Chopped leaf 10–40 mm	Steam-blanched, peroxidase-negative	24 months at −18 °C (bulk); 12 months on retail packs	Free-flowing, no additives	Lead ≤ 0.30 · Cd ≤ 0.20 mg/kg	FSSC 22000 · FSSAI · APEDA · IEC

1. Product

Product	IQF Chopped Spinach
Description	Washed, steam-blanched, chopped and individually quick frozen spinach leaf (Spinacia oleracea), pieces 10–40 mm, free-flowing, no additives. Whole-leaf IQF available on request.
Ingredients	100 % spinach
Variety	Flat-leaf spinach varieties, conventionally grown — not organic
Origin	Grown by Sunshine's own and contract farms and approved growers in Uttar Pradesh, India, against Sunshine's raw-material specification; processed at Sikandrabad. Product of India.
Process	Raw-material intake → Washing → Inspection → Steam blanching → Cooling and dewatering → Chopping → IQF freezing → Inspection and metal detection → Packing and coding → frozen storage at −18 °C
Intended use	Ingredient for further cooking or processing — not ready-to-eat; cook before consumption. Suitable for the general population.
Classification	HS 0710.30 (spinach, frozen) · FSSAI category 4.2.2.1 frozen vegetables

2. Physical and organoleptic specification (500 g frozen sample; sensory after cooking)

Parameter	Specification	Method	Frequency
Piece size	Chopped leaf 10–40 mm	Visual, 500 g	Every lot
Stem content	≤ 15 % w/w (stems > 3 mm diameter)	Hand-separation, 500 g	Every lot
Colour	Uniform dark green; yellow or brown leaf ≤ 2 % w/w	Visual against reference	Every lot
Flavour and odour (after cooking)	Characteristic; no off-flavours	Sensory, cooked 100 g	Every lot
Free-flowing / clumps	≥ 90 % free-flowing pieces; clumps ≤ 5 % w/w	Visual, 500 g	Hourly
Sand and grit	Nil visible; acid-insoluble ash ≤ 0.1 %	Visual; ash on request	Hourly / on request
Foreign material	Nil	Visual, 500 g	Hourly
Extraneous vegetable matter (weeds, other plants)	≤ 0.5 % w/w	Visual, 500 g	Hourly
Product temperature	≤ −18 °C core at packing and at dispatch	Probe thermometer, per pallet	Every lot

3. Chemical specification and declarations

Parameter	Specification	Method	Frequency
Blanching	Peroxidase test negative	Codex guaiacol method / IS 4624	Every lot
Nitrate	≤ 2,000 mg/kg (Reg. (EU) 2023/915 limit for frozen spinach)	Ion chromatography, external	Per season and on request
Additives	None — no preservatives, colours, sulphites or processing aids	Declaration	—
Pesticide residues	Grown under Sunshine's package of practices: approved-input list issued to every contract farmer, pre-harvest intervals controlled plot by plot, spray records held per plot. Within FSSAI limits and, for export, the MRLs of Reg. (EC) 396/2005 or the destination market. Multi-residue screen by a NABL-accredited laboratory each crop season; per-lot analysis on request.	NABL laboratory	Per season
Heavy metals	Lead ≤ 0.30 mg/kg; cadmium ≤ 0.20 mg/kg (leaf vegetables (spinach)) — Codex CXS 193 / Reg. (EU) 2023/915 / FSSAI	ICP-MS, NABL laboratory	Six-monthly
Allergens	None of the allergens listed by FSSAI or in Annex II of Reg. (EU) 1169/2011 present; no allergenic materials handled on the line	Declaration	—
GMO / irradiation	Non-GMO; not irradiated	Declaration	—
Dietary status	Vegan and vegetarian; suitable for Halal and Kosher diets by nature	Declaration	—

4. Microbiological specification (product as dispatched)

Organism	Limit	Method	Frequency
Aerobic plate count (30 °C)	≤ 5×10^5 cfu/g	ISO 4833-1	Every lot
Enterobacteriaceae	≤ 1×10^3 cfu/g	ISO 21528-2	Every lot
Escherichia coli	< 10 cfu/g	ISO 16649-2	Every lot
Coagulase-positive staphylococci	≤ 1×10^2 cfu/g	ISO 6888-1	Every lot
Yeasts and moulds	≤ 5×10^3 cfu/g	ISO 21527-1	Every lot
Bacillus cereus	≤ 1×10^3 cfu/g	ISO 7932	Monthly
Clostridium perfringens	≤ 1×10^2 cfu/g	IS 5887 (Part 4)	Six-monthly

Organism	Limit	Method	Frequency
Salmonella spp.	Absent in 25 g	ISO 6579-1	Every lot
Listeria monocytogenes	Absent in 25 g	ISO 11290-1	Every lot
Escherichia coli O157:H7	Absent in 25 g	ISO 13136	Six-monthly
Vibrio cholerae	Absent in 25 g	ISO 21872-1	Six-monthly

"Every lot" parameters are reported on the Certificate of Analysis issued with each lot; the remainder are verified by an external NABL-accredited laboratory. Tighter customer limits can be agreed per contract.

5. Nutritional information (typical values per 100 g)

Energy	Fat	of which saturates	Carbohydrate	of which sugars	Fibre	Protein	Salt
97 kJ / 23 kcal	0.4 g	0.1 g	1.4 g	0.4 g	2.2 g	2.9 g	0.2 g

6. Packaging, palletisation and container loading

Format	Primary pack	Case	Cases / pallet ISO / Euro	Net per pallet ISO / Euro	Net per 40′ HC ISO / Euro
Export bulk 10 kg	10 kg in blue food-grade LDPE liner	5-ply carton 400 × 300 × 230 mm	81 / 72	810 / 720 kg	16.2 / 16.6 MT
Export bulk 25 kg	25 kg in LDPE liner	PP-woven bag with liner	35 / 28	875 / 700 kg	17.5 / 16.1 MT
Foodservice 4 × 2.5 kg	4 × 2.5 kg printed PE bags	Carton 400 × 300 × 250 mm	72 / 64	720 / 640 kg	14.4 / 14.7 MT
Retail 1 kg	Pillow pouch, EAN-13, private label	Carton 8 × 1 kg, 400 × 300 × 250 mm	72 / 64	576 / 512 kg	11.5 / 11.8 MT
Retail 400 g / 500 g	Pillow pouch, EAN-13, private label	Carton 16 × 400 g or 16 × 500 g	72 / 64	576 / 512 kg	11.5 / 11.8 MT
Domestic bulk 25 kg	25 kg in LDPE liner, HDPE woven bag, stitched	India only	35 / 28	875 / 700 kg	—

Pallets: ISPM-15 heat-treated wood — ISO 1000 × 1200 mm (GCC, Southeast Asia, India), Euro 800 × 1200 mm (EU / UK), GMA 48 × 40 in (North America); maximum height 2.2 m; stretch film, four corner boards, top cap; GS1-128 pallet label with SSCC. Container figures are for a 40′ High-Cube reefer, 20 ISO or 23 Euro pallet positions, subject to the destination's road-weight limit. Octabin 1,000 kg on request. Case marking: product and cut, net weight, lot code, manufacture and best-before dates, storage instruction, "Cook before consumption", "Product of India", manufacturer and FSSAI licence, ITF-14; consumer packs carry EAN-13 and destination-market label text.

7. Shelf life, storage and dispatch

Shelf life	Bulk and foodservice packs: 24 months from the date of manufacture at ≤ −18 °C. Retail consumer packs: 12 months from the date of packing at ≤ −18 °C. Do not refreeze after thawing.
Storage	Held at −18 °C in Sunshine's 3,600 MT frozen store with continuous temperature monitoring; FIFO by lot.
Dispatch	Product core ≤ −18 °C, probed per pallet. Export containers are pre-trip inspected, stuffed and sealed at the Sunshine plant, set at −18 °C (−20 / −21 °C on instruction), vents closed, fitted with three temperature dataloggers whose IDs appear on the packing list, and railed from ICD Dadri to Mundra or Nhava Sheva (JNPT). Seal, setpoint and load photographs accompany the shipping advice.
Terms and documents	FOB Mundra / Nhava Sheva; CFR, CIF or DAP on request. Commercial invoice, packing list, bill of lading, certificate of origin, Certificate of Analysis per lot, and health or phytosanitary certificates where the destination requires them.

8. Traceability, quality assurance and contact

Lot code	Every pack carries a lot code (format L1 J1 DD M YY NNN: line, product code, day, month, year, batch) that resolves in Sunshine's traceability system to the farmer and plot, sowing and harvest dates, the plot's inputs and spray records, the cold-store chamber and the IQF production run. Records are retained for the shelf life plus one year.
Quality system	FSSC 22000 (GFSI-recognised) certified food safety management system; FSSAI licences 12724999000263 and 12721054000020; APEDA registered exporter (RCMC) and IEC holder. Metal detection on every pack (Fe 1.0 mm, non-Fe 1.2 mm, stainless 1.8 mm test pieces). Certificate of Analysis with every lot; retention samples held for the shelf life; customers notified 30 days before any change to this specification.
Export desk	Sagar Deswal, CEO · +91 80779 24395 (WhatsApp) · sagardeswal@sunshinevegetables.com · 09:00–19:00 IST, Monday to Saturday