. These records must be maintained for three years following the production year in which the pistachios were shipped, and are subject to audit by the committee at any time.

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**§ 983.40 Failed lots/rework procedure.**

(a) *Substandard pistachios.* Each lot of substandard pistachios may be reworked to meet minimum quality requirements.

(b) *Failed lot reporting.* If a lot fails to meet the aflatoxin and/or the minimum quality requirements of this part, a failed lot notification report shall be completed and sent to the committee within 10 working days of the test failure. This form must be completed and submitted to the committee each time a lot fails either aflatoxin or the minimum quality testing. The accredited laboratories shall send the failed lot notification reports for aflatoxin tests to the committee, and the handler, under the supervision of an inspector, shall send the failed lot notification reports for the lots that do not meet the minimum quality requirements to the committee.

(c) *Inshell rework procedure for aflatoxin.* If inshell rework is selected as a remedy to meet the aflatoxin requirements of this part, then 100% of the product within that lot shall be removed from the bulk and/or retail packaging containers and reworked to remove the portion of the lot that caused the failure. Reworking shall consist of mechanical, electronic or manual procedures normally used in the handling of pistachios. After the rework procedure has been completed the total weight of the accepted product and the total weight of the rejected product shall be reported to the committee. The reworked lot shall be sampled and tested for aflatoxin as specified in §983.38 except that the lot sample size and the test sample size shall be doubled. The reworked lot shall also