



Mango ginger (*Curcuma amada*): An important culinary and medicinal spice

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INTRODUCTION

Mango ginger (*Curcuma amada* Roxb.) is a significant member of the genus *Curcuma* and is referred to as such because of its raw, unripe mango-like scent and physical resemblance to ginger (*Zingiber officinale*). The term "amada" refers to the rhizome that has the distinct flavor of an unripe mango and is derived from the Bengali word "mango ginger." Mango ginger is a well-known aromatic plant used as mango flavoring as the rhizomes of mango ginger have the smell of raw-mango.



Field view of *Curcuma amada*

The plant habit of *Curcuma amada*, is a perennial rhizomatous herbaceous plant that grows erect to a height of about 80–90 cm. It has stout underground rhizomes with a mango-like aroma, and broad, decorative leaves that appear after the flowers emerge. The inflorescence arises from the base of the rhizome typically in spring, and the plant prefers high humidity, partial sun to partial shade, and well-drained sandy loam soil rich in organic matter. It grows luxuriantly in tropical climates and can be cultivated or found wild in tropical areas, especially in India.



Curcuma amada



Rhizomes of *Curcuma amada*

Active constituents

The active constituents of *Curcuma amada* include several important phytochemicals such as starch, phenolic acids, curcuminoids, volatile oils, and terpenoids. Key compounds found in the rhizome essential oil are amadaldehyde, labdane diterpene dialdehyde, difurocumenonol, zederone, and amadannulen. The essential oil mainly comprises monoterpenoids like myrcene (approximately 67.6–73%), along with (Z)-(Z)-Geranyl linalool, β-ocimene, and β-pinene. Oxygenated sesquiterpenes, including caryophyllene oxide, ar-turmerone, curzerenone, and others such as humulene epoxide, γ-eudesmol, and β-eudesmol are also prominent. The characteristic aroma and bioactivities of *Curcuma amada* are attributed to this complex mix of volatile aromatic compounds and curcuminoids.

Culinary and medicinal uses

Curcuma amada or mango ginger holds significant value in traditional and medicinal

uses, particularly in Ayurvedic and Unani medicinal systems. Traditionally, the rhizome is used as an appetizer, alexiteric (disease-preventing), antipyretic (fever-reducing), aphrodisiac, diuretic, emollient, expectorant, and laxative. It is employed to alleviate digestive issues, biliousness, skin diseases, respiratory disorders such as bronchitis and asthma, hiccough, and inflammation from injuries.

Medicinally, it is valued for its antioxidant, antibacterial, antifungal, anti-inflammatory, analgesic, and antiallergic activities. Traditional topical applications involve using a paste made from the rhizome for treating skin irritations, fungal infections, and wounds. Its use in joint pain and skin health has been documented in classical manuscripts and tribal healing traditions. Studies also indicate potential roles in liver protection and metabolic regulation.

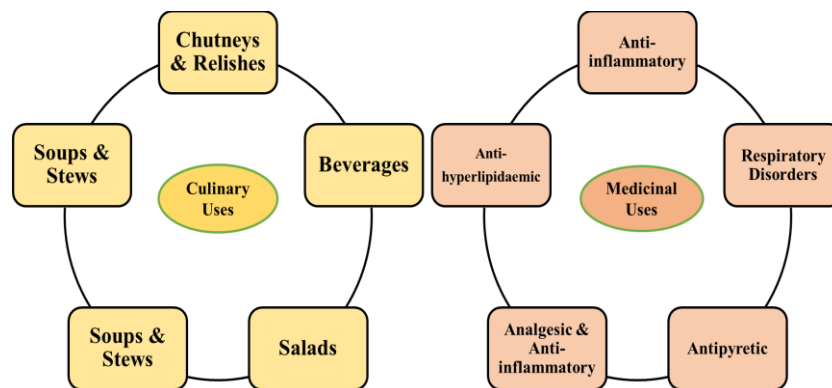


Fig.1 Culinary and medicinal uses of *Curcuma amada*

CONCLUSION

Curcuma amada, contains a rich profile of bioactive compounds including starch, phenolic acids, curcuminoids, and various volatile oils such as monoterpenoids and sesquiterpenes that contribute to its characteristic aroma and pharmacological activities. *Curcuma amada* represents a multifaceted medicinal spice whose traditional therapeutic uses are validated by scientific evidence. It offers promising applications in health and disease management, making it a valuable candidate for further pharmacological exploration and incorporation into integrative medicine.

CSIR-CIMAP working in CSIR-Phytopharmaceutical Mission to develop a good cultivar and Good agro practices for high yield and better performance of *Curcuma amada* and also extracting some of its compounds including Zerumin and labdane dialdehyde which can be used against hyperlipidemia.

REFERENCES

- K.P. Prabhakaran Nair, (2013) *The Agronomy and Economy of Turmeric and Ginger*, Elsevier, 13 - *The Ornamental Curcuma*, Pages 205-215, ISBN 9780123948014, <https://doi.org/10.1016/B978-0-12-394801-4.00013-2>.
- Nikita Bindal, Sujata Mohanty. A Review on Phytochemistry and Pharmacological Properties of *Curcuma amada* (Zingiberaceae). *Research & Reviews : Journal of Herbal Science*. 2024;
- Lenka J, Khuntia S, Kar B, Sahoo S. Metabolic profile, bioactivities, and variations in chemical constituents of essential oils of 20 mango ginger (*Curcuma amada*) accessions. *J App Biol Biotech*. 2023;11(6):147-157. <http://doi.org/10.7324/JABB.2023.129372>
- Lata Choudhary, Ritesh Jain, Satish Sahu. Mango Ginger – *Curcuma amada* – The Uncommon Spice with Uncommon Pharmacotherapeutic Potentials. *Research Journal of Pharmacy and Technology*. 2024; 17(3):1418-4. doi: 10.52711/0974-360X.2024.00225
- Lokesh Kumar Soni. Isolation and characterization of novel compounds from *Curcuma amada* Rhizomes: A phytochemical analysis. *J Pharmacogn Phytochem* 2025;14(5):102-107. DOI: 10.22271/phyto.2025.v14.i5b.15558
- Nikita Bindal, Sujata Mohanty, Inferring the antimicrobial potential of *Curcuma amada* rhizome through in-vitro, TLC-autobiography, molecular docking and ADME analysis, *The Microbe*, Volume 8, 2025, 100495, ISSN 2950-1946. <https://doi.org/10.1016/j.microb.2025.100495>.