

PRODUCT SPECIFICATION

Amaranth (Conventional)



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Company	Patel Agro Foods Industries (PAFI)
Product Name	Amaranth Seeds (Cleaned, Graded)
Botanical Name	<i>Amaranthus caudatus</i>
HS Code	10089090
Country of Origin	India
Processing Location	Deesa, Gujarat, India

Description: Amaranth seeds (*Amaranthus caudatus*) are small, light-colored pseudo-cereal grains rich in protein, fiber, and essential micronutrients. Sourced from Indian farms and processed under hygienic, food-safe conditions, the seeds are cleaned, graded, and packed for use in food manufacturing, oil extraction, milling, and health-oriented applications.

This product is intended for business-to-business (B2B) use and complies with relevant food safety regulations. It is naturally gluten-free, non-GMO, and suitable for dry storage. The product is supplied in bulk packaging with batch-wise quality control and COA support.

1. Physical & Chemical Parameters

	Parameter	Result
1.1	Purity	≥ 99%
1.2	Moisture	≤ 10.0%
1.3	Foreign Matter	≤ 0.2%
1.4	Water Content	Max. 10%
1.5	Ash Content	Max. 3%
1.6	Stones, Metal, Glass, and Plastic	Absent
1.7	Color	Pale yellow to creamy white
1.8	Odor	Characteristic, free from musty or rancid smell
1.9	Taste	Neutral
1.10	Gluten Free	Naturally gluten-free
1.11	Vegan	Suitable for vegan and vegetarian diets

All processing steps follow ISO 22000:2018, HACCP principles, and EU food safety regulations including packaging contact compliance (EC 1935/2004, EC 10/2011).



2. Microbiological Parameters

	Parameter	Result
2.1	Total Plate Count	< 1.000.000 CFU/g
2.2	Yeast & Mold	< 1.000 CFU/g
2.3	Salmonella spp.	Absent in 25g
2.4	Escherichia coli	< 10 CFU/g
2.5	Coliforms	< 5.000 CFU/g
2.6	Aflatoxin (B1, B2, G1, G2)	As per EC 1881/2006

3. Chemical & Nutritional Parameters

	Parameter	Result
3.1	Protein	13–15g
3.2	Energy	370 kcal per 100g
3.3	Fat	6–8g
3.4	Carbohydrate	60–65g
3.5	Dietary Fibre	7–9g

4. Contaminants & Residues

	Parameter	Result
4.1	Pesticide Residue	As per EC Regulation (EC) No 396/2005
4.2	Heavy Metals	Within EU limits (Pb, Cd, As, Hg)
4.3	Allergens	Free from 14 major allergens as listed in Annex II of EU Regulation (EU) No. 1169/2011.

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5. Processing Conditions & Controls

	Parameter	Result
5.1	Heat Treatment	None applied; processed under ambient temperature (< 40°C)
5.2	Metal Detection Sensitivity	Fe 1.5 mm / Non-Fe 2.0 mm / SS 2.5 mm
5.3	Sieves Used	1 mm and 2 mm mesh during cleaning and grading
5.4	Foreign Matter Prevention	Destoner, gravity separator, color sorter, metal detector

6. Packaging Details

All packaging is suitable for direct food contact and export compliant. Custom labeling and palletization available as per buyer's requirement.

7. Storage & Shelf Life

Storage: Cool, dry place, away from sunlight and pests

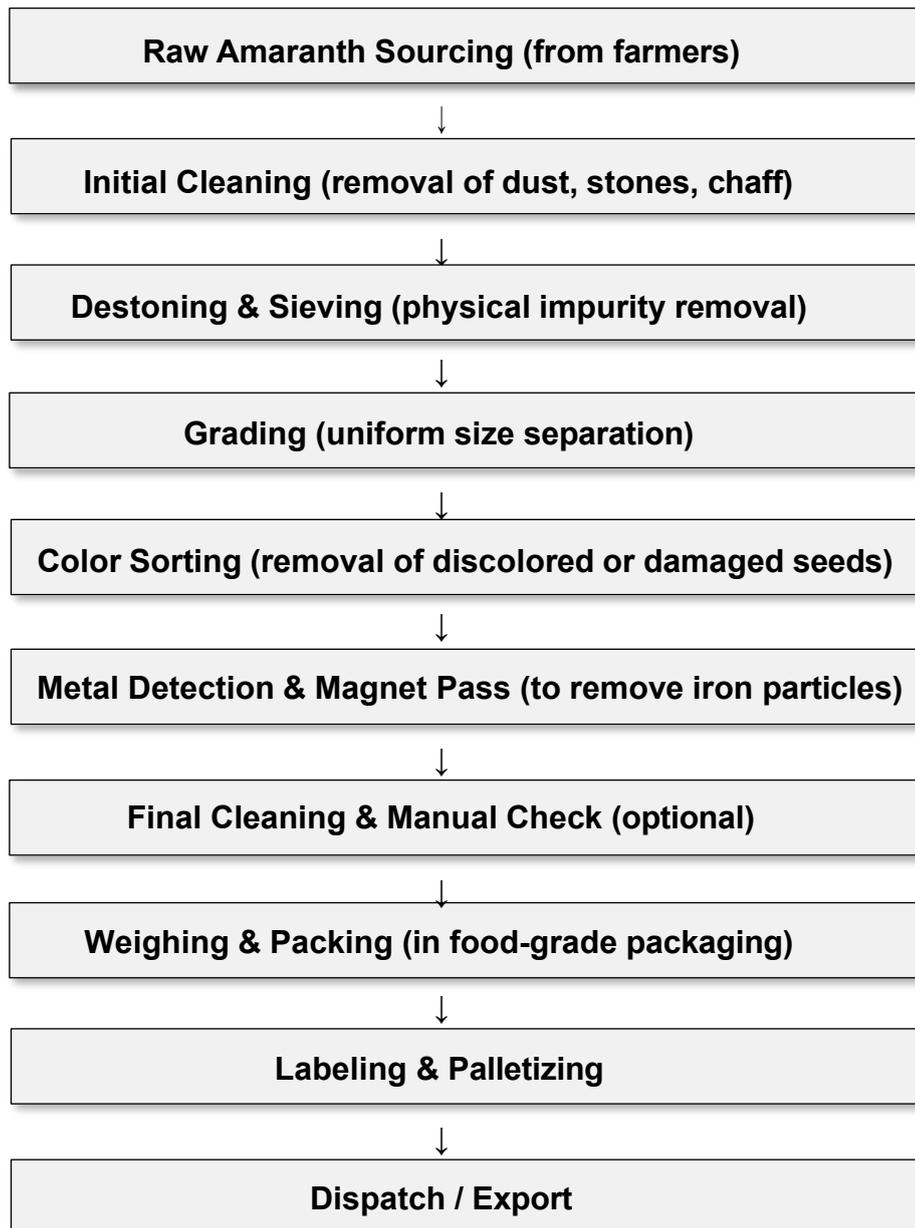
Shelf Life: 12 months from date of packing (can extend up to 18 months under ideal storage)

Contact & Approvals	Authorized By
<p>For further information, documents, or samples, please contact:</p> <p>Patel Agro Foods Industries Email: info@patelagrofoods.com Website: www.patelagrofoods.com</p>	<p>Name: Arjanbhai Patel Designation: Proprietor Signature and Stamp:</p>

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PROCESS FLOW CHART (AMARANTH)



All processing steps follow ISO 22000:2018, HACCP principles, and EU food safety regulations including packaging contact compliance (EC 1935/2004, EC 10/2011).

Amaranth (Conventional)**1. Raw Material Procurement**

Amaranth seeds are procured directly from approved farmer groups. Each incoming lot is documented and inspected for visible contamination and traceability.

2. Pre-Cleaning

Seeds are passed through a sieve separator to remove large impurities such as straw, leaves, pods, and other coarse materials.

3. Destoning and Air Classification

A destoner separates heavy particles like stones and glass, while air blowers remove lightweight impurities such as husk and dust.

4. Magnet Detection

Seeds pass through **high-intensity magnets** ($\geq 10,000$ Gauss) to eliminate ferrous metal fragments before further processing.

5. Fine Cleaning and Sieving

Precision sieving removes remaining fine particles and aligns the seed size for uniformity.

6. Grading

Seeds are graded by size to enhance purity and visual consistency for food and oil-use applications.

7. Color Sorting (Optical Sorting)

A digital color sorter removes discolored, burnt, or defective seeds using camera-based technology.

8. Metal Detection

A final **metal detector** (multi-frequency) screens for both ferrous and non-ferrous particles prior to packaging.

9. Final Manual Sorting (if required)

Manual visual inspection is conducted for high-purity lots or upon customer request.

10. Packaging

Seeds are packed in **food-grade, export-compliant bags** (25 kg paper bags or FIBC with inner liners), labeled with product name, batch number, and shelf life.

11. Palletization and Storage

Bags are stacked on sanitized pallets and stored in a clean, ventilated, pest-monitored warehouse under dry conditions.

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12. Dispatch

Each batch is tested for quality and safety parameters. A **Certificate of Analysis (COA)** is provided along with export documents before shipment.

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