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# Pistachios In the Shell

## Shipping Point and Market Inspection Instructions





# Shipping Point and Market Inspection Instructions for Pistachios in the Shell

These inspection instructions are specifically developed and designed by the Fresh Products Branch to assist officially licensed inspectors in the interpretation and application of the U.S. Standards for Grades of Pistachio Nuts in the Shell, 7 CFR - Section 51.2540.

These instructions do not establish any substantial rule not legally authorized by the official grade standards. This publication supersedes any previously issued inspection instructions.

Refer to General Inspection Instructions for additional information pertaining to date, inspection point, carrier, condition of carrier, lading, etc. not covered in these instructions. (Reference to "General Inspection Instructions" in all Fresh Products Branch publications refers to any one or all of the following - General Shipping Point Inspection Instructions, General Market Inspection Instructions, or Fresh Fruit and Vegetable Certificate Writing Handbooks.)

**February 2005**

*This replaces Shipping Point and Market Inspection Instructions for Pistachios in The Shell previously June 1994.*

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## **Representative Sampling**

Representative sampling is just as important as correct grade interpretation. Accurate certification is only possible if the samples examined are truly representative of the entire lot or accessible portion of the load or lot.

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### **Size of Sample**

A minimum of 250 grams of in-shell pistachio nuts shall be examined for each test; larger samples may be taken if needed. The amount drawn shall be at least twice as large as that used for analysis. The extra amount, called a check sample or library sample is used to increase the size of the original sample, or in case the original sample is lost or destroyed. Check samples (library samples) shall be disposed of in accordance with Section 51.22 of the Regulations Governing Inspection, Certification, and Standards for Fresh Fruits, Vegetables, and Other Products.

Samples shall be randomly drawn from at least five percent of the containers in the lot. For excessively large lots, less than five percent of the containers may be sampled at the supervisors approval. Containers should be obtained from various parts of the lot and nuts drawn from near the top, bottom, and sides of selected containers. When sampling bulk bins, all bins should be sampled in lots of five bins or less; lots of six to 20 bins, sample 50 percent; and lots which contain over 20 bins, sample 25 percent.

Occasionally, a number of lots are put together to make a load. When each lot is the same count, size, quality, variety, and markings, one composite sample shall be used for analysis. If there is an obvious difference between lots and each can be identified by markings, then separate samples for each shall be drawn and analyzed. When markings are identical, the lots should be sampled and analyzed as one lot. If the quality varies between lots, a statement should be made in the "Remarks" section to indicate this.

Report the amount analyzed on FV-300 certificate either adjacent to the defects or in the "Other" section.

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### **Official Sampling**

Official samples may be drawn by any USDA authorized inspector or applicant/handler personnel directly supervised by an inspector. Samples which are not official (applicant submitted) may be analyzed, but must be restricted to the net weight of sample provided.

Inspections may be requested from offices that have not been furnished with pistachio nut inspection equipment, or it may be necessary for a sample to be drawn

by one inspector and sent to another office for analysis and certification. When this is the case, a Notice of Sampling (FV-187) shall be issued. The original shall be sent with the sample, a copy sent separately to the office making the analysis, and another copy to the applicant. Other copies may be filed at the office where the sample was drawn. An example of Form FV-187 is at the end of these instructions.

Certificates showing results of analysis should state under "Remarks."  
"Sample covered by this certificate was officially drawn and reported on Certificate of Sampling (FV-187) number (certificate number), which is attached."

In order to be sure the official sample will be large enough for additional analysis, if necessary, it should be about 2-1/4 times larger than needed. Nuts shall be padded against contact with the inside of shipping containers in order to minimize damage. When a sample needs to be shipped in more than one container, the outside of each container shall be marked so that the receiving office is aware of how many containers are in the shipment. A simple marking system such as "1 of 3," "2 of 3," and "3 of 3" will suffice.

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### **Determining and Reporting Percentages and Defects**

Percentages of defects shall be computed on the basis of grams. The weight of defects found shall be measured in tenths of a gram (0.1 g). Percentages of defects, staining, foreign material, etc., shall be shown on the certificate in hundredths of a percent (0.00%).

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### **Tolerances and Application of Tolerances**

The tolerances for the grades apply to the entire lot and shall be based on a composite sample drawn from containers throughout the lot. Any container or group of containers which have nuts obviously different in quality or size from those in the majority of containers shall be considered a separate lot and shall be sampled separately. There is no application of tolerances that could be applied to sub-samples. All tolerances are applied on a weight basis. The following is a list of tolerances provided for U.S. Fancy, U.S. No. 1, U.S. No. 2, and U.S. No. 3 grades as per Section 51.2542 of U.S. Standards for Grades of Pistachio Nuts in the Shell.



**Table I – Tolerances**

Factor	U.S. Fancy	U.S. Extra No. 1	U.S. No. 1	U.S. Select	U.S. Artificially Opened	U.S. Non-Split
<b>External (Shell) Defects (tolerances by weight)</b>	Percent	Percent	Percent	Percent	Percent	Percent
(a) Non-split and not split on suture	2	3	6	10	10	N/A
(1) Non-split included in (a)	1	2	3	4	4	N/A
(b) Adhering hull material	1	1	1	2	2	2
(c) Light stained	7	12	25	N/A	N/A	N/A
(1) Dark stained, included in (c)	2	3	3	3	3	3
(d) Damage by other means	1	1	2	3	10	N/A
(e) Total External Defects	9	16	N/A	N/A	N/A	N/A
(f) Undersized (Less than 30/64 inch in diameter)	5	5	5	5	4	5

**Table II - Tolerances**

Factor	U.S. Fancy	U.S. Extra No. 1	U.S. No. 1	U.S. Select	U.S. Artificially Opened	U.S. Non-Split
<b>Internal (Kernel) Defects (tolerances by weight)</b>	Percent	Percent	Percent	Percent	Percent	Percent
(a) Damage	3	6	6	6	6	6
(b) Serious Damage (Minor Insect or Vertebrate Injury, Mold, Rancid, Decay)	3	4	4	4	4	4
(1) Insect Damage, included in (b)	1	2	2	2	2	2
(c) Total Internal Defects	4	8	9	9	9	9

**Table III – Tolerances**

Factor	U.S. Fancy	U.S. Extra No. 1	U.S. No. 1	U.S. Select	U.S. Artificially Opened	U.S. Non-Split
<b>Other Defects (Tolerances by weight)</b>	Percent	Percent	Percent	Percent	Percent	Percent
(a) Shell pieces and Blanks	2	2	2	2	2	2
(1) Blanks, included in (a)	1	1	1	1	1	1
(b) Foreign material (No glass, metal or live insects shall be permitted)	.25	.25	.25	.25	.25	.25
(c) Particles and Dust	.25	.25	.25	.25	.25	.25
(d) Loose kernels	4	5	6	6	6	6

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## **NOTESHEETS AND CERTIFICATE**

Entries on the notesheet and certificate must be kept in a legible and accurate manner. It is mandatory that all information which appears on the certificate be supported by information on the notesheet. It is the responsibility of the inspector to ensure that all information is properly recorded. Notations shall be recorded so that anyone familiar with inspection procedures can interpret them and write a certificate. Also remember that notesheets and certificates are prima facie evidence and must be able to withstand legal scrutiny.

Detailed instructions pertaining to date, inspection point, place of inspection, type of carrier, lading, etc., which are not covered by these instructions may be found in the General Inspection Instructions. Additional information and instructions may be given by your supervisor.

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### **Products**

There are several varieties of pistachio nuts grown in world production areas. Varietal characteristics are very similar and no attempt to certify variety should be made. The certificate should state "Pistachio Nuts in the Shell" under the "Product" heading. It is common for the industry to dye, roast, and/or salt pistachio nuts before marketing. The U.S. grade standards apply to nuts in this form, and when it is definitely known that the nuts have been dyed, roasted and/or salted, this should also be shown on the certificate under the "Lot ID" heading. Dyed nuts should not be commingled with natural appearing nuts. Lots which contain obviously dissimilar forms which are commingled cannot be inspected based on the U.S. standards.

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### **Numbers/Type of Container**

The quantity of nuts that the inspection covers shall be shown on all certificates. This shall be shown in terms of number of containers, weight, or a combination of both. When a sample is submitted report the type and quantity of containers and net weight of sample (subtract container and packing material weight).

Pistachio nuts are shipped in various types of containers. A commonly used description of the container type should be shown under "Number of Containers."

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### **Brandings/Markings**

The brand, variety, size, count, grade, weight, point of origin and other important information appearing on the container should be reported on the notesheet in the "Brands/Markings" section. Only the brand name and other key markings necessary to properly identify the lot for certification should appear in this section on the certificate.

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## **Origin**

The inspector should not make a positive statement on their own authority, but when container markings list the state or country of origin, it should be quoted. This policy is necessary because some firms may use one mark on the same product they may pack in two or three states and the inspector can certify only to the marks and has no means of knowing in what state or country the pistachio nuts were grown. (If packages are not marked or the nuts are in bulk, refer to the General Inspection Instructions.)

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## **Temperature of Product**

Temperatures are not reported on pistachio nut inspection certificates. This heading will be blocked out.

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## **Condition of Pack**

This heading refers to the product in the container. The fill of the container, any protective material or lining, report of net weight, or descriptions of broken or crushed containers is recorded on the notesheet under this heading. Any unusual circumstances pertinent to the inspection regarding pack should be reported under the "Other" heading on the certificate. Further information is discussed in the General Inspection Instructions.

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## **Inspection Sequence**

The in-shell pistachio nut standards have three separate tolerances for defects. Each set of tolerances is independent of the others. A shipment may be failed on one tolerance alone or on several factors in more than one set of tolerances.

All tolerances are based on the weight of the sample. All samples shall include both the shell and the accompanying kernel. The entire weight of the shell and kernel must be used as the basis of determining percentages for all defects.

Inspectors should first segregate and separate the foreign material, loose kernels, shell pieces and particles of dust. Next, size may be determined. Segregating for external and internal defects is normally completed last.

It is important that inspectors analyze unsorted samples for both external and internal defects. It is possible that nuts may be scored twice, once for each category of defect (external and internal).

The samples used to determine external and internal defects must be composite samples representative of the lot. Inspectors may wish to segregate and

record all external defects in the sample, and then crack the entire sample, including previously scored external defects, for segregation and recording of internal defects. Another method is to split the original sample into two smaller samples and use one for exclusively determining external defects and the other for determining internal defect, either method is acceptable.

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## Size

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**All sizing of in-shell pistachio nuts must be done prior to roasting.**

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All pistachio nuts must be at least 30/64 inch in diameter. (See tolerances, Table I.) A round hole screen with 30/64 inch openings should be used to determine compliance with this requirement. The entire sample for analysis should be screened before attempting to determine other size classifications.

It is not necessary to report compliance with this requirement on the certificate. However, any percentage under 30/64 inch should be reported on the certificate along with other size requirements. Since this is actually a requirement of the grade, nuts failing this requirement would fail to grade. This should be explained in the "Grade" statement.

Nut size is generally specified in connection with grade. It may be specified using the size designations defined in Table IV of the grade standards or in terms of a count range per ounce. The size difference between the largest and smallest nuts in the sample must also be within a specified weight ratio. The standards allow that the final average number of nuts per ounce for the lot may be one-half nut or less beyond the defined or specified count per ounce. The following paragraphs explain how to determine count per ounce and the largest nut versus smallest ratio.

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### Determining Count Range Per Ounce

Using the sample for grade analysis, separate nuts into at least one eight ounce portion or the equivalent. (Larger portions, such as ten ounces may be used if desired.)

Count the number of nuts in the portion(s) and determine average count per ounce by dividing the total number of nuts by the total number of ounces. When count per ounce is more than one-half nut beyond the minimum or maximum specified, the lot fails to meet the defined or specified count per ounce. These samples will also be used to determine the largest versus small ratio.

#### Example:

$$48 + 38 + 42 + 44 = 172 \text{ nuts}$$

$$172 \text{ nuts}/8 \text{ ounces} = 21.50 \text{ nuts/ounce}$$

In this example (four two ounce samples were used), each portion was counted and the total number of nuts was divided by the total number of ounces in all four portions. The resulting count per ounce, reported to hundredths of a nut, falls within 21 to 25 count range specified for "Large" size pistachio nuts.

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### Determining the Large Versus Small Ratio

The standards specify that in order to meet a count per ounce range the weight of 10 percent, by count, of the largest nuts in the lot must not be more than 1.50 times the weight of 10 percent, by count of the smallest nuts. To determine this ratio, multiply the total number of nuts used in the above count per ounce sample (in this case  $.10 \times 172 = 17$  nuts). Ten percent, by count (in this sample 17 nuts), of the smallest nuts and 10 percent, by count (17 nuts), of the largest nuts shall be picked out of the sample and their respective weights recorded.

Divide the weight of the largest nuts by weight of the smallest nuts.

#### Example:

$$\frac{\text{Largest nuts} = 29.7 \text{ g}}{\text{Smallest nuts} = 20.8 \text{ g}} = 1.43 \text{ ratio}$$

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### Reporting Size

When a size designation or count per ounce is specified, the size statement shall report the average count per ounce and largest versus smallest size ratio. When the 1.50 ratio is exceeded, the size statement shall show "Irregular" and the ratio reported. Lots failing to meet a defined or specified count per ounce range because of count per ounce or not meeting the required ratio shall show the failure in the grade statement, i.e. "US No. 1. Fails to meet count per ounce range account range exceeded."

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### Quality and Condition

There are six U.S. Grades for pistachio nuts in the shell. The scoring of defects in all grades (U.S. Fancy, U.S. Extra No. 1, U.S. No. 1, U.S. Select, U.S. Artificially Opened, U.S. Non-Split) is the same. The separation of the grades is achieved through tolerances. (See previous tolerance section 51.2544 of the standard). The following equipment will be needed in order to properly analyze a sample of pistachio nuts in the shell for various defects:

- 18/1000 inch thick by 1/4 inch wide gauge. A feeler gauge commonly used to set gap on automobile spark plugs is the easiest to obtain.
- Screen with 30/64 inch round openings. (Minimum diameter.)

- Screen with 5/64 inch round openings. This is used to separate particles and dust.

Pistachio nuts are not normally subject to condition factors.

The following paragraphs describe the procedures used to analyze the lot and discuss the scoring and reporting of defects.

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## Analysis

After size has been determined, return the nuts to the sample for analysis. The sample should be screened on a screen with 5/64 inch round openings. This will separate the "particles and dust" from the sample.

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### Particles and Dust

Particles and dust are defined as pieces of nut kernels smaller than 5/64 inch. Any other material shall be classed as either foreign material or shell pieces. Each grade restricts particles and dust to not more than .25 percent.

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### Foreign Material

Foreign material consists of any substance other than pistachio shells or kernels. Leaves, sticks, loose hulls or hull pieces, dirt, rocks, and insects or insect pieces not attached to a nut shall be considered foreign material. **If any metal, glass or live insects are found, the lot will fail to meet a U.S. grade regardless of the amount of other defects present.**

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### Shell Pieces

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Nuts normally consist of two halves of a shell split along a natural suture and a kernel. Sometimes the two halves of the shell become separated or pieces are broken off of the shell. All half-shells, joined or not joined, or small shell pieces shall be classed as shell pieces.

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### Blanks

Blanks are defined as a nut that does not contain a kernel or contains a kernel that fills less than one-half the shell cavity. The above would apply only when the shell was not split. Occasionally a piece of a shell will break off the nut and the kernel will fall out during cleaning and processing. The empty shell shall be considered a blank, the shell piece as a shell piece, and the kernel as a loose kernel.

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## Loose Kernels

Loose kernels are those kernels not contained within the shell. These kernels may be whole or portions of kernels. However, the portions of kernels may not be less than 5/64 inch, otherwise they will be considered particles and dust. There is a four percent tolerance, by weight, for loose kernels.

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## Shell Defects

External or shell defects consist of any blemish affecting the hard covering around the kernel. It is desirable for pistachio shells to be split open along a naturally formed suture. Shells not split in this manner are considered undesirable and scored as defects.

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### Crinkle Shell

Crinkle shell appears as an indented, sunken wrinkled and/or curved area on a shell. It normally occurs on or near where the shell naturally splits open. Sometimes it also has staining because it is difficult to remove the hull from this sunken area. It may also appear as a "chip" or "half moon" portion of the shell that is missing. This abnormality, in its various forms, seems to predominate in the smaller size nuts.

Crinkle shell is considered a defect when it appears as a relatively thin shell with a noticeable wrinkling, curling, sinking, or curving of a half shell which exceeds 1/8 inch in depth or width measured from the normal plane of the shell surface.

Inspectors should use the 1/8 inch area diameter gauges or a depth gauge to determine how much the shell is indented beyond the normal contour. **On those shells where only a portion is missing, nothing should be scored unless the kernel is severely scraped or chaffed by the hulling process.**

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### Three Piece Shells

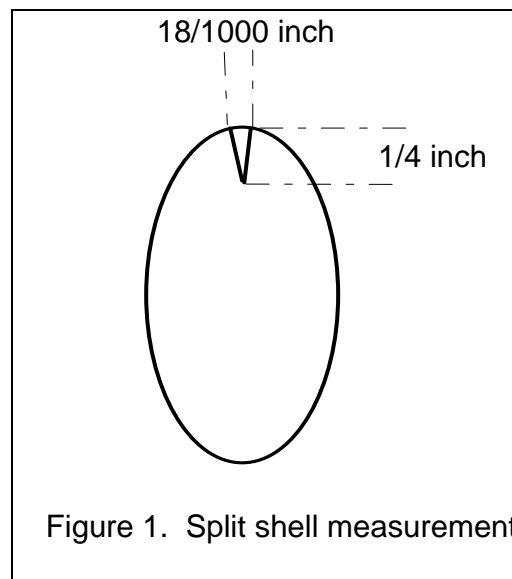
Quite often, larger size pistachio nut shells develop with three shells instead of two halves. The third shell or "third shell plate" is 1/8 to 1/10 the size of the two main shells. It frequently develops with a prominent natural suture on either side. In some minor cases, it may show a faint but detectable suture or crack line through the middle where the normal suture would occur if the shell only formed two halves.

**This third shell is not considered a defect of in-shell pistachio nuts.** Frequently, nuts may be encountered which have lost the third shell plate. When this piece is gone a circular area exposing a greater area of the kernel results. As with crinkle shell, this is only being scored as a defect if there is severe chaffing or scraping damage to the kernel.

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## Non-split Shells

Pistachio shells are considered as being not split when they are not opened or are partially opened, but the opening will not allow an 18/1000 inch thick by 1/4 inch wide gauge to slip into the opening. In other words, the opening must be at least 18/1000 inch wide and 1/4 inch in length. See Figure 1.



When it is questionable as to whether or not a shell should be scored as non-split, the opening should be checked with a feeler gauge of the proper dimensions. The gauge should not be forced into the opening. Shells having splits smaller than the required opening shall be scored against the restricted tolerance for "non-split" as shown in line (a) (1) of Table I in the grade standards.

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## Not Split on Suture

Shells scored as not split on the suture will meet the requirements of being opened, (opening is larger than 18/1000 thick by 1/4 inch wide) but the opening does not occur on the naturally formed suture. Shells not split on the suture shall be scored against the tolerance as shown in line (a) of Table I.

Shells which are not split along the suture but are split along another area of the shell and fail the opening requirements for the split shall be scored against the restricted tolerance for non-split shells.

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## Adhering Hull Material

At the time of harvest, many of the nuts still have portions of the fleshy hull attached. The industry attempts to remove all the hull from the shell during



processing. Occasionally, hull material sticks to the shell causing a rough, brown-colored, raised area. This is considered a defect. Adhering hull material damages the appearance of the nut when it covers more than one-eighth of the total shell surface. This area is equivalent to one-fourth of the area on a half-shell. On shells dyed red, any amount of adhering hull material is scorable when it is readily noticeable.

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## **Staining**

Freshly harvested pistachio nuts normally have fleshy hull material attached to the shell. It is imperative that the hull material be removed from the shells as soon after harvest as possible. If it is not removed after a reasonable amount of time the shells may become discolored or stained by tannins and oils leaching from the hulls.

The color of the stains ranges from light yellow through brown to black. The grade standards allow a certain amount of light and/or dark stain before the shell is damaged.

Light stains damage the appearance of the shell when an aggregate amount of yellow to light brown or light gray discoloration noticeably contrasts with the predominate color of the shell and more than one-fourth of the surface is affected. The specified area is equivalent to one-half of a half shell. Any amount of noticeable staining causes damage to the appearance of dyed nuts.

Inspectors should remember that light staining is only considered when it is contrasting with the predominate color of the shell. The color of individual shells within the lot may vary from a bright ivory or cream color to a dull grayish color. Staining is scored as affecting the individual shell, not when an individual nut contrasts with other nuts. Darker discoloration than yellow to light brown or light gray is also considered staining, provide the color is not considered as "dark stain" as described below.

Dark stains damage the shell when an aggregate amount of dark brown, dark gray or black discoloration affects more than one-eighth of the total shell surface or when readily noticeable on dyed nuts. One-eighth of the total shell surface is equivalent to one-fourth on a half shell.

In addition, inspectors must disregard any speckled appearing dark staining occurring on the one-fourth (1/4) surface area of the nut closest to the stem end. This is the end where the two shell halves are joined.

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## **Other Means**

Defects other than splitting of the shell, staining, and adhering hull material may affect the shell. Other defects would be defects that materially affect individual

shells or the lot as a whole. The mixing of dyed nuts with natural shell nuts would be one such defect. Each grade level has its own tolerance for this factor (see Table I).

---

## **Kernel Defects**

Internal or kernel defects are defects affecting the kernel. The tolerances specified for damage and serious damage are separate. The serious damage tolerance is not included in the damage tolerance. However, there is a total allowable tolerance specified for internal defects (see Table II). The following paragraphs discuss damage and serious damage by various defects that affect pistachio kernels, and how to score them.

---

### **Dryness**

Well dried is a basic requirement for kernels and should be reported on SPI certificates or in the "Other" section on the FV-300 certificate only in general terms when there are kernels that are not well dried. Example: Mostly well dried (show % of kernels not well dried). Well dried kernels are firm and crisp, not pliable and leathery. Well dried kernels can be readily broken with the fingers without noticeably bending the kernel. Distinctly pliable or leathery kernels should be scored as defects.

Very well dried is not a requirement of the grades. Very well dried kernels are those that would normally be considered well dried (firm and crisp), but, in addition, have had the average moisture content of the lot tested and certified. The moisture must be 7 percent or less in order for the lot to be considered very well dried. Section 51.2546 of the standard discusses the procedure used to determine moisture content:

*Kernels shall be obtained from a randomly drawn composite sample. Official certification shall be based on the air-oven method or other officially approved methods or devices. Results obtained by methods or devices not officially approved may be reported and shall include a description of the method or device and owner of any equipment used.*

When a moisture content is determined on the basis of "very well dried," this should be shown in the "Other" section on the certificate. Under "Remarks" report, "Very well dried determined at applicant's request."

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### **Mold**

Mold is separated into damage and serious damage and may be scored separately under both categories. Any white or gray color mold that is not considered readily noticeable and can be rubbed off the kernel with the fingers is

classed as **damage** and described as "minor white or gray mold." This type of mold is not considered damage when it affects the shell only.

Any type of mold that is **readily visible** is considered **serious damage**. It makes no difference what the color is or whether it is seen on the kernel or the shell. This type of mold shall be described on the certificate simply as "mold."

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### **Immature Kernels**

Immature kernels are always considered damage. An immature kernel is one that is excessively thin for its normal size and cross section, or one that fills less than three-fourths, but one-half or more of the shell cavity. Kernels large enough to fill more than three-fourths the cavity are not immature unless excessively thin. Kernels filling less than one-half the cavity would be scored as blanks.

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### **Kernel Spots**

Kernels are occasionally affected by one or more small circular spots that contrast in color from the normal color. It is thought that these spots may be the result of insect feeding on the hull during the nuts' development. When the spots are dark brown or dark gray and aggregate more than one-eighth of the surface, the kernel shall be scored as damage.

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### **Kernel Defects Considered Serious Damage**

All of the following defects are considered serious damage at all times. All except insects are scored under the general tolerance for serious damage in Table II of the grade standard. Insect caused defects can be scored under the general or the restricted tolerance, depending on the severity.

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### **Minor Insect or Vertebrate Injury**

When mature, the pistachio kernel is naturally exposed. Various insects and vertebrates, such as birds or mice, may feed on it. When there is conspicuous evidence that the kernel has been used as a food source, it should be scored against the general tolerance for serious damage. Inspectors should be positive in their scoring of this defect. Certain types of processing machinery may cause mechanical injury that can be mistaken for feeding injury.

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### **Insect Damage**

Insect damage is more serious than minor insect or vertebrate injury discussed previously. The presence of an insect, insect fragment, web, or frass on the kernel is positive evidence of insect intrusion. Affected kernels are always scored against a restricted tolerance [See Table II, line (b) (1) of the grade

standard]. **The presence of live insects, even one on a kernel, shall cause the lot to fail any of the U.S. grades.**

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### **Rancidity**

Rancid kernels are always scored against the general tolerance for serious damage. The standards specify that kernels must be distinctly rancid (i.e. foul or offensive) tasting to be scored. Kernels that are stale or flat tasting should not be considered rancid. Rancid kernels are usually firm, but have dark colored, oily appearing flesh. A small portion to the entire kernel may be affected.

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### **Decay**

Decay is always scored against the general tolerance for serious damage. Whenever any portion of the kernel is decomposed, it is scored as decayed.

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# Appendix I -- U. S. Grade Standards

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## United States Standards for Grades of Pistachio Nuts in the Shell

Effective December 23, 2004

### General

51.2540 General

### Grades

51.2541 Grades

### U.S. Artificially Opened

51.2542 U.S. Artificially Opened

### U.S. Non-Split Grade

51.2543 U.S. Non-Split Grade

### Tolerances

51.2544 Tolerances

### Application of Tolerances

51.2545 Application of Tolerances

### Size

51.2546 Size

### Definitions

51.2547 Definitions

### Average Moisture Content Determination

51.2548 Average Moisture Content Determination

### Metric Conversion Table

51.2549 Metric Conversion Table

### § 51.2540 General

(a) Compliance with the provisions of these standards shall not excuse failure to comply with provisions of applicable Federal or State laws.

(b) These standards are applicable to pistachio nuts in the shell which may be in a natural, dyed, raw, roasted, or salted state; or in any combination thereof.

### Grades

#### § 51.2541 U.S. Fancy, U.S. Extra No. 1, U.S. No. 1 and U.S. Select Grades.

"U.S. Fancy," "U.S. Extra No. 1," "U.S. No. 1," and "U.S. Select" consists of pistachio nuts in the shell which meet the following requirements:

(a) Basic requirements:

(1) Free from:

(i) Foreign material;

(ii) Loose kernels;

(iii) Shell pieces;

(iv) Particles and dust; and,

(v) Blanks.

(b) Shells:

(1) Free from:

(i) Non-split shells; and,

(ii) Shells not split on suture.

(2) Free from damage by:

(i) Adhering hull material;

(ii) Light stained;

(iii) Dark stained; and,

(iv) Other External (shell) defects.

(c) Kernels:

(1) Well dried, or, very well dried when specified in connection with the grade.

(2) Free from damage by:

- (i) Immature kernels;
- (ii) Kernel spotting; and,
- (iii) Other Internal (kernel) defects.
- (3) Free from serious damage by:
  - (i) Minor insect or vertebrate injury;
  - (ii) Insect damage;
  - (iii) Mold;
  - (iv) Rancidity;
  - (v) Decay; and,
  - (vi) Other Internal (kernel) defects.
- (d) The nuts are of a size not less than 30/64 inch in diameter as measured by a round hole screen.
- (e) For tolerances, see §51.2544.

**§ 51.2542 U.S. Artificially Opened.**

"U.S. Artificially Opened" consists of artificially opened pistachio nuts in the shell which meet the following requirements:

- (a) Basic Requirements:
  - (1) Free from:
    - (i) Foreign material;
    - (ii) Loose kernels;
    - (iii) Shell pieces;
    - (iv) Particles and dust; and,
    - (v) Blanks.
  - (b) Shells:
    - (1) Free from:
      - (i) Non-split shells; and,
      - (ii) Shells not split on suture.
    - (2) Free from damage by:
      - (i) Adhering hull material;
      - (ii) Light stained;
      - (iii) Dark stained; and,
      - (iv) Other External (shell) defects.
  - (c) Kernels:
    - (1) Well dried, or, very well dried when specified in connection with the grade;
    - (2) Free from damage by:
      - (i) Immature kernels;
      - (ii) Kernel spotting; and,
      - (iii) Other Internal (kernel) defects.
    - (3) Free from serious damage by:
      - (i) Minor insect or vertebrate injury;
      - (ii) Insect damage;
      - (iii) Mold;
      - (iv) Rancidity;
      - (v) Decay; and,
      - (vi) Other Internal (kernel) defects.
  - (d) The nuts are of a size not less than 30/64 inch in diameter as measured by a round hole screen.
  - (e) For Tolerances, see §51.2544.

**§ 51.2543 U.S. Non-Split.**

"U.S. Non-Split" consists of non-split pistachio nuts in the shell which meet the following requirements:

- (a) Basic requirements:
  - (1) Free from:
    - (i) Foreign material;
    - (ii) Loose kernels;
    - (iii) Shell pieces;
    - (iv) Particles and dust; and,
    - (v) Blanks.
  - (b) Shells:

- (1) Free from damage by:
  - (i) Adhering hull material; and,
  - (ii) Dark stain.
- (c) Kernels:
  - (1) Well dried, or very well dried when specified in connection with the grade.
- (2) Free from damage by:
  - (i) Immature kernels;
  - (ii) Kernel spotting; and,
  - (iii) Other internal (kernel) defects.
- (3) Free from serious damage by:
  - (i) Minor insect or vertebrate injury;
  - (ii) Insect damage;
  - (iii) Mold;
  - (iv) Rancidity;
  - (v) Decay; and,
  - (vi) Other Internal (kernel) defects.
- (d) The nuts are of a size not less than 30/64 inch in diameter as measured by a round hole screen.
- (e) For Tolerances, see §51.2544.

**§ 51.2544 Tolerances.**

- (a) In order to allow for variations incident to proper grading and handling, the tolerances in Tables I, II, and III of this section are provided.

**Table I - Tolerances**

<b>Factor</b>	<b>U.S. Fancy</b>	<b>U.S. Extra No. 1</b>	<b>U.S. No. 1</b>	<b>U.S. Select</b>	<b>U.S. Artificially Opened</b>	<b>U.S. Non-Split</b>
<b>External (shell) Defects (tolerances by weight)</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>
<b>(a) Non-split and not split on suture</b>	2	3	6	10	10	N/A
<b>(1) Non-split included in (a)</b>	1	2	3	4	4	N/A
<b>(b) Adhering hull material</b>	1	1	1	2	2	2
<b>(c) Light stained</b>	7	12	25	N/A	N/A	N/A
<b>(1) Dark stained, included in (c)</b>	2	3	3	3	3	3
<b>(d) Damage by other means</b>	1	1	2	3	10	N/A
<b>(e) Total External Defects</b>	9	16	N/A	N/A	N/A	N/A
<b>(f) Undersized (Less than 30/64 inch in diameter):</b>	5	5	5	5	4	5

**Table II - Tolerances**

Factor	U.S. Fancy	U.S. Extra No. 1	U.S. No. 1	U.S. Select	U.S. Artificially Opened	U.S. Non-Split
<b>Internal (Kernel) Defects (tolerances by weight)</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>
<b>(a) Damage</b>	3	6	6	6	6	6
<b>(b) Serious Damage (Minor Insect or Vertebrate Injury, Mold, Rancid, Decay)</b>	3	4	4	4	4	4
<b>(1) Insect Damage, included in (b)</b>	1	2	2	2	2	2
<b>(c) Total Internal Defects</b>	4	8	9	9	9	9

**Table III - Tolerances**

Factor	U.S. Fancy	U.S. Extra No. 1	U.S. No. 1	U.S. Select	U.S. Artificially Opened	U.S. Non-Split
<b>Other Defects (tolerances by weight)</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>	<b>Percent</b>
<b>(a) Shell pieces and Blanks</b>	2	2	2	2	2	2
<b>(1) Blanks, included in (a)</b>	1	1	1	1	1	1
<b>(b) Foreign material (No glass, metal or live insects shall be permitted)</b>	.25	.25	.25	.25	.25	.25
<b>(c) Particles and Dust</b>	.25	.25	.25	.25	.25	.25
<b>(d) Loose kernels</b>	4	5	6	6	6	6

**§ 51.2545 Application of tolerances.**

The tolerances for the grades apply to the entire lot and shall be based on a composite sample drawn from containers throughout the lot. Any container or group of containers which have nuts obviously different in quality or size from those in the majority of the containers shall be considered a separate lot and shall be sampled separately.

**§ 51.2546 Size.**

Nuts may be considered as meeting a size designation specified in Table IV or a range in number of nuts per ounce, provided, the weight of 10 percent, by count, of the largest nuts in a sample does not exceed 1.50 times the weight of 10 percent, by count, of the smallest and the average number of nuts per ounce is not more than one-half nut above or below the extremes of the range specified.



**Table IV - Nut Size**

Size Designations	Average Number of Nuts Per Ounce <sup>1</sup>
Colossal	Less than 18
Extra Large	18 to 20
Large	21 to 25
Medium	26 to 30
Small	More than 30

<sup>1</sup> Before Roasting

**§ 51.2547 Definitions.**

- (a) *Well dried* means the kernel is firm and crisp.
- (b) *Very well dried* means the kernel is firm and crisp and the average moisture content of the lot does not exceed 7.00 percent or is specified. (See §51.2548.)
- (c) *Loose kernels* means edible kernels or kernel portions which are out of the shell and which cannot be considered particles and dust.
- (d) *External (shell) defects* means any blemish 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, light stained, or dark stained.
  - (1) *Damage by external (shell) defects* means any specific defect described in paragraphs (d) (1) (i) through (v) 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 edible or marketing quality of the individual shell or of the lot. (For tolerances see §51.2544, Table I.)
    - (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 covers more than one-eighth of the total shell surface, or when readily noticeable on dyed shells.
    - (iv) *Light stained* on raw or roasted nuts, means an aggregate amount of yellow to light brown or light gray discoloration is noticeably contrasting with the predominate color of the shell and affects more than one-fourth of the total shell surface or, on dyed nuts, when readily noticeable.
    - (v) *Dark stained* on raw or roasted nuts, means an aggregate amount of dark brown, dark gray or black discoloration affects more than one-eighth of the total shell surface, or, on dyed nuts, when readily noticeable, provided that speckled appearing stain located within the area of one-fourth of the shell nearest the stem end shall be disregarded.
  - (e) *Internal (kernel) defects* means any blemish affecting the kernel. Such defects include, but are not limited to evidence of insects, immature kernels, rancid kernels, mold, or decay.
    - (1) *Damage by internal (kernel) defects* means any specific defect described in paragraphs (e) (1) (i) through (ii) 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 edible or marketing quality of the individual kernel or of the lot. (For tolerances see §51.2544, Table II.)
      - (i) *Immature kernels* are excessively thin or when a kernel fills less than three-fourths, but not less than one-half the shell cavity.
      - (ii) *Kernel spotting* refers to dark brown or dark gray spots aggregating more than one-eighth of the surface of the kernel.
    - (2) *Serious damage by internal (kernel) defects* means any specific defect described in paragraphs (e) (2) (i) through (v) of this section; 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 the marketing quality of the individual kernel or of the lot. (For tolerances see §51.2544, Table II.)
      - (i) *Minor insect or vertebrate injury* means the kernel shows conspicuous evidence of feeding.

- (ii) *Insect damage* is an insect, insect fragment, web or frass attached to the kernel. No live insects shall be permitted.
- (iii) *Mold* which is readily visible on the shell or kernel.
- (iv) *Rancidity* means the kernel is distinctly rancid to taste. Staleness of flavor shall not be classed as rancidity.
- (v) *Decay* means one-sixteenth or more of the kernel surface is decomposed.
- (f) *Other defects* means defects which cannot be considered internal defects or external defects. Such defects include, but are not limited to shell pieces, blanks, foreign material or particles and dust. The following shall be considered other defects. (For tolerances see §51.2544, Table III.)
  - (1) *Shell pieces* means open in-shell nuts not containing a kernel, half shells or pieces of shell which are loose in the sample.
  - (2) *Blank* means a non-split shell not containing a kernel or containing a kernel that fills less than one-half the shell cavity.
  - (3) *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.
  - (4) *Particles and dust* means pieces of nut kernels which will pass through a 5/64 inch round opening.
  - (5) *Undersize* means pistachio nuts in the shell which fall through a 30/64 inch round hole screen.

**§ 51.2548 Average Moisture Content Determination.**

- (a) Determining average moisture content of the lot is not a requirement of the grades, except when nuts are specified as "very well dried." It may be carried out upon request in connection with grade analysis or as a separate determination.
- (b) Nuts shall be obtained from a randomly drawn composite sample. Official certification shall be based on the air-oven method or other officially approved methods or devices. Results obtained by methods or devices not officially approved may be reported and shall include a description of the method or device and the owner of any equipment used.

**§ 51.2549 Metric Conversion Table**

Use the following table for metric conversion:

<b>Inches</b>	<b>Millimeters</b>
5/64	1.98
18/1000	0.46
1/4	6.35
30/64	11.88
<b>Ounces</b>	<b>Grams</b>
1	28.35
2	56.70

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## Appendix II -- Sampling of Pistachio Nuts (In-Shell and Shelled) for Aflatoxin Analysis

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### General

*Aflatoxin* is one of a group of mycotoxins produced by the molds *Aspergillus flavus* and *Aspergillus parasiticus*. Aflatoxins are naturally occurring compounds produced by molds, which can be spread in improperly processed and stored nuts, dried fruits and grains. They are potent compounds which cause acute toxicity and have been found to be carcinogens for some animals.

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### Purpose

To provide an alternative aflatoxin-sampling method for the pistachio industry that has an equivalent predictability to that currently being used by probing.

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### Sampling

Representative sampling is an important factor. If the samples are not representative, the results of the aflatoxin analysis are incorrect regardless of the accuracy of the laboratory personnel.

### Requirements for Manual Sampling Procedures

- (a) Lots must be accessible for sampling throughout; otherwise the handler shall be required to have them made completely accessible before sampling. Samples shall be drawn with an approved sampling probe.
- (b) Check markings on containers for every available means of **identification** of the lot. *All pistachios that are required to be inspected and certified in accordance with Marketing Orders 983 and 999 shall be identified by appropriate seals, stamps, tags, or other identification to be affixed to the containers by the handler.* The inspector shall record markings on the test samples.
- (c) **Samples for testing.** Prior to testing, a sample is drawn from each lot ("lot samples") of sufficient weight to comply with Table 1 and Table 2 of this section (from §983.150(d)(2) and §999.600(d)(3) of the Marketing Orders). Sampling is conducted by or under the direct supervision of an inspector or as approved under an alternative USDA-recognized inspection program, such as Partners in Quality (PIQ).

(d) **Test samples for aflatoxin.** Prior to submission of samples to a USDA accredited laboratory for aflatoxin analysis, one sample (“test sample”) shall be created from the pistachios designated for aflatoxin testing in compliance with Tables 1 and 2 for inshell and kernel pistachio lots that weigh up to and including 4,400 pounds. For lot sizes larger than 4,400 pounds, two samples (“test samples”) shall be created equally from the pistachios designated for aflatoxin testing in compliance with the requirements of Tables 1 and 2. The test samples shall be prepared by, or under the direct supervision of an inspector, or as approved under an alternative USDA-recognized inspection program. The test samples shall be designated by an inspector or as approved under an alternative USDA-recognized inspection program as Test Sample #1 and Test Sample #2. Each sample shall be placed in a suitable container, with the lot number clearly identified, and then submitted to a USDA accredited laboratory.

**Table 1 – Inshell Pistachio Lot Sampling  
 Increments for Aflatoxin Certification**

<b>Lot weight (lbs.)</b>	<b>Minimum number of incremental samples for the lot sample</b>	<b>Total weight of lot sample (kilograms)</b>	<b>Weight of test sample (kilograms)</b>
220 or less	10	2.0	2.0
221-440	15	3.0	3.0
441-1,100	20	4.0	4.0
1,101-2,200	30	6.0	6.0
2,201-4,400	40	8.0	8.0
4,401-11,000	60	12.0	6.0
11,001-22,000	80	16.0	8.0
22,001-150,000	100	20.0	10.0

**Table 2 – Shelled Pistachio Kernel Lot Sampling  
 Increments for Aflatoxin Certification**

<b>Lot weight (lbs.)</b>	<b>Minimum number of incremental samples for the lot sample</b>	<b>Total weight of lot sample (kilograms)</b>	<b>Weight of test sample (kilograms)</b>
220 or less	10	1.0	1.0
221-440	15	1.5	1.5
441-1,100	20	2.0	2.0
1,101-2,200	30	3.0	3.0
2,201-4,400	40	4.0	4.0
4,401-11,000	60	6.0	3.0
11,001-22,000	80	8.0	4.0
22,001-150,000	100	10.0	5.0

**Requirements for In-Line Automatic Sampling Devices**

In order for an automatic sampler to be considered acceptable by the Federal-State Inspection Service (FSIS) the control and security of the pistachios **must** be equal to sampling being conducted manually by or under the direct supervision of an inspector, or as approved under an alternative USDA-recognized inspection program. This is essential since the sampling process is a critical component in the aflatoxin analysis process.

In-line automatic sampling devices must be officially approved by USDA/FSIS prior to being used to draw official samples and are subject to being reviewed periodically for compliance. All sampling devices must bear the FSIS Seal of Approval, which also carries an assigned accountability number. The seal is usually affixed in close proximity to the sampling device. If for any reason the sampling device does not bear the seal of approval or is not marked to indicate official approval, promptly notify the immediate supervisor. Sampler approval must be obtained through the Federal Program Manager(s).

The automatic sampler **must** have the following steps in place before it can be considered for use as an official sampler.

1. The automatic sampling device must be constructed so that no product or contaminants may be added to or removed from the sample either accidentally or deliberately.

2. Prior to running a lot to be certified, the handler shall have the weight of the lot and it shall be uniquely identified. The accumulator collecting the incremental samples for the lot shall have this unique number and its weight affixed to the container in a manner in which it cannot be tampered with.
3. After the lot has been run, the official sample needs to be sealed in a manner in which it cannot be tampered with. The sample needs to have the weight of the sample and the number of incremental sample(s) it contains.
4. Partial lot samples that are held overnight must be kept in a manner in which it cannot be tampered with.
5. After a lot is finished, the sample **must** be removed and sealed by a Federal or Federal-State authorized inspector or as approved under an alternative USDA-recognized inspection program.
6. If the sample fails to contain the appropriate weight or number of incremental samples required in Table 1 and Table 2 of the above section it cannot be considered as an official sample and the Handler must call the local inspection office to have the lot sampled.

Inspectors that prepare the sample(s) for submission to a USDA, Science and Technology approved aflatoxin analytical laboratory shall document periodic checks of the mechanical sampling procedures and report findings on the **Pistachio Automatic Sample Check Form**.

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### **Compliance and Criteria for Revocation of Privilege to Use In-Line Automatic Sampler**

Compliance with the requirements of the in-line automatic sampler is essential for continued use of the privilege. This will be done by an inspector or any other party authorized by the inspection service during periodic checks. Non-compliance will be written up on the **Pistachio In-Line Automatic Sampler Non-Compliance Report** and will result in the revocation of the privilege and require the Handler to return to requesting the inspection service to manually sample the product for marketing order compliance.

All observations and non-compliances will be documented by FSIS, including corrective actions taken. Non-compliances must be corrected in a timely manner under FSIS supervision. Some non-compliances may result in the loss of privilege to use the in-line automatic sampler.

Minor deviations from program requirements observed by FSIS (observations) will be brought to the attention of participant's staff. Corrective actions may be necessary (by participant). Observations are not "non-compliances;" they are potentially hazardous occurrences that may become non-compliances if not corrected.

## **Levels of Non-compliance**

### **Major Non-compliance**

A major non-compliance is a major deviation from program requirements, which if allowed to continue, may result in sampling not meeting in-line sampling requirements.

### **Critical Non-compliance**

A critical non-compliance is a critical deviation from in-line sampling requirements, which has resulted in sampling not meeting in-line sampling requirements.

## **Examples of Non-compliances**

The following provides examples for major and critical non-compliance:

### **Major Non-compliance**

*Markings on sample are not legible, but may be verified in another manner.* This would be a major non-compliance.

### **Critical Non-compliance**

*Markings on sample are not legible and cannot be verified in another manner.* FSIS would need to probe the lot, the sample collected would not be acceptable.

*The sample has been removed from the collector by the applicant's staff.* This would be a critical non-compliance with the sample losing its identity. This would result in the participant losing their in-line sampling privileges.

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## **Automatic Splitting of Test Samples**

Specialty Crops Inspection Division does not approve or recognize the automatic splitting of samples. In order to maintain the integrity of each test sample, test samples shall be prepared by, or under the direct supervision of an inspector, or as approved under an alternative USDA-recognized inspection program.

**Pistachio Automatic Sample Check Form**

<b>AUTOMATIC SAMPLE CHECK FORM</b>		
Name of Handler Facility:		
Sampler Identification Number:		
Crop Year:		Page:
<b>Date</b>	<b>Inspector's Name</b>	<b>Comment</b>



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**Pistachio In-Line Automatic Sampler Non-Compliance Report**

<b>Pistachio In-Line Automatic Sampler NON-COMPLIANCE REPORT</b>	Date: Time:
Inspector Name:	
Handler Name:	
Handler Address:	
<b>Description of Non-Compliance:</b>	
<b>Company Representative Signature:</b>  <small>SIGNATURE AFFIRMS FACTS CONCERNING NON-COMPLIANCE ARE CORRECT</small>	
<b>Corrective Action:</b> (If applicable)	

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# Appendix III -- Examples

## Example 1 – Inspection Certificate




U.S. DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL MARKETING SERVICE  
 FRUIT AND VEGETABLE DIVISION

S- Example 1  
 SUBLOT

**FEDERAL-STATE INSPECTION CERTIFICATE**

INSPECTION STARTED: 10/13/94 11:00 AM A INSPECTION COMPLETED: 10/13/94 12:00 PM P		This certificate is issued pursuant to the Agricultural Marketing Act of 1946, as amended, and the conditions of the Federal Order in all courts of the United States.	
APPLICANT: Y. RAPTOR PACKING CO. JERICHO PARK CA.		CITY/STATE: JERICHO PARK CA.	
INSPECTION POINT: SAME		OTHER ID:	
CONVEYANCE NO.: 013 T22 CA		NOTESHEET NO.: N-915294	
PRODUCT/VARIETY	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION OF PRODUCT (Color, Maturity, etc., Quality, Condition, etc.)	GRADE
PISTACHIO NUTS	300 CTNS.	IN-SHELL, NATURAL, SAPIENS, 25Lbs, U.S. No. 1	U.S. No. 1 LARGE
PISTACHIO NUTS	370 CTNS.	IN-SHELL, ROASTED, R. SAPIENS, 25Lbs, U.S. No. 1	U.S. No. 1 MEDIUM
PISTACHIO NUTS	330 CTNS. 330 CTNS.	IN-SHELL, DYED (RED), T. REX, 25Lbs., U.S. No. 1	U.S. No. 1 MEDIUM
NATURAL LOT - WELL DRIED ROASTED LOT - AVERAGE MOISTURE CONTENT 3.2% DYED LOT - WELL DRIED			
ABOVE PRODUCTS MEET REQUIREMENTS OF MARKETING ORDER			
* VARIETY OF PRODUCT AND NUMBER OF CONTAINERS ARE PROVIDED BY THE APPLICANT AND ARE NOT BEING CERTIFIED BY THE INSPECTOR UNLESS OTHERWISE NOTED.			
FOR DATA ENTRY ONLY CONNECTS FM 184 CERTIFICATE NUMBER: _____ APPLICANT: 21 _____ CWT: _____ ON-SITE HOURS: _____ O.T. Hrs.: _____ TRAVEL MILES: _____ O.T. Hrs.: _____ OTHER: _____ \$ _____		REMARKS: AVERAGE MOISTURE CONTENT OF ROASTED LOT DETERMINED AND REPORTED AT APPLICANT'S REQUEST. APPLICANT STATES ABOVE LOT FOR SHIPMENT TO T. REX ENTERPRISES, INC. I, the undersigned, a duly authorized inspector of the United States Department of Agriculture, do hereby certify that samples of the herein described product were inspected and the grades as shown by said samples were as herein stated. A. N. Inspector INSPECTOR'S SIGNATURE 10/13/94 DATE ISSUED	
INSPECTED BY: _____		FEE: \$ _____ O.T.: \$ _____ EXP.: \$ _____ ESTIMATED TOTAL: \$ _____	

Example 2 – Inspection Certificate



U.S. DEPARTMENT OF AGRICULTURE  
 AGRICULTURAL MARKETING SERVICE  
 FRUIT AND VEGETABLE DIVISION

S- Example 2

FEDERAL-STATE INSPECTION CERTIFICATE  SUBLOT

*This certificate is issued pursuant to the Agricultural Marketing Act of 1946, as amended and is admissible as prima facie evidence in all courts of the United States.*  
*WARNING: Any person who knowingly shall falsify records, returns, labels, or other information, or participate in any such action, is subject to a fine of not more than \$1,000 or imprisonment for not more than one year for each offense.*

INSPECTION STARTED: 019/28/915 01:01 PM  
 INSPECTION COMPLETED: 019/28/915 01:20 PM

APPLICANT: T. REX ENTERPRISES, INC. TERRA COTTA, CA PU: FED STATE 310-013  
 CITY/STATE: OTHER ID:  
 INSPECTION POINT: SAME  
 CONVEYANCE NO.: 915-063A FL TYPE: NOTESHEET NO.:

PRODUCT/VARIETY	NUMBER AND SIZE OF CONTAINERS	DESCRIPTION OF PRODUCT (Brand, Markings, Color, Quality/Condition, etc.)	GRADE
PISTACHIO NUTS	515 CTNS	IN-SHELL, NATURAL, STEGOSAURUS BRAND, 25 LBS. NET	U.S. No. 1 LARGE
SHELL DEFECTS - 250 GRAMS SAMPLE NON-SPLIT - 1.25% LIGHT STAIN - 7.68% DARK STAIN - 1.30% KERNEL DEFECTS - 300 GRAMS SAMPLE DAMAGE - 2.00% (KERNELS) (SPTS) SERIOUS DAMAGE - 1.01% (DECAY, HINDER INSECT) OTHER DEFECTS - 1500 GRAMS SAMPLE NONE SIZE - LARGE KERNELS WELL DRIED			
ABOVE PRODUCTS MEET REQUIREMENTS OF MARKETING ORDER * VARIETY, OF PRODUCT, AND NUMBER OF CONTAINERS ARE PROVIDED BY THE APPLICANT, AND ARE NOT BEING CERTIFIED BY THE INSPECTOR UNLESS OTHERWISE NOTED			

**FOR DATA ENTRY ONLY**

CONNECTICUT CERTIFICATE NUMBER: \_\_\_\_\_

APPLICANT: Z1 \_\_\_\_\_

CWT: \_\_\_\_\_

ON-SITE HOURS: \_\_\_\_\_

O.T. (Hrs.): \_\_\_\_\_

TRAVEL MILES: \_\_\_\_\_

O.T. (Hrs.): \_\_\_\_\_

OTHER: \_\_\_\_\_

INSPECTED BY: \_\_\_\_\_

\$ \_\_\_\_\_

REMARKS:


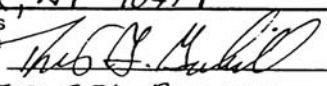
I, the undersigned, a duly authorized inspector of the United States Department of Agriculture, do hereby certify that samples of the herein described product were inspected and the grades as shown by said samples were as herein stated.

L. B. Inspector  
 INSPECTOR'S SIGNATURE

DATE ISSUED: \_\_\_\_\_

FEE: \$ \_\_\_\_\_  
 O.T.: \$ \_\_\_\_\_  
 EXP.: \$ \_\_\_\_\_  
 ESTIMATED TOTAL: \$ \_\_\_\_\_

Example – Notice of Sampling

		U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE FRUIT AND VEGETABLE DIVISION <b>NOTICE OF SAMPLING</b> (FOR GRADE OR CHEMICAL ANALYSIS)		<b>N F-00010</b> 01/01/93 <small>DATE SAMPLING BEGAN</small>
		<small>THIS IS TO CERTIFY (That, in compliance with the regulations of the Secretary of Agriculture governing the inspection of fruits, vegetables and nuts pursuant to the Agricultural Marketing Act of 1946 as amended (7 U.S.C. 1621-1627) the undersigned, a duly authorized inspector of the United States Department of Agriculture do hereby certify that on the date indicated, samples drawn believed by me to be representative of the lot were as described below.</small>		
SAMPLE DRAWN AT: (city, state) <b>ANYTOWN, N.J.</b>		MILL OR WAREHOUSE NAME: <b>SAM'S WARE LOT # 632</b>		SAMPLING FOR: <input checked="" type="checkbox"/> Grade <input checked="" type="checkbox"/> Chemical Analysis
<input type="checkbox"/> CAR NO.: APPLICANT (Name, Address, Zip Code): <b>LOTS-O-NUTS, INC.</b> <b>NEW YORK, NY 10004</b>	<input type="checkbox"/> TRUCK NO.: RECEIVER (Name, Address): <b>SAME AS APPLICANT</b>	<input checked="" type="checkbox"/> NAME OF SHIP: <b>TORO</b> SHIPPER (Name, Address): <b>YAKIMA SALAM BOLON</b> <b>TURKEY</b>		
PRODUCT - PEANUTS <input type="checkbox"/> CLEANED IN THE SHELL PEANUTS <input type="checkbox"/> SHELLED PEANUTS		DESIGNATED AS TYPE: <input type="checkbox"/> "RUNNER" <input type="checkbox"/> "VIRGINIA" <input type="checkbox"/> "SPANISH" <input type="checkbox"/> "VALENCIA"		CONTRACT NO.:
WT. MANIFESTED AS: <input type="checkbox"/> SACKS <input type="checkbox"/> BINS	COLOR TAGS:	CROP YEAR:	STATE:	MILL NO.:
QUALITY DESIGNATED BY SHIPPER (verbal or marked):		GRADE INSPECTION CERTIFICATE NO.:	DESIGNATED QUALITY: <input type="checkbox"/> MEETS <input type="checkbox"/> FAILS	
CHECK HIGHEST QUALITY DETERMINED: <input type="checkbox"/> RUNNER NO. 1 OR BETTER <input type="checkbox"/> SPANISH NO. 1 OR BETTER <input type="checkbox"/> VIRGINIA NO. 1 OR BETTER		<input type="checkbox"/> P.A.C. "WITH SPLITS" <input type="checkbox"/> U.S. SPLITS <input type="checkbox"/> "OTHER EDIBLE QUALITY" <input type="checkbox"/> FAILS "OTHER EDIBLE QUALITY"		<input type="checkbox"/> DOMESTIC CRUSHING <input type="checkbox"/> EXPORT CRUSHING (Fragmented) <input type="checkbox"/> OTHER (Specify):
THIS SAMPLE IS DESIGNATED AS: <input type="checkbox"/> 1-AB <input type="checkbox"/> 2-AB <input type="checkbox"/> 3-AB <input type="checkbox"/> 1-CO <input type="checkbox"/> APPEAL <input type="checkbox"/> OTHER:				
RESULTS FROM PREVIOUS SAMPLES: 1-AB (ppb) 2-AB (ppb) 1-CO (ppb)				
PRODUCT (Other than peanuts): <input type="checkbox"/> IN-SHELL BRAZIL NUTS <input type="checkbox"/> SHELLED PISTACHIO NUTS <input checked="" type="checkbox"/> IN-SHELL PISTACHIO NUTS <input type="checkbox"/> OTHER:		WEIGHT OF LOT: <b>44,082 Lbs.</b>	NUMBER OF SACKS: <b>400</b>	
SHIPPER'S MARKS: <b>IN BURLAP SACKS PRINTED: "OSHKOSH TS. 3075-7-2696 TURKIYE. I.C FUNDIK TOMBUL-I-13-15 MM. SAMSON 50 Kg 1993."</b>				
TYPE OF ANALYSIS: <input checked="" type="checkbox"/> KERNEL AND SHELL <input type="checkbox"/> KERNEL ONLY	APPROX. WT. OF SAMPLE: <b>12 Lbs.</b>	SAMPLE SHIPPED VIA: <b>P.O.V.</b>	RESULTS OF ANALYSIS TO BE: <input checked="" type="checkbox"/> PHONED OR WIRED COLLECT <input type="checkbox"/> MAILED TO APPLICANT <b>JANE DOE (212) 555-0123</b>	
REMARKS: <b>APPLICANT STATES ABOVE LOT UNLOADED FROM: TORO, ENTRY # 062-0907593-0, B/L # OBTU-80193 IS NY 178, CONT. # CTIV-485067-7.</b>				
DATA BLOCK - FOR USDA USE ONLY CORRECTS: _____ APPLICANT NO: <b>21</b>		SAMPLE SENT TO (Name of Laboratory): <b>U.S.D.A. A.M.S. F&amp;V DIV.</b> ADDRESS: <b>ROOM 28A HUNT'S POINT MARKET</b> <b>BROOK, NY 10474</b>		DATE SENT: <b>1/1/93</b>
ON-SITE HOURS: _____ O.T. (hrs): _____ INSPECTED BY: _____	TRAVEL MILES: _____ O.T. (hrs): _____ OTHER: \$ _____	INSPECTOR'S SIGNATURE: 	FEE: _____ POSTAGE: _____ TRANS. CHARGES: _____ TOTAL: _____	
MARKET OFFICE: <b>FED. BLDG. ROOM 1430</b> <b>NEWARK, N.J. 07102</b>				

### Example 3 – Inspection Certificate


U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE <b>INSPECTION CERTIFICATE</b> <b>EXAMPLE 3</b>			
F.C.A. NUMBER: 0907593-0, B/L# 08TV-8019313NY198, CONTAINER # CTIV-485067-7 Entry / Lot to be Shipped by: MANIFEST Country / Lot Name: TORO		APPLICANT: LOT 2-0-NHT3, INC. NEW YORK, NY SHIPPER: YAKIMA SALAM, BLDG. TURKEY BILLS OF LADING: BINT NY 8/24 BBOX, NY O.1   O.2   9.3   0.9 : 4.54 GENERAL CARRIER: OSHKOSH TR. 3075-N-2296 TW 400 SACKS	
54 T.P. REGISTERED UNIT: 10 COOL: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO REFRIGERATION UNIT: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO LOT TEMPERATURES: A: <input type="checkbox"/> 10 <input type="checkbox"/> 10 B: <input type="checkbox"/> 10 <input type="checkbox"/> 10 C: <input type="checkbox"/> 10 <input type="checkbox"/> 10 D: <input type="checkbox"/> 10 <input type="checkbox"/> 10	PISTACHIOS (IN SHELL)		
AVERAGE DAMAGE: .14 DEFECTS: .24 .26 13.90 .24 .22 .20 1.04	DEFECTS:		
DEFECTS BY DEFECTS			
NON-SPLIT & NOT SPLIT ON SURFACE: COOUT PER OUNCE NON-SPLIT - INCLUDED IN ABOVE: AVERAGES 19.90 ADHERING HELL MATERIAL: EXTERNAL DEFECTS STAINED: (500 GRAM SAMPLE) WELL DRIED DARK STAINED - INCLUDED IN ABOVE DAMAGE BY OTHER MEANS SMALLER THAN 2 5/8 INCHES LOOSE KERNELS DAMAGE: INTERNAL DEFECTS SERIOUS DAMAGE (INSECT): (250 GRAM SAMPLE) TOTAL INTERNAL DEFECTS SHELL PIECES & BLANKS: OTHER DEFECTS FOREIGN MATERIAL: (500 GRAM SAMPLE) PARTICLES & DUST			
GRADE: U.S. No. 1			
REMARKS: ENTRY #162-0907593-0, B/L# 08TV-8019313NY198, CONTAINER # CTIV-485067-7 NOTICE OF SHIPPING F-0010.			
WARNING: Any person who knowingly shall falsify, make, issue, alter, forge, or counterfeit this certificate, or participate in any such actions, is subject to a fine of not more than \$1,000 or imprisonment for not more than one year, or both.			ESTIMATED TOTAL \$
MARKET OFFICE:			BBOX NY
SIGNATURE: Charles Tward			

**Example 4 – Inspection Certificate**

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE <b>INSPECTION CERTIFICATE</b> <b>EXAMPLE 4</b>		
APPLICANT SHIPPER ADDRESSEE APPLICANT'S WAREHOUSE CHICAGO, ILL SAM'S KERNELS NORTON, AZ	U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE INSPECTION CERTIFICATE EXAMPLE 4	APPLICANT'S WAREHOUSE CHICAGO, ILL SAM'S KERNELS NORTON, AZ
CARRIER CARRIER'S PHONE NUMBER CARRIER'S ADDRESS BROIA BROIA, ILL BROIA, ILL	U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE INSPECTION CERTIFICATE EXAMPLE 4	APPLICANT'S WAREHOUSE CHICAGO, ILL SAM'S KERNELS NORTON, AZ
REGISTRATION ORIGIN REGISTRATION ORIGIN STATE REGISTRATION ORIGIN COUNTY REGISTRATION ORIGIN CITY REGISTRATION ORIGIN ZIP REGISTRATION ORIGIN STATE REGISTRATION ORIGIN COUNTY REGISTRATION ORIGIN CITY REGISTRATION ORIGIN ZIP	U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE INSPECTION CERTIFICATE EXAMPLE 4	APPLICANT'S WAREHOUSE CHICAGO, ILL SAM'S KERNELS NORTON, AZ
LOT A: 03103193 B: 11001A C: 300 CARBONS D: (225 Lbs. Approx)	U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE INSPECTION CERTIFICATE EXAMPLE 4	APPLICANT'S WAREHOUSE CHICAGO, ILL SAM'S KERNELS NORTON, AZ
AVERAGE DEFECTS 1.00 .50 1.00 .50 3.25 1.50 5.70 2.00 .25 7.95 .50	U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE INSPECTION CERTIFICATE EXAMPLE 4	APPLICANT'S WAREHOUSE CHICAGO, ILL SAM'S KERNELS NORTON, AZ
OTHER DEFECTS NON-SPLIT & NOT SPLIT ON SUTURE ADHERING HULL MATERIAL STAINED DAMAGE BY OTHER MEANS SMALLER THAN 26/44 INCHES LOOSE KERNELS DAMAGE (KERNEL SPOTS) SERIOUS DAMAGE SERIOUS DAMAGE BY INSECTS INCLUDED ABOVE TOTAL INTERNAL DEFECTS SHELL PIECES & BLANKS & OTHER DEFECTS (250 GRAM SAMPLE)	U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE INSPECTION CERTIFICATE EXAMPLE 4	APPLICANT'S WAREHOUSE CHICAGO, ILL SAM'S KERNELS NORTON, AZ
GRADE: FAILS TO MEET "MEDIUM" SIZE ACCOUNT 1.89 LARGEST TO SMALLEST RATIO: 1.89 REMARKS:	U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE INSPECTION CERTIFICATE EXAMPLE 4	APPLICANT'S WAREHOUSE CHICAGO, ILL SAM'S KERNELS NORTON, AZ
ESTIMATED TOTAL \$	U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE INSPECTION CERTIFICATE EXAMPLE 4	APPLICANT'S WAREHOUSE CHICAGO, ILL SAM'S KERNELS NORTON, AZ



Example 5 – Inspection Certificate

CHARACTERISTICS		APPLICANT'S INFORMATION		SHIPPER'S INFORMATION		INSPECTION CERTIFICATE	
NO. OF PAGES	1	NAME	TOYA SERVICES, INC.	NAME	LONG BEACH, CA	INSPECTION NO.	0210219310101A
CERTIFY LOT IS SHIPPED BY	ADDITIONAL LABELS	ADDRESS	SUNSHINE TRADING, INC.	ADDRESS	BLTYHE, CA	INSPECTION DATE	02/10/05
CERTIFY TYPE / NAME		SHIPPER'S SIGNATURE	APPLICANT'S WAREHOUSE	SHIPPER'S SIGNATURE		INSPECTION TIME	10:00 AM
REGISTRATION UNIT			"NO BRAND" SUNSHINE, EL PASO, CA			INSPECTION PLACE	400 CAROTONS
LOT NO.			ROASTED			INSPECTION METHOD	(30 lbs. Approx)
A:							
B:							
C:							
D:							
AVERAGE DAMAGE TO OBJECTS		SPECIFIC DEFECTS		OTHER			
5.00		STAINED		SIZE: EXTRA LARGE			
4.00		DARK STAINED INCLUDED ABOVE	EXTERNAL DEFECTS	VERY WELL DRIED. AVERAGE			
0.22		DAMAGE BY OTHER MEANS	DEFECTS	MOISTURE CONTENT (6.4%)			
0.00		SMALLER THAN 26/64 INCHES	(500gmm sample)	REPORTED AT APPLICANT'S			
2.41		LOOSE KERNELS		REQUEST.			
1.11		DAMAGE		INTERNAL DEFECTS			
3.00		SERIOUS DAMAGE		(250gmm sample)			
1.00		SERIOUS DAMAGE BY INSECTS	INTERNAL DEFECTS				
4.11		TOTAL INTERNAL DEFECTS					
0.50		SHELL PIECES & BLANKS	OTHER DEFECTS				
0.15		FOREIGN MATERIAL					
0.10		ARTICLES & DUST					
GRADE: FAILS TO GRADE U.S. FANCY ACCOUNT EXCESSIVE DARK STAINED.		REMARKS: VERY WELL DRIED DETERMINED AT APPLICANT'S REQUEST.					
WARNING: Any person who knowingly shall falsely make, issue, alter, forge, or counterfeit this certificate, or participate in any such actions, is subject to a fine of not more than \$1000 or imprisonment for not more than one year, or both.		(This certificate is only valid if issued by an Inspector of the United States Department of Agriculture, who hereby certifies that the above indicated sample of the bulk material inspected conforms to the quality standards established by the United States Department of Agriculture.)		ESTIMATED TOTAL		\$	
FORM #V-55 (10-85) Reference PV-558 (4-81) and PV-558 (1-83) which are obsolete		Signature: 		State: CA		\$	

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