

Chemical Constituents in *Litsea cubeba* Leaves from Different Countries

Major Components	Percentage %					
	Sarawak	Vietnam	India	Java	Taiwan	China
Beta-phellandrene	5 - 14					5
Sabinene	5 - 20	48				
Eucalyptol	50 - 60	23 - 52		50 - 66	50 - 66	14
Linalool		91	78	40 - 50		7
Citronellal	< 5			30 - 40		< 1
Terpineol	< 15	6 - 12				2

Chemical Composition of LitSara® Leaf Oil

No	Chemical Composition	Known Uses
1	1,8-Cineole / Eucalyptol	<ul style="list-style-type: none"> Decongestant / expectorant, effective against mouth bacteria, tick repellent, antibacterial, antifungal, anti-inflammatory, antioxidant, antiviral, astringent, promote wound healing. Used as an ingredient in some mouthwash and dental preparations, as an endodontic solvent, and may possess antimicrobial properties. Listerine® mouthrinse is a combination of essential oils (eucalyptol, menthol, thymol, methyl salicylate), which has been shown to be efficacious for the reduction of dental plaque and gingivitis.
2	Sabinene	<ul style="list-style-type: none"> Flavour and fragrance agent. Contributes to 'spiciness' in black pepper.
3	Terpinen-4-ol	<ul style="list-style-type: none"> Anti-asthmatic, antibacterial, expectorant
4	Beta myrcene	<ul style="list-style-type: none"> Perfumery application, analgesic effect, anti-inflammatory, sedative effect in very high doses.
5	Citronellal	<ul style="list-style-type: none"> Antibacterial, insect repellent, antifungal, anti-inflammatory, antiseptic, anti spasmodic, deodorant. insecticidal.
6	Alpha-Terpineol	<ul style="list-style-type: none"> Flavour and fragrance application.
7	Beta-phellandrene	<ul style="list-style-type: none"> Flavour and fragrance application.

Chemical Constituents in *Litsea cubeba* Fruits from Different Countries

Major Components	Percentage %		
	Sarawak	China	Thailand
D-limonene	< 16	7	
Citronellal	50 - 80	2	
Citral		64	76

Chemical Composition of LitSara® Fruit Oil

No	Chemical Composition	Known Uses
1	Citronellal	<ul style="list-style-type: none"> Antibacterial, insect repellent, antifungal, anti-inflammatory, antiseptic, anti spasmodic, deodorant. insecticidal.
2	D-Limonene	<ul style="list-style-type: none"> Antibacterial, anti-cancerous, expectorant, antispasmodic Shown to inhibit cholesterol synthesis by affecting the pathway that produces cholesterol.
3	Beta-Citronellol	<ul style="list-style-type: none"> Floral fragrance, insect repellent, mite attractant, pesticide intermediate. May cause skin sensitization.
4	Menthol	<ul style="list-style-type: none"> Provokes cooling sensation when inhaled, ingested or applied to skin, topical analgesic, decongestant, as pesticide against tracheal mites of honey bees, perfumery application to emphasize floral notes, antispasmodic agent. Applied in dental care products as topical antibacterial agent.
5	Butanoic acid, 3-methyl-1-ethenyl-1,5-dimethyl-4-hexenyl ester	<ul style="list-style-type: none"> Flavouring and fragrance agent.
6	Beta myrcene	<ul style="list-style-type: none"> Perfumery application, analgesic effect, anti-inflammatory, sedative effect in very high doses.