

PROMINENT USAGE OF CARDAMOM [*Elettaria cardamomum* L. (MATON)] FOR UPLIFTING INVIGORATING HEALTHCARE

Lalit Mohan⁴, KP Singh² and Raaz K. Maheshwari^{3*}

¹Department of Zoology, Dayalbagh Educational Institute, Agra, Uttar Pradesh, India

²Department of Genetics & Plant Breeding, School of Agriculture, Jaipur National University, Jaipur, Rajasthan, India

³Department of Chemistry, SBRM Govt PG College, Nagaur, Rajasthan, India

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Abstract

Cardamom is one of the most significant, valuable spices in the world. It consists of the small, highly aromatic pods or seed capsules of a perennial plant of the ginger family. Cardamom is a highly valued herbal spice that is used as a culinary spice in Asian cuisines because of its intrinsic flavoring capacity. Moreover, when used as a home remedy it helps cure various ailments like indigestion, nausea, lightheadedness, etc. Cardamom has various chemical compounds that include pinene, sabinene, myrcene, phellandrene, limonene, cineole, terpinene, cymene, terpinolene, linalool, linalyl acetate, terpinen-4-ol, terpineol, terpineol acetate, citronellol, nerol, geraniol, methyl eugenol and trans-nerolidol. It is useful for curing dental diseases and urinary tract infections such as cystitis, nephritis, and gonorrhoea. Cardamom possesses aphrodisiac properties and is also used as a cure for impotence, erectile dysfunction, and premature ejaculation. It possesses antiseptic, aphrodisiac, carminative, digestive, diuretic, stimulant, stomachic, tonic and anti-spasmodic.

Keywords

Cineole, Linalool, Aphrodisiac, Carminative, Geraniol.

INTRODUCTION

The cardamom [*Elettaria cardamomum* L. (Maton)] belonging to family Zingiberaceae contains tiny, brown aromatic seeds and is one of the most important spices. *Elettaria cardamomum*, commonly known as green or true cardamom, is a herbaceous, perennial plant in the ginger family, native to southern India. It is the most common of the species whose seeds are used as a spice called cardamom. It is cultivated widely in tropical regions and reportedly naturalized in Réunion, Indochina, and Costa Rica. It is also known as “Queen of Spices” in India and “Hel” in Iran,

Saudi Arabia, Kuwait, United Arab Emirates, Iraq, because of its very pleasant aroma and taste. This aromatic spice is straw-green to bright-green in color with small, black seeds inside a pod. The fibrous, oval pod has about 8 to 16 seeds. [1-3] There is another variety of this herb, that is, Black Cardamom (*Cardamomum amomum*) which is mostly found in Asia and Australia. Cardamom is the third most expensive spice in the world. The seeds have a sweet aroma and slightly pungent taste. Its essential oil is obtained by steam distillation of cardamom seeds. The oil and left over resin is used in processed foods, liqueurs and perfumes.

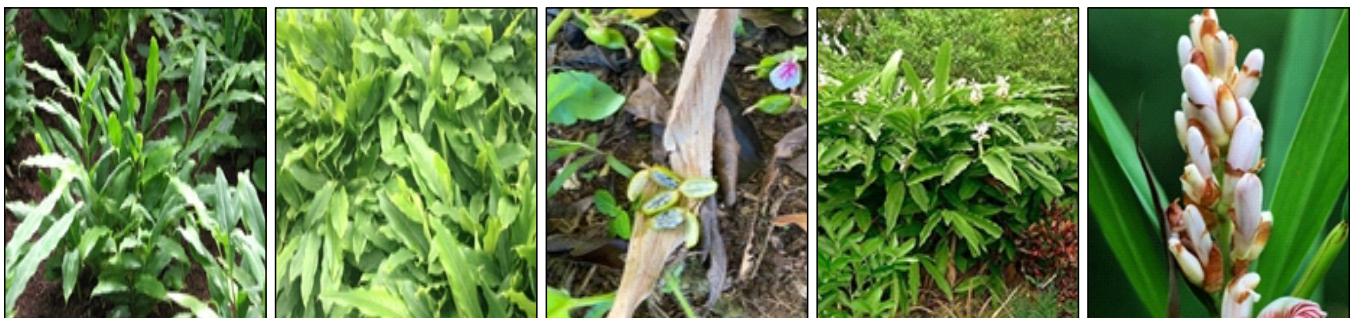


Figure 1: Cardamom plant, leaves, Inflorescence.

Cardamom is found in the form of a small pod with black seeds inside. Both the seeds and the pod give a pleasant aroma and flavor. Therefore, they are used as flavoring agents in Indian cuisine. Its use is just not just limited to hot and spicy dishes; the seeds are also added to desserts and beverages to complement the sweet flavor. Cardamom tea is a very famous beverage, along with ginger tea, in India. In India, cardamom was traditionally considered as an herb and was one of the ingredients in Ayurveda and traditional Chinese medicine. It was believed to be a remedy for teeth and gum infections, throat problems, congestion of the lungs, pulmonary tuberculosis, inflammation of the eyelids, gastrointestinal disorders, disintegrating kidneys, and gallbladder stones, and was also used as an antidote for poisons and venoms. [4-5] Cardamom is packed with antioxidants. There are two kinds

of cardamoms, green and black. Black cardamoms help in curing colds and cough and certain respiratory problems. It imparts warmth to the body. Due to its strong aroma, it helps in activating our taste and sensory elements and thus, aid digestion. The floral and sweet aroma of cardamoms makes it a natural breath freshener. A major component of cardamom oil called cineole is known for its antimicrobial properties that promote oral hygiene and it also fights bacteria that cause bad breath. Cardamom is known to increase the blood circulation in your body and especially to your lungs and so, is often used as a natural remedy for respiratory disorders. It maintains vitality and keeps your energy levels up. Black cardamom is often touted as an effective remedy for treating high blood sugar levels. Cardamom is rich in manganese which helps in controlling blood sugar levels.[6-7]

Table 1: Nutritional profile of cardamom.

Principle	Nutrient Value	Percentage Of Rda
Energy	311 Kcal	15.5%
Carbohydrates	68.47 g	52.5%
Protein	10.76 g	19%
Total Fat	6.7 g	23%
Cholesterol	0 mg	0%
Dietary Fiber	28 g	70%
VITAMINS		
Niacin	1.102 mg	7%
Pyridoxine	0.230 mg	18%
Riboflavin	0.182 mg	14%
Thiamin	0.198 mg	16.5%
Vitamin A	0 IU	0%
Vitamin C	21 mg	35%
ELECTROLYTES		
Sodium	18 mg	1%
Potassium	1119 mg	24%
MINERALS		
Calcium	383 mg	38%
Copper	0.383 mg	42.5%
Iron	13.97 mg	175%
Magnesium	229 mg	57%
Manganese	28 mg	1217%
Phosphorus	178 mg	25%
Zinc	7.47 mg	68%

CHEMICAL CONSTITUENTS IN CARDAMOM

Cardamom contains essential volatile oil which is made up of monoterpene constituents, such as 1,8-cineole, α -pinene, α -terpineol, linalool, linalyl acetate, and nerolidol and the ester constituent α -terpinyl acetate which exhibit vascular

relaxant, anti-inflammatory, analgesic, antimicrobial, antioxidant and antispasmodic properties. The major active component of cardamom oil is a potent antiseptic that is known to kill bacteria producing bad breath and other infections. Cardamom contains flavonoids, terpenoids,

anthocyanins, alkaloids, and other phenolic constituents that are responsible for reducing fat storage, cardiovascular,

pulmonary, kidney and lung associated disorders and improves insulin function in the body. [3-7]

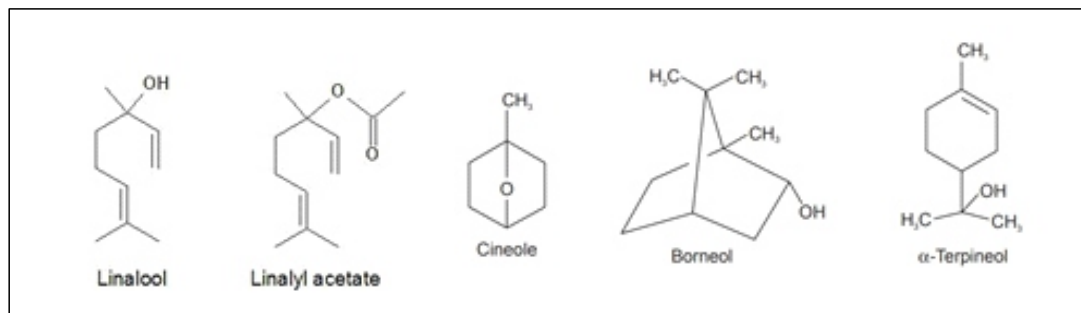


Figure 2: Major Chemical constituents occurring in cardamom.

CARDAMOM BENEFITS

Cardamom boosts energy metabolism and helps the body burn more fat efficiently. Inhaling the sweet and soothing aroma of cardamom essential oil may help in treating sleep issues such as insomnia, restlessness, and anxiety. According to Ayurveda, cardamom is an important spice which is tridoshic which means that helps in balancing all the three doshas - Vatta, Pitta and Kapha in our body. It has significant warming properties that are soothing for your body. It is also believed in Ayurveda that the excess build-up of 'ama', a sticky substance that blocks normal circulation and lowers energy levels, leads to various diseases. Cardamom helps in preventing its accumulation and thus, reduces its negative impact. Since cardamom gives out a sweet flavor, it was traditionally believed to possess aphrodisiac properties. Not only is cardamom regarded as an aphrodisiac, but it is also believed to possess the cure for impotence and premature ejaculation. In Ayurveda, cardamom has been used as a remedy for urinary tract diseases and infections such as cystitis, nephritis, and gonorrhoea. There are several remedies prescribed in folk medicine and one of the most popular among them is startling a person who is hiccupping. This may or may not work most of the time. [5-7] However, cardamom is another very effective remedy. Cardamom pods and seeds can be chewed as a breath freshener. The flavors and aroma found in cardamom are due to the presence of essential oil. It is no wonder that the essential oil of cardamom is being used as a popular ingredient in chewing gum! Cardamom contains a high amount of flavonoids contents especially quercetin which improves anxiety-like behavior and depression. Cardamom benefits are due to essential oil, sterol, phenolic acids and lipids which show relaxation of muscles and reduce the volume of gastric ulcer thus prove gastroprotective effect. The presence of phenolic compounds like flavonoids, terpenoids, and tannins (1,8-cineole) in the cardamom show wonderful effects by delayed the severity of seizures. Cardamom increases the production of a good enzyme (superoxide dismutase and ascorbic acid), restores endogenous antioxidants, preserve histopathology and ultrastructure of the myocardium. In simple words, it improves cardiac function thus delay the initiation, progression, and development of myocardial ischemic injury. Cardamom helps improve digestive health, aids in diabetes treatment and helps you cope with depression. The spice also

stimulates metabolism, given its antioxidant and anti-inflammatory properties. Cardamom is also known to stimulate the secretion of bile acid in the stomach, further aiding in digestion. The spice also prevents other gastrointestinal ailments like acid reflux, heartburn, diarrhea, etc. Its antioxidant properties can promote heart health. Cardamom also contains fiber, the nutrient that can help lower cholesterol levels and enhance heart health. The spice also can lower blood pressure levels – and this benefits the heart. Cardamom has diuretic properties that can benefit cases of hypertension and epilepsy. These diuretic properties of cardamom also aid in detoxification. Cardamom can indeed help people cope with depression. Cardamom plays a role in fighting asthma symptoms like wheezing, coughing, shortness of breath, and tightness in the chest. The spice makes breathing easier by enhancing blood circulation within the lungs. It also fights related inflammation by soothing the mucus membranes. In accordance with another report green cardamom can be used to treat asthma, bronchitis, and numerous other respiratory issues. Cardamom is extremely rich in manganese – a mineral that can lower the risk of diabetes. [3-8] Cardamom possesses antimicrobial properties that enhance oral health. The pungent taste of cardamom even stimulates the salivary flow – and this can help prevent dental caries. Cardamom can also work well in treating bad breath. One study emphasizes on the use of cardamom for treating a lack of appetite. Even cardamom oil can be used as an appetite stimulant. Cardamom can also aid in the treatment of histoplasmosis – a condition in which one of the symptoms is a lack of appetite. Cardamom is a proven aphrodisiac. The spice is rich in a compound called cineole, and just a small pinch of cardamom powder can release nerve stimulants and fuel your passions. Some reports say that cardamom can also treat impotence. Cardamom has muscle-relaxing properties, and these can help relieve hiccups. [8-11]

CARDAMOM USE IN COSMETICS

Cardamom is often used in cosmetics to impart fragrance. Due to its distinct spicy, sweet scent, both cardamom and cardamom oil are used in perfumes, soaps, body washes, powders, and other cosmetics. Oriental style perfumes and other scented products often use cardamom as an ingredient in addition to other essential oils. Cardamom can be used in skin care products for antiseptic and anti-inflammatory

purposes to calm and soothe the skin, thanks to its therapeutic effects. When added to perfumes, it can stimulate the senses. Facial soaps use cardamom to impart a warming sensation to the skin. These cosmetics using cardamom for therapeutic reasons are known as aromatherapy products. The strong scent of cardamom can ward off unpleasant odors. This makes it a great addition to cosmetic products, such as toners, that serve a specific function but smell unappealing due to the inclusion of certain ingredients. Cardamom is added to these products to mask the unpleasant scent while retaining the benefit of the cosmetic. Cardamom essential oil is often added to cosmetics that are applied to the lips (such as lip balms) to impart the taste of the oil and make the lips smooth. The antibacterial properties of the spice even treat scalp

infections, if any. This is a given. Improved scalp health most often means stronger and better-looking hair. The spice strengthens your hair roots and offers shine. The spice helps treat skin allergies and improves skin complexion. It can also be used as a tool to cleanse the skin. One of the benefits of cardamom is that it imparts in making fair skin. Cardamom essential oil helps in removing blemishes, thus giving a fairer complexion. The skin benefits of cardamom can be attributed to its antibacterial and antioxidant properties. Cardamom contains vitamin C, which is a powerful antioxidant. It improves blood circulation throughout the body. Also, the many layers of phytonutrients in the spice can improve blood circulation – which invariably enhances skin health. [9-12]



Figure 3: Green and dried Cardamom, seeds and oil.

USAGE OF CARDAMOM PRODUCTS

Cardamom finds use as products in different forms; cardamom seeds, cardamom powder, cardamom oil, cardamom oleoresin, encapsulated cardamom flavor, etc which is used to flavor sweets, baked goods, and hot beverages such as tea and coffee. Cardamom benefits are gastroprotective, treat Seizures, lowers cholesterol and many more. Cardamom oil is used internally for indigestion, nausea, vomiting and pulmonary disease with copious phlegm. Cardamom oil is used for memory enhancement. It is used to flavor coffee, baked goods, curries and pickles, milk desserts and mulled wine. It is also used for perfumery, beverages, cosmetics and a blend of potpourris. Cardamom is used in perfumery blend for manufacturing of men's perfume. It is especially used in the preparation of Curve Colognes, Eau De Toilette spray for men. [4,6,7-8]

CONCLUSION

Cardamom has digestive, antispasmodic, carminative, anti-inflammatory, anti-microbial, aphrodisiac and diuretic properties. It boosts digestion and stops nausea, vomiting. Plus, the herb aids in eliminating belching and flatulence. Some other health benefits of cardamom include relief from stomach pain, colon spasms and menstrual cramps. Besides, application of cardamom oil cures teeth and gum infections. Its pleasing fragrance removes bad breath (Halitosis). Furthermore, the herb works as a mild circulatory stimulant. This warm spice improves blood circulation to the lungs. Plus, it can help lower blood pressure, especially in case of primary hypertension. The therapeutic herb also promotes urination and aids in detoxification of the body. Cardamom benefits the immune

system as well. In addition, studies show that it has antioxidant properties that can increase the levels of glutathione. It is also believed to have antitumor qualities. Cardamom essential oil has a balsamic aroma and expectorant qualities. Thus, when used in aromatherapy, it helps break up mucus and congestion in sinuses and lungs. It is also beneficial for those suffering from asthma or bronchitis. It has a soothing effect on muscles, nervous system and gives mental clarity. It is high in phytochemical cineole, which is a central nervous stimulant. Further, the herb's diaphoretic properties are useful in increasing perspiration.

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