

Product Name:	Bulk Freeze-dried Rose Petals	Origin:	Tamil Nadu & Karnataka, India
Botanical Name:	<i>Rosa damascena</i> / <i>Rosa centifolia</i>	HS Code:	0603.90.00 / 1211.90.92
Processing Method:	Cryogenic Vacuum Lyophilization	Quality Grade:	Commercial Export Grade A1

1. PRODUCT DESCRIPTION & OVERVIEW

Bulk Freeze-dried Rose Petals manufactured and exported by Passaro International (Chennai, India) are produced from fresh, hand-harvested Indian damask and tea roses. Through advanced industrial sublimation (lyophilization) at temperatures ranging from -40°C to -50°C under deep vacuum, moisture is converted directly from solid ice to gas. This gentle preservation method ensures complete retention of the natural 3D cellular structure, vibrant crimson/pink anthocyanin pigments, and essential botanical oils without thermal degradation or chemical preservatives.

2. PHYSICAL & CHEMICAL SPECIFICATIONS

Parameter	Specification / Acceptance Limit	Test Method Reference
Appearance & Form	Whole, unblemished, 3D structural petal geometry	Visual Inspection / Orgoleptic
Color Profile	Deep Crimson Red, Passion Pink, Creamy White (100% Natural)	Spectrophotometric / Colorimeter
Odor & Flavor	Characteristic fresh floral rose scent, clean, subtle sweet notes	Organoleptic Evaluation
Moisture Content	≤ 5.0% w/w	Karl Fischer Titration / Loss on Drying
Bulk Density	40 g/L – 60 g/L (Low volumetric density)	ISO 697 Standard
Purity / Foreign Matter	≥ 99.5% Purity / < 0.5% Extraneous Botanical Matter	Manual Gravimetric Sorting
Water Activity (a_w)	≤ 0.30 at 25°C	Chilled Mirror Dew Point Hygrometer
Additives / Preservatives	100% Pure Natural Petals (Zero Dyes, Sulfites, or Synthetics)	HPLC Analysis

3. MICROBIOLOGICAL STANDARDS & CONTAMINANT LIMITS

Microbiological Parameter	Limit (CFU/g)	Heavy Metal / Contaminant	Maximum Permissible Limit
Total Plate Count (TPC)	< 10,000 CFU/g	Lead (Pb)	≤ 2.0 mg/kg (ppm)
Yeast & Mold	< 100 CFU/g	Arsenic (As)	≤ 1.0 mg/kg (ppm)
Coliforms	< 10 CFU/g	Cadmium (Cd)	≤ 0.2 mg/kg (ppm)
<i>Escherichia coli</i>	Absent in 25g	Mercury (Hg)	≤ 0.05 mg/kg (ppm)
<i>Salmonella spp.</i>	Absent in 25g	Pesticide Residues	Complies with EU & FDA MRL limits
<i>Staphylococcus aureus</i>	Absent in 10g	Aflatoxins (B1+B2+G1+G2)	≤ 4.0 µg/kg (ppb)

4. EXPORT PACKAGING & CONTAINER LOADABILITY DATA

Packaging Tier	Material Specification	Configuration / Weight
Primary Packaging	Food-grade, high-barrier aluminium foil pouch, vacuum-sealed & nitrogen-flushed	1.0 kg or 5.0 kg Net Weight per Pouch
Secondary Packaging	Double-walled heavy-duty 5-ply corrugated export master carton with poly-liner barrier	60 cm × 40 cm × 40 cm Net: 5.0 kg Gross: 6.5 kg
20ft FCL Capacity	Standard palletized shipment (ISPM-15 heat-treated wooden/plastic pallets)	1,800 kg – 2,200 kg Net Weight
40ft HC FCL Capacity	High-Cube palletized/stacked export shipment	4,500 kg – 5,200 kg Net Weight

Storage & Handling Protocol:

Store in original unopened packaging under cool, dry conditions (< 25°C / 77°F, Relative Humidity < 50%). Keep away from direct sunlight, ambient heat sources, and strong aromatics. Because freeze-dried botanicals are highly hygroscopic, reseal moisture-barrier bags immediately after opening.

5. INDUSTRIAL APPLICATIONS & REGULATORY COMPLIANCE

Key Commercial Uses:

- **Cosmetics & Personal Care:** Facial scrubs, soaps, bath bombs, botanical hydrosols.
- **Food & Beverage:** Herbal tea blends, artisanal confectionery, gourmet pastries, craft cocktails.
- **Luxury Events:** 100% biodegradable wedding confetti, table decor, aisle runners.

Certifications & Compliance:

- **FSSAI** Licensed Food Business Operator
- **ISO 22000** Food Safety Management System
- **APEDA** Registered Agricultural Exporter
- Phytosanitary & Certificate of Origin Issued per Batch

Passaro International — Commercial Sales & Export Division

87, Babu Nagar III Main Road, Medavakkam, Chennai 600100, Tamil Nadu, India

Global Supplier of Freeze-Dried Botanicals & Plant Extracts

Email: sales@passarotrading.com

Phone / WhatsApp: +91 9962 002500

Web: www.passarotrading.com