

Cardamom as Anti Skin Cancer Agent

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Abstract: Cardamom is one of the known perennial spice plant which dried fruit placed in top rank when the ranking of spices is done on the basis of price. Spices in foods mainly act as a flavouring agent, as a medicine some times food preservative since ancient times. This article discussed about history of cardamom and its type, its chemical composition, essential oil and oleoresin present in it. The different types of major vitamins found in cardamom are niacin, pyridoxine, riboflavin, thiamin, vitamin C. Past researches and work regarding antioxidant activity, antimicrobial activity, anti inflammatory activity and anti insecticide activity is also mentioned. This article gives a brief idea about different health benefits of cardamom. Three types of skin cancer and effectiveness of cardamom on non melanoma skin cancer is discussed briefly. Past work shows that phytochemicals 1,8 Cineole and alpha terpineol exhibit anti skin cancer properties. Vitamin C, riboflavin, niacin, pyridoxine are important for a healthy skin and can prevent skin cancer to some extent. The main aim of this article is to provide knowledge about phytochemicals present in cardamom having anti cancer properties and further studies of these phytochemicals would be helpful in future research and drug designing.

Keywords: *Elettaria-cardamomum*, skin cancer, 1,8-cineole, alpha terpineol, kaempferol

Introduction

Cardamom is a evergreen herb also referred as queen of species mainly used in adding flavour to the foods and sweets. Cardamom is perennial plant has a long erect stem (pseudostem) which is formed by leaf sheaths layered one over the other. A fully matured plant attained 2-5 meter height. Rhizome is the real stem present below the soil. The fully grown leaf is about 30-50 centimeter in length with 10-15 cm diameter. After flowering fruits mature in 3-4 month. Mature seeds colour vary from dark brown to black colour. The optimum temperature required for the growth is about 10 to 35 degree celsius. The soil pH range from 4.5 to 5.8

is best for the plant growth. Cardamom is shade loving and wind sensitive plant. It is very costly and ranked in third place after saffron and vanilla on the basis of its price. Among its all part seed is mainly used for the extraction. The plant has pointed leaves and bears white flowers followed by a pod which contain 15 to 18 number of seeds. The two main genera of cardamom include *Elettaria* and *Amomum*. *Elettaria* is regarded as true cardamom which is light green in colour and small in size. *Amomum* is black to dark brown in colour and bigger in size in comparison to *Elettaria*. In the pharmaceutical industry, cardamom extract dissolve in alcohol are mainly used as flavour and aroma, in cosmetic industry cardamom is used