

## CARDAMOM SELECT OIL – CERTIFICATE OF ANALYSIS

COMPANY INFORMATION	
<b>Company Name</b>	Gramtarang Foods Private Limited
<b>Address</b>	D-206, KSR Green Valley, Madhavadhara, Visakhapatnam – 530 018, Andhra-Pradesh, INDIA
<b>Website</b>	<a href="http://www.gramtarangfoods.in">www.gramtarangfoods.in</a>
<b>Contact person</b>	Srinivas Vedula (Managing Director)
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GENERAL PRODUCT INFORMATION	
<b>Raw material</b>	ELETTARIA CARDAMOMUM
<b>Physical properties</b>	Our Cardamom select oil is sweet, spicy and almost balsamic in fragrance, is clear to pale yellow in color and slightly watery in viscosity
<b>Purity</b>	It does not contain any external additives and is not blended/formulated. No traces of heavy-metal, pesticide contamination, reproducible micro-organisms or any other organic solvents.
<b>Extraction method</b>	Super-Critical-Fluid-Extraction (CO <sub>2</sub> extraction)

QUALITY ANALYSIS REPORT	
<b>Specific gravity at 15° C</b>	0.9264 – 0.9349
<b>Refractive Index at 25° C</b>	1.4603 – 1.4620
<b>Optical rotation 25°C</b>	+15.1° TO +44.0°
<b>Acid value</b>	0.36 TO 1.3
<b>Saponification value</b>	96.5 TO 156.4

KEY ACTIVE INGREDIENTS - MAJOR	
<b>Terpinyl Acetate</b>	23.7% TO 55.1%
<b>1,8-Cineol</b>	13.9% TO 45.7%

**KEY ACTIVE INGREDIENTS - MINOR**

<b>Sabinene</b>	0.5% TO 3.9%
<b>Limonene</b>	0.8% TO 3.9%
<b>Linalool</b>	1.9% TO 3.4%
<b>Linalyl Acetate</b>	1.8% TO 6.1%
<b>Terpinene-4-ol</b>	0.3% TO 2.8%
<b>Alpha-terpineol</b>	0.9% TO 7.1%
<b>Trans – nerolidol</b>	0.0 % TO 1.8%
<b>Geraniol</b>	2.0% TO 2.29%