PISTACHIO NUTS (IN-SHELL) — PRODUCT SPECIFICATION

Naturally Opened — Extra / 1st / 2nd / 3rd Grade • Mechanically Opened — 1st / 2nd Grade

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Pistachio Nuts — In-Shell

General description: Pistachio nuts, mechanically and naturally opened.
Country of origin: Iran

ORGANOLEPTIC PARAMETERS

Parameter	Characteristic
Appearance	Pistachio kernels are unsplit, healthy, in a light-brown shell; kernels are yellowish-green on a cut. Homogeneous in form and size.
Taste and Scent	Typical for pistachio kernels, natural, not rancid, without foreign scent or aftertaste.

Organoleptic quality index (per 100 kernels): 100–85% compliance — product accepted. 85–80% compliance — secondary test / corrective action. Below 80% compliance — product not accepted.

PHYSICO-CHEMICAL PARAMETERS

№	Parameter	EXTRA Naturally Opened Highest grade	EXTRA Naturally Opened 1st grade	STANDARD Naturally Opened 2nd grade	STANDARD Naturally Opened 3rd grade	— Mechanically Opened 1st grade	— Mechanically Opened 2nd grade
1	Moisture, %, less than	6	6	6	6	6	6
2	Kernel output, %, no less than	50	50	50	50	45	43
3	Closed nuts, %, less than	3	5	7	7	7	7
4	Shell deformation, %, less than	2	3	5	5	3	5
5	Kernels with dark spots on shell > 3 mm, %, less than	3	3	5	5	5	5
	Total defected-shell nuts (items 3–5), %, less than	9	11	15	15	—	—
6	Immature kernels / empty nuts*, %, less than	2	2	2	5	6	8
7	Rancid, rotten, or mouldy kernels, %, less than	2	2	2	5	8	10
8	Damaged by pests, %, less than	0.5	2	2	2	2	2
	Total defected kernels (items 6–8), %, less than	4	5	5	9	—	—
9	Free shell, %, less than	2	2	2	3	5	5
10	Vegetable foreign bodies (sticks, hull), %, less than	0.2	0.25	0.25	0.5	0.5	0.5
11	Form homogeneity, deviation, %, less than**	3	3	3	6	6	6
12	Size homogeneity, deviation***	1.8	2	2	2.5	2.5	2.5
13	Foreign bodies (glass, metal, living pests not allowed), %, less than	0.25	0.3	0.3	0.5	0.5	0.5
14	Pest metabolic products, %, less than	Not allowed	0.25	0.25	0.5	0.5	0.5
15	Correct size, %, no less than	Deviation not allowed, pc/28–36	Deviation not allowed, pc/28–36	Deviation not allowed, pc/28–36	Deviation not allowed, pc/28–36	Deviation not allowed, pc/28–36	Deviation not allowed, pc/28–36

** Immature kernels — kernels filling the nut cavity to less than ¾ but no less than ½; empty nuts — nut cavity filled with kernel to less than ½. ** Form homogeneity — defined by the proportion of nuts of another form, in %. *** By standard selection, the weight of the largest 10% of pistachio kernels should not exceed the weight of the smallest 10% of pistachio kernels by more than 1.5 times. A pistachio kernel batch containing more than 10% mechanically opened nuts is classified and accepted as a mechanically opened pistachio nut batch.*

CHEMICAL PARAMETERS — CONTAMINANTS

Group	Element / Parameter	Acceptable Level, mg/kg (Bq/kg for radionuclides), less than
Toxic elements	Arsenic	0.3
Toxic elements	Lead	0.5
Toxic elements	Cadmium	0.1
Toxic elements	Mercury	0.05
Mycotoxins	Aflatoxin B1	0.005
Pesticides	DDT and its metabolites	0.15
Pesticides	Hexachlorocyclohexane (α, β, γ-isomers)	0.5
Radionuclides	Caesium-137	200
Radionuclides	Strontium-90	100

MICROBIOLOGY

Parameter	Characteristic
Mass of product (g) where coliforms are not allowed	0.01
Mass of product (g) where pathogenic germs (including Salmonella) are not allowed	25.0
Mould, CFU/g, less than	1×10^{3}

PACKAGING, STORAGE CONDITIONS & OTHER REQUIREMENTS

Parameter	Requirement
Acceptance	Pistachio kernels are accepted by lots. A lot is any quantity of pistachio kernels of one commercial grade, homogeneous, of one colour, of one crop year, packed in containers of one type and size, arriving in a single transport unit and accompanied by documents on food safety and quality.
Packaging	Natural pistachio kernels are packed in double bags: an outer canvas sack and an inner polymeric or paper bag. When fabric bags are used, the product must be protected from external moisture. Packaging must be dry, clean, intact, free of pest infestation and foreign odours.
Marking	Each package is marked with indelible, odourless paint, in English, showing: Product name Composition Name and location of the manufacturer (legal address including country) EAC (product conformity sign) Net weight or product volume Commercial grade / size Crop year Quality report with parameters of the manufactured product Product nutritional value Storage conditions Date of manufacture and date of packing Shelf life Food additives, flavourings, biologically active food additives, ingredients of unconventional composition Product recommendations (if necessary) Conformity information
Storage Conditions	The product must be stored in closed, dry, sterile, ventilated areas free of foreign odours and pest infestation, at a temperature of 20±5°C and relative humidity not exceeding 70%, away from direct sunlight and strong odours. Packed product is stored on pallets in no more than 8 rows. The distance between pallets must be at least 0.3 m, and the distance to pipes, heaters, ovens and flues at least 1 m.
Shelf Life	12 months from the date of manufacture, under normal storage conditions.
Transportation	The product must be transported in compliance with relevant sanitary requirements, in clean, dry vehicles free of pest infestation.
Other Requirements	Shelf life on the delivery date must not exceed one-third (1/3) of the total shelf life of the product.

This specification is issued by ARNICA FOODS for guidance in commercial contracting. Values are subject to natural variation of agricultural product and to the terms agreed in the sales contract.