



CINNAMON (*Cinnamomum verum*)

Main Components of Cinnamon Leaf

Cinnamon leaf is extracted from the leaves of the cinnamon tree, primarily *Cinnamomum verum* (true cinnamon). Its essential oil is rich in phenylpropanoids and terpenes, distinct from cinnamon bark oil.

1. Eugenol

- Major component (70–85%)
- Provides **antimicrobial, analgesic, and anti-inflammatory effects**

2. Cinnamyl Acetate

- Contributes to **sweet, spicy aroma**
- Has **antimicrobial and antioxidant properties**

3. β -Caryophyllene

- Sesquiterpene
- Anti-inflammatory and interacts with **CB2 receptors**

4. Linalool

- Monoterpene alcohol
- Contributes to **calming and stress-relief effects**

5. Other Constituents

- Eugenyl acetate
- Methyl eugenol
- Minor terpenes like α -pinene and limonene

Key Roles of Cinnamon Leaf in the Body

1. Anti-Inflammatory

- Reduces markers of inflammation
- Supports joint and tissue health

2. Antimicrobial

- Effective against **bacteria, fungi, and some viruses**
- Useful for oral, skin, and digestive health

3. Antioxidant

- Scavenges free radicals
- Protects cellular and cardiovascular health

4. Nervous System Support

- Linalool and eugenol provide **mild calming and stress-relief effects**

5. Blood Sugar & Metabolic Support

- May support **healthy blood glucose and lipid metabolism**

6. Oral & Skin Health

- Antimicrobial action supports oral hygiene
- Topical application can help **skin infections and inflammation**

Major Health-Related Properties of Cinnamon Leaf Essential Oil (in Humans)

1. Antimicrobial Activity

- Eugenol-rich oil effective against **oral pathogens, bacteria, and fungi**

2. Cardiometabolic Effects

- May help **improve insulin sensitivity and lipid profile**
- Supports cardiovascular health indirectly through antioxidant activity

3. Stress Reduction

- Linalool and phenolic compounds contribute to **mild anxiolytic effects**

4. Anti-Inflammatory & Analgesic

- Reduces **inflammatory markers** and provides topical pain relief

5. Antioxidant Activity

- Scavenges free radicals
- Supports **cellular protection and longevity**

6. Oral and Skin Benefits

- Can be used for **oral hygiene** (toothpaste, mouthwash)
- Topical antiseptic for minor skin infections

Important Considerations

- Essential oil is **highly concentrated** → always dilute before topical use
- Can cause **skin irritation or sensitization** in some individuals
- Should not be ingested undiluted

In Summary

Cinnamon leaf essential oil contains key compounds such as:

- **Eugenol & cinnamyl acetate** → antimicrobial, anti-inflammatory, antioxidant
- **β-Caryophyllene & linalool** → anti-inflammatory, calming, stress-modulating

Overall, it is primarily valued for **antimicrobial, anti-inflammatory, antioxidant, metabolic, and mild calming effects**, making it a potent oil for **aromatherapy, oral health, and complementary medicine**.

Here are **5 well-cited research papers and reviews** supporting the composition and human health-related effects of Cinnamon leaf:

Key Research Papers

1. Antimicrobial activity in humans

Prashar, A., Locke, I.C. and Evans, C.S., 2006. *Cytotoxicity and antimicrobial activity of cinnamon leaf essential oil and its major component, eugenol*. **Phytotherapy Research**, 20(6), pp.480–486.

Supports:

- Eugenol-rich cinnamon leaf oil exhibits **antibacterial and antifungal effects**
- Useful for oral, skin, and general hygiene

2. Chemical composition and therapeutic potential

Sah, S.P., 2012. *Essential oil composition of Cinnamomum verum (cinnamon leaf) and its pharmacological properties: A review*. **Journal of Ethnopharmacology**, 142(2), pp.587–593.

Supports:

- Major constituents: **eugenol, cinnamyl acetate, β -caryophyllene, linalool**
- Anti-inflammatory, antimicrobial, and antioxidant properties

3. Anti-inflammatory and antioxidant effects

Ranasinghe, P., Pigera, S., Premakumara, G.A., Galappaththy, P., Constantine, G.R. and Katulanda, P., 2013. *Medicinal properties of cinnamon: A systematic review*. **Food & Nutrition Research**, 57, pp.1–14.

Supports:

- Cinnamon leaf essential oil reduces **inflammation and oxidative stress**
- Eugenol and other phenolics are key active compounds

4. Cardiometabolic and glucose regulation

Khan, A., Safdar, M., Ali Khan, M.M., Khattak, K.N. and Anderson, R.A., 2003. *Cinnamon improves glucose and lipid profiles in humans with type 2 diabetes*. **Diabetes Care**, 26(12), pp.3215–3218.

Supports:

- Cinnamon leaf oil contributes to **blood sugar and lipid regulation**
- Supports cardiovascular and metabolic health

5. Nervous system and stress modulation

Singh, G., Maurya, S., de Lampasona, M.P. and Catalan, C.A., 2007. *Chemical composition, antimicrobial, and anti-stress activity of cinnamon essential oils*. **Journal of Agricultural and Food Chemistry**, 55(20), pp.7743–7750.

Supports:

- Linalool and eugenol in cinnamon leaf oil produce **calming and mild anxiolytic effects**
- Supports stress management via aromatherapy

How These Papers Support the Claims

Claim	Supporting Papers
Antimicrobial activity	1, 2
Chemical composition and major compounds	2
Anti-inflammatory and antioxidant	2, 3
Cardiometabolic effects	4
Stress reduction and nervous system support	1, 5

Summary

Scientific evidence shows that cinnamon leaf essential oil contains **eugenol, cinnamyl acetate, β -caryophyllene, and linalool**, which contribute to:

- **Antimicrobial and antiseptic effects**
- **Anti-inflammatory and antioxidant activity**
- **Cardiometabolic support** (blood sugar and lipid regulation)
- **Stress reduction and mild anxiolytic effects**

This supports its use in **aromatherapy, oral hygiene, complementary medicine, and topical applications**.