No. 2-C. Muhavoor Road, SEITHUR, RAJAPALAYAM - 626 121, TAMILNADU, INDIA

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# **Technical Data Sheet**

**Product Name Cardamom Oil** 

**Our Product Number CAD 5000** :

**Country of Gathering** India

**Country of Manufacturing** India :

**Colour and Appearance** Clear, pale yellow liquid :

Odour Characteristics odour of Cardamom Seed, :

spicy and camphorous

**Botanical Name** Elletaria Cardamom L. Maton :

**Botanical Family** : Zingiberaceae

**Preparation** Essential Oil of *Elletaria Cardamom L*. :

> Maton (Zingiberaceae) obtained by steam distillation of dried and crushed cardamom

fruit. No chemical process is involved.

**Solubility** 1 volume of cardamom oil shall not :

require more than 6 volumes of 70% ethanol to

give hazy solution

Refractive Index at 25°C 1.462 - 1.476:

Optical Rotation at 25°C :  $+22^{\circ}$  to  $+44^{\circ}$ 

Specific Gravity at 25°C 0.917 - 0.947

Acid Value (as mg KOH/g Oil)  $\leq$  7.0

Ester Value (as mg KOH/g Oil) 92-150

**Flash Point** 56.67 °C (134.01 °F) - Closed Cup :

188 °C **Boiling Point** 

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# **Registry Numbers:**

CAS	EINECS	FEMA	FDA
8000-66-6	288-922-1	2241	21 CFR 182.10,582.20

Chromatographic Profile of Main Chemical Components of Cardamom Oil (GC/GC-MS):

Components	CAS	Odour	Min %	Max %
Sabinene	3387-41-5	Woody terpene citrus, pine spice	2.00	6.00
1,8-Cineole	470-82-6	Eucalyptus herbal camphor medicinal	30.00	40.0
Linalool	78-70-6	Citrus floral sweet bois de rose woody green blueberry	1.00	2.00
Terpineol-4	562-74-3	Pepper woody earth musty sweet	1.00	6.00
Z-citral	5392-40-5	Sharp lemon sweet	0.10	1.00
Nerol	106-25-2	Sweet natural neroli citrus magnolia	1.00	5.00
α-Terpinyl acetate	80-26-2	Sweet, herbal bergamot lavender lime citrus	30.00	45.00
β-Selinene	17066-67-0	Herbal	1.00	3.00
Nerolidol	7212-44-4	Floral green waxy citrus woody	1.00	3.00
TDI 1 1 1000/ /		4 47	1	

These being 100% natural and pure products, the percentage number of above components are subject to changes.

# **Crop Harvesting Season:**

August to January

# **Certification:**

Hindu, Halal, Kosher (Pareve/Passover)

### **Classification:**

Natural and Food Grade

# **Tenacity on a Smelling Strip:**

2 days

# **Additive and Colour:**

Not added

# **Genetically Modified Organisms:**

To the best of our knowledge, this product is not manufactured from genetically modified organisms or their derivatives.

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# **Allergens Declaration:**

To the best of our knowledge, this product does not contain nor is derived from any food allergens, including Cereals containing gluten, Crustaceans, Egg, Fish, Peanuts, Soybean, Milk, Buck Wheat, Celery, Mustard, Sesame Seeds, Sulfur dioxide and Sulfites Mollusks, Lupine, Tree nuts

# Spongiform Encephalopathy or Transmissible Spongiform Encephalopathy Declaration:

To the best of our knowledge, this product is not produced from bovine or caprine sources or raw materials and does not contain any bovine spongiform encephalopathy or transmissible spongiform encephalopathy.

#### Other Declaration:

This product has not been (a) Exposed to Ionizing Radiation,(b) Derived from Sewage Sludge, and (c) Treated with Ethyl Oxide

# **Heavy Metals:**

Tested for Lead (Pb), Copper(Cu), Arsenic(As), Tin(Sn), Cadmium(Cd), Mercury(Hg), Nickel(Ni), Iron(Fe), Calcium(Ca), Sodium(Na), Potassium(K), Antimony(Sb), Barium(Ba).

### **Pesticides Residue:**

# Organo Chlorine:

Tested for Aldrin,  $\alpha$  –HCH,  $\beta$  –HCH, Trans- Chlordane, Cis-Chlordane,  $\delta$  –HCH, Lindane, Dicofol, Dieldrin,  $\alpha$  –Endosulfan,  $\beta$  –Endosulfan, Endosulfansulphate, Endrin, Heptachlor, Hexachlorobenzene.

#### Organo Phosphorus:

Tested for Chlorfenvinphos, Chlorpyrifos, Chlorpyrifos – methyl, Diazinon, Dichlorvos, Dimethoate, Ethion, Fenthion, Formothion, Malathion, Malaoxon, Monocrotophos, Parathion.

#### **Toxins & Contaminants:**

Tested for Aflatoxin B1, Aflatoxin B2, Aflatoxin G1, Aflatoxin G2, Aflatoxin M1, Ochratoxin A, Benzo(a)Pyrene, Benzo(a)Anthracene.

#### Phthalate:

Tested for Benzyl Butyl Phthalate, Bis(2-ethylhexyl) Adipate, Bis(2-ethylhexyl) Phthalate, Dibutyl Phthalate, Diethyl Phthalate, Dimethyl Phthalate, Di-n-octyl phthalate will be below detection range

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# Microbiology:

Tested for Yeast & Mould, E.Coli, Coliforms, Staphylococcus Aureus, Salmonella Sp., Clostridium Perfringens, Bacillus Cereus, Listeria Monocytogenes, Pseudomonas Aeruginosa

#### **Residual Solvent:**

Tested for Tetrahydrofuran , 1,4-Dioxane , Trichloro ethylene , Hexanal , Xylene ,Orthoxylene , Meta & Para-Xylene , Methanol , Acetone , Dichloromethane ,Hexane , Ethyl acetate , Chloroform , Cyclohexane , Benzene , Toluene ,2-Propanol , 1,2-Dichloroehtane Methyl ethyl ketone , Butanol , Ethanol.

# **Nutrition Value:**

Total Carbohydrates 46.46 g/100 g, Energy 624.20 Kcal/100 g, Phosphorus 209.95 mg/100 g, Sugar (Mono & Disaccharides) 0.020 g/100 g, Starch 0.038 g/100 g, Protein 8.70 g/100 g, Ash 0.30 g/100 g, Dietary Fibre 0.028 g/100 g, Vitamin-A BDL (DL 0.01 mg/100 g), Vitamin-C 15.8 mg/100 g.

# **Dietary Preferences & Restrictions Declaration:**

Suitable for Vegans, Lacto-Vegetarians, Ovo-Vegetarians, Vegetarians.

# **Animal Testing Statement:**

This product is not tested on any animal

# **Stability and Application:**

Primarily used for seasoning foods, baked goods, frozen dairy, hard and soft candy, meat products, alcoholic beverages, nonalcoholic beverages and in small dosages in perfumery. Individual consumption 0.0046 mg/kg/day.

# **Storage Conditions:**

The oil is affected by light. Keep away from heat, sparks, open flames and hot surfaces, Use only non-sparking tools. Take precautionary measures against static discharge. Store at 18°C in well closed in air tight containers.

#### **Product Packaging:**

Aluminum Bottle with Narrow Neck: 0.25 Kg, 0.5 Kgs, 1 Kg, 2 Kgs, 5 Kgs, 10 Kgs, 25 Kgs

# **Outer Packing:**

Bubble Sheet, 20 mm Thickness Thermcool Sheet and 11 Ply Corrugated Plain Boxes are used for packing Aluminum Bottles

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Raw Material Image:



# **Product Image:**



**Images of Inner and Outer Packing:** 



TDS Approved By Dr RV Rajagopalan Manager (QA)

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