



# JOHN KELLYS (LONDON) LTD

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● Essential Oils ● Aromatic Chemicals ● Oleoresins ● Fragrances ● Flavors ● Functional ingredients

## TECHNICAL DATA SHEET

**PRODUCT: Chinese Tea Tree Oil**

**JK LOT NUMBER: 38140**

### 1. Product Identification

- Botanical Name: Melaleuca alternifolia
- INCI Name: Melaleuca Alternifolia (Tea Tree) Leaf Oil
- CAS No.: 68647-73-4; 85085-48-9
- FEMA No.: 3902
- EINECS No.: 285-377-1
- Extraction Method: Steam Distillation from Leaves
- Standard Reference: ISO 4730 (Terpinen-4-ol Type)

### 2. Physical & Chemical Properties

- Appearance: Clear, pale yellow to colorless mobile liquid
- Odor: Fresh, camphoraceous, spicy-herbaceous
- Specific Gravity (20°C): 0.885 – 0.905
- Refractive Index (20°C): 1.475 – 1.482
- Optical Rotation (20°C): +5° to +15°
- Flash Point: 57 – 60 °C (Pensky-Martens Closed Cup)
- Solubility: Insoluble in water; Soluble in alcohol, ether, and fixed oils

### 3. Typical Chemical Composition (ISO 4730 compliant)

Component	Typical Content	Specification Limit
Terpinen-4-ol	38.0%	> 36.0%
1,8-Cineole (Eucalyptol)	2.4%	< 4.5%
$\gamma$ -Terpinene	20.5%	10.0 – 28.0%
$\alpha$ -Terpinene	9.5%	5.0 – 13.0%
$\alpha$ -Pinene	3.0%	1.0 – 6.0%
Terpinolene	2.5%	1.5 – 5.0%
p-Cymene	1.5%	0.5 – 3.0%
Aromadendrene	0.5%	< 3.0%

### 4. Quality Specifications

#### Microbiology

- Total Aerobic Count: < 100 CFU/g
- Yeast & Mould: < 10 CFU/g
- E. coli, Pseudomonas, Staph. aureus, Candida albicans: Absent in 1g

#### Heavy Metals

- Lead (Pb): < 10 ppm
- Arsenic (As): < 2 ppm
- Mercury (Hg): < 1 ppm
- Cadmium (Cd): < 1 ppm

### 5. Stability & Storage

- Stability: Stable for min. 2 years when properly stored
- Storage Conditions: Cool, dry place; Protect from light, heat, and air
- Incompatibility: Avoid contact with plastics, rubber, and oxidizing agents

### 6. Applications

- Cosmetics (topical creams, lotions, soaps)
- Aromatherapy & Personal Care
- Natural Antiseptic & Anti-fungal formulations
- Household Cleaning Products

### 7. Safety & Handling (Summary)

- Flammable Liquid: Keep away from heat/sparks/open flames
- Skin Irritant: May cause irritation/sensitization in sensitive individuals
- Oral Toxicity: Harmful if swallowed; Do not ingest
- Eye Contact: Rinse immediately with plenty of water