

Cinnamon Leaf

Cinnamon leaf (*Cinnamomum Verum*) is known for its aromatic essential oil, which has been studied for various potential health benefits and applications. The leaves of cinnamon are medium in size, elongated, slender, oval to lanceolate in shape, and taper to a tip. When compared to cinnamon bark, they have a milder flavour and scent and are frequently dried. The leaf oil has a powerful, spicy, and musky aroma with strong notes of clove and citrus.

GC and GC–MS analysis of cinnamon leaf volatile oil showed the presence of 19 components accounting for 99.4% of the total amount. The major component was eugenol (87.3%) followed by bicyclogermacrene (3.6%), α -phellanderene (1.9%), β -caryophyllene (1.9%), aromadendrene (1.1%), p-cymene (0.7%) and 1,8-cineole (0.7%). (Singh et al., 2007)

Eugenol shows promise as a chemo-preventive and anticancer agent. Eugenol was found to be selectively toxic to cancer cells, such as HeLa cells, at the studied doses, while not significantly affecting normal cells. It is also shown to induce apoptosis in a dose-dependent manner in HeLa cells. This is considered a promising criterion for the development of therapeutic agents targeting cancer. (Hussain et al., 2011)

A study assessed the medicinal properties of Ceylon cinnamon leaves, focusing on their antioxidant and antidiabetic effects. The research measured the total polyphenolic content (TPC) and total flavonoid content (TFC) in Ceylon cinnamon leaves at various maturity stages. These leaves exhibited radical scavenging activity, with the ABTS test indicating the highest potency. The study also found out that cinnamon leaves demonstrated the highest anti-amylase activity, which is significant in diabetes management. Proanthocyanidins, a specific type of phenolic compound, were identified as potential contributors to the observed anti-amylase activity in cinnamon leaves. (Mendis Abeysekera et al., 2019)

The study of Lee et al. (2013) investigated the potential antidiabetic and pancreas-protective effects of cinnamon leaf essential oil, particularly focusing on the component, linalool. The study found that appropriate doses of cinnamon leaf essential oil, particularly the linalool chemotype, exhibited therapeutic potential in controlling blood glucose levels. The improved insulin secretion and the reduction in oxidative stress and inflammation in the pancreas suggest that CO may have a protective effect on pancreatic beta cells.

NOTES

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3. Mendis Abeysekera, W. P. K., Arachchige, S. P. G., Abeysekera, W. K. S. M., Ratnasooriya, W. D., & Indeewari Medawatta, H. M. U. (2019, July 18). Antioxidant and Glycemic Regulatory Properties Potential of Different Maturity Stages of Leaf of Ceylon Cinnamon (*Cinnamomum zeylanicum* Blume) In Vitro. *Evidence-Based Complementary and Alternative Medicine*, 2019, 1–10. <https://doi.org/10.1155/2019/2693795>
4. Lee, S. C., Xu, W. X., Lin, L. Y., Yang, J. J., & Liu, C. T. (2013, May 13). Chemical Composition and Hypoglycemic and Pancreas-Protective Effect of Leaf Essential Oil from Indigenous Cinnamon (*Cinnamomum osmophloeum* Kanehira). *Journal of Agricultural and Food Chemistry*, 61(20), 4905–4913. <https://doi.org/10.1021/jf401039z>