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Cardamom–Queen of Spices

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Elettaria cardamomum, a member of the Zingiberaceae family of ginger, has long been used in traditional medicine. Cardamom's widespread use in Middle Eastern, Arabic, Indian, and even Swedish cuisines is proof of its appeal on a worldwide scale. Often referred to as the "Queen of Spices," it is one of the priciest spices worldwide and is mostly grown in countries of Southeast Asia, India, Sri Lanka, and Guatemala. Beyond its culinary appeal, cardamom's rich phytochemical composition—particularly its richness of phenolic compounds—makes it useful in the food, pharmaceutical, and cosmetic industries. *Elettaria cardamomum*, often known as "green" or "true cardamom," is a perennial herbaceous plant that is known to contain a number of bioactive compounds, including proteins, alkaloids, anthocyanins, starch, tannins, sterols, terpenoids, flavonoids, and phenols. These substances support a variety of its pharmacological characteristics, including as antibacterial, anticancer, anti-inflammatory, and antioxidant activities.

Origin

The monsoon forests of the Western Ghats in southern India, which are now renowned as the Cardamom Hills, are where cardamom grows natively. Before organized farming started some 200 years ago, these verdant woodlands were home to wild cardamom plants that provided the majority of the world's demand for ages. Known as the "Queen of Spices," the spice has been a part of Indian trade for more than a millennium, while black pepper was revered as the king. The plant still grows widely in the wild in India, where the golden-hued cardamom pods, like those kept in Kew's Economic Botany Collection, are native (Kamalaveni S 2019).

Chemical composition & flavor profile

Table 1. Chemical Composition of Cardamom

Chemical Composition	
Nutrient	**Amount (per 100g)**
Carbohydrate	68.5 g
Water	8.28 g
Energy	311 kcal
Protein	10.8 g
Fat	6.7 g
Fibre	28 g
Ash	5.78 g
Minerals	
Calcium	383 mg
Iron	14 mg

Magnesium	229 mg
Phosphorous	178 mg
Potassium	1120 mg
Sodium	18 mg
Calcium	383 mg
Iron	14 mg
Magnesium	229 mg
Vitamins	
Vitamin C	21 mg
Thiamin	0.198 mg
Riboflavin	0.182 mg
Niacin	1.1 mg
Vitamin B-6	0.23 mg
Fatty Acids	
Total Saturated	0.68 g
SFA 14:0	0.03 g
SFA 16:0	0.57 g
SFA 18:0	0.06 g
Total Monounsaturated	0.87 g
MUFA 16:1	0.02 g
MUFA 18:1	0.87 g
Total Polyunsaturated	0.43 g
PUFA 18:2	0.31 g
PUFA 18:3	0.12g

Source: (USDA, 2022) (SFA: Saturated Fatty Acids; MUFA: Monounsaturated Fatty Acids; PUFA: Polyunsaturated Fatty Acids)

Table 2. Essential Oils in Cardamom

Component	Total Oil (%)
α-Pinene	1.5
β-Pinene	0.2
Sabinene	2.8
Myrcene	1.6
α-Phellandrene	0.2
Limonene	11.6
1,8-Cineole	36.3
Terpinene	0.7
Cymene	0.1
Terpinolene	0.5
Linalool	3.0
Linalyl acetate	2.5
Terpinen-4-ol	0.9
α-Terpineol	2.6
α-Terpinyl acetate	31.3
Citronellol	0.3
Nerol	0.5
Geraniol	0.5
Methyl eugenol	0.2
Trans-nerolidol	2.7

Source: (Nair, 2020)

Medicinal Properties and Health Benefits of Cardamom (Kamalaveni S 2019)

Due to its many therapeutic uses, cardamom, an aromatic spice made from the seeds of Elettaria and Amomum species, has been prized in traditional medicine for ages. Often

referred to as the "Queen of Spices," it has exceptional healing, purifying, and digestive properties. Cardamom's beneficial effects on digestion are among its most well-known benefits. Essential oils included in the spice, like as limonene and cineole, encourage the release of digestive enzymes and help reduce gas, acidity, bloating, and indigestion. Additionally, it protects the stomach from infections and increases hunger and metabolism.

- Packed in bioactive substances like phenolics and catechins, cardamom has potent anti-inflammatory and antioxidant properties that support the body's fight against oxidative stress, inflammation, and chronic illnesses.
- Cardamom is prized for its respiratory properties as well. Its aromatic oils function as natural expectorants, clearing mucus, relieving asthma, colds, and coughs, and easing congestion in the respiratory system.
- By avoiding gum disease, tooth decay, and foul breath, its antimicrobial and antibacterial qualities promote oral health.
- Cardamom also has diuretic qualities, which encourage urine and aid in the kidneys' removal of urea, excess calcium, and toxins. Urinary infections, hypertension, and oedema may all benefit from its use. Potassium helps control blood pressure, which promotes heart health and lowers the risk of cardiovascular disease.
- Cardamom's peaceful scent provides a calming and uplifting influence on the mind in addition to its physical health advantages.
- Cardamom's detoxifying, antiseptic, and antimicrobial qualities make it useful for cleansing the body and boosting the immune system. It is also known to lower stress and anxiety, elevate mood, and in some cultures, be considered a natural aphrodisiac, which is thought to improve vitality and emotional well-being.
- In Ayurveda, cardamom is referred to as a "tridoshic" spice, which means it helps balance all three doshas—Vata, Pitta, and Kapha—maintaining overall harmony within the body. It also helps relieve respiratory and muscle spasms and acts as a natural body warmer, helping to ease headaches caused by colds.
- Incorporating tiny amounts of cardamom into everyday meals, teas, or spice blends provides a natural, comprehensive strategy to support mental, respiratory, and digestive health, though individual reactions may differ.

References

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