

# THEPISTACHIOCO. IN-SHELL PISTACHIO SPECIFICATIONS

RAW IN-SHELL PISTACHIOS NATURALLY TREE OPENED "NTO"

Facility : THEPISTACHIOCO. Middle East



Varieties - Shape :

Jumbo Round / Regular Round

Jumbo Long / Medium Long / Regular Long

Caliber / Number of Fruits per Ounce:

18/20 - 20/22 - 22/26 - 26/30 -30/34

Shelf life:

18 months after packing date at ambient conditions  
(optimum storage conditions : 5 C to 15 C , RH : 55%)

(17) Nuts must be crunchy, free from any off-taste or foreign odor, with typical pistachio flavor

**No Artificially Opnend Nuts Blend authorized**

Tolerances:

| IR Standards                                 | IR Fancy | IR Extra | IR NO.1 | IR NO.2 |
|--|----------|----------|---------|---------|
| Factor                                       |          |          |         |         |
| External shell defects (tolerance by weight) | Percent  | Percent  | Percent | Percent |
| Open mouth                                   | 98       | 97       | 95      | 93      |
| (1) Close Shell*                             | 2        | 3        | 5       | 7       |
| (2) Tight split                              | 20       | 30       | N/A     | N/A     |
| (3) Wide Split                               | >70%     | >50%     | >30%    | N/A     |
| (4) Adhering hull*                           | 0.5      | 1        | 2       | 2       |
| (5) Stained*                                 | 3        | 5        | 7       | 10      |
| (6) Out of caliber*                          | 15       | 25       | 35      | N/A     |
| (7) Midgets*                                 | 2        | 3        | 5       | 10      |
| (8) Damage by other means *                  | 2        | 3        | 8       | 12      |
| (9) Total External Defects (Marked by*)      | 20       | 30       | N/A     | N/A     |
| (10) Discolouration                          | 5        | 10       | 20      | N/A     |
| (11) Dissimilar varieties                    | 6        | 10       | 20      | 30      |

| Factor   | IR Fancy | IR Extra | IR NO.1 | IR NO.2 |
|--|----------|----------|---------|---------|
| Internal ( kernel ) defects (tolerances by weight) | Percent  | Percent  | Percent | Percent |
| (12) Edible meat                                   | >50%     | >50%     | >50%    | >50%    |
| (13) Damaged                                       | 2        | 3        | 5       | 5       |
| (14) Serious Damaged                               | 1        | 1        | 2       | 3       |
| Including maximum Insect Damaged                   | 0.5      | 0.5      | 1       | 2       |
| (15) Total Internal Defects                        | 3        | 4        | 7       | 8       |

| Factor                                | IR Fancy | IR Extra | IR NO.1 | IR NO.2 |
|---------------------------------------|----------|----------|---------|---------|
| Other Defects ( tolerance by weight ) | Percent  | Percent  | Percent | Percent |
| (16) Shell pieces and blank           | 2        | 2        | 3       | 5       |
| (17) Loose kernels                    | 2        | 2        | 3       | 5       |
| (18) Foreign material                 | 0.02*    | 0.02*    | 0.05    | 0.05    |

( No glass , metal, brittle\*, hard plastic\*, ceramics\* or live insect shall be permitted )

| Factor             | IR Fancy  | IR Extra | IR NO.1 | IR NO.2 |
|--------------------|---|----------|---------|---------|
| Chemical parameter | Percent   | Percent  | Percent | Percent |
| (a)Moisture        | Min 3 - Max 6   |          |         |         |
| (b)Aflatoxin B1    | depend on destination legislation / customer requirements |          |         |         |
| (c)Aflatoxin Total |   |          |         |         |



## “IR STANDARDS” DEFINITIONS FOR IN-SHELL PISTACHIO SPECIFICATION

### External shell defect definition:

1. **Close shell** means tightly closed nuts in which human nail cannot enter the suture
2. **Tight split** means the open nuts which thickness of split is less than 2 mm for Round types or 1mm for Long types
3. **Wide Splits** means nuts which are wide open which thickness of split is over 4 mm for Round types or 3 mm for Long types
4. **Adhering hull** means an aggregate amount covers more than one-quarter of total shell surface.
5. **Stained** means an aggregate of yellow to dark brown or black discoloration is noticeably contrasting with the ordinary color of shell and affect is more than one-quarter of the total shell surface.
6. **Out of caliber** means proportion of aggregate amount of oversized and undersized pistachios regarding to caliber of Lot.
7. **Midgets** means pistachio in-shell which falls through an 10 mm round whole screen.
8. **Damage by other means** any damage or defects on the hard covering around the kernel that affect the quality of product.
9. **Total external defects** means total percentage of Closed, adhering hull, stained, out of caliber, midgets and damage by other means
10. **Discoloration** means light grey or dark grey discoloration on shells contrasting with ordinary shell color.  
These colors are the nature of pistachio and do not have any effect on quality.
11. **Dissimilar varieties** mean proportion of other variety in main variety of goods.

### Internal defects definition:

12. **Edible meat** means proportion of aggregate kernel in 100 Gram of in-shell sample.
13. **Damage** means immature kernels which are excessively small, or fills less than three-fourths, but not less than one-half the shell cavity / Kernel spotting refers to dark brown or dark gray spots aggregating more than one-eighth of the kernel surface.
14. **Serious damage contains** a) minor insect or vertebrate injury means the kernel shows conspicuous evidence of feeding  
b) insect damage meaning an insect, insect fragment, web or frass attached to the kernel. No live insect shall be permitted.  
c) Mold which is readily visible on the shell or kernel d) Rancidity which means the kernel is distinctly rancid to taste. Staleness of flavor shall not be classed as rancidity e) Decay means one-sixteenth or more of the kernel surface is decomposed.
15. **Total internal defects** means total percentage of damage and serious damage.

### Other factor definition:

16. **Shell pieces and blanks** means open shell or half shell not containing any kernel
17. **Foreign material** means leaves, sticks, loose hulls or hull pieces, dirt, rocks, insects or insects fragments not attached to nuts or any substance other than pistachio shells or kernels. Glass, metal and live insect shall not be permitted.  
( In IR Fancy and IR Extra : hard plastic, ceramic and similar material shall not be permitted since those products have been processed with electronic sorters in complement to hand sorting.
18. **Off Taste and foreign odor** means absence of any flavor or odor not typical to pistachios. Only internally certified staff demonstrating ability to detect flavors and odors shall do the sensory test.