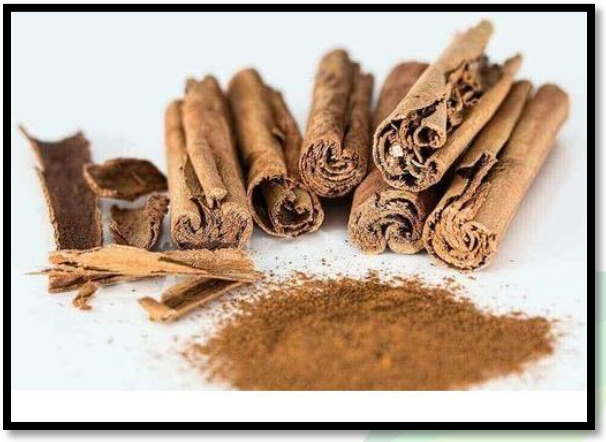
Cinnamomum zeylanicum

TAXONOMICAL CLASSIFICATION:[1]



- *Kingdom: Plantae*
- *Phylum: Magnoliophyta*
- *Class: Magnoliopsida*
- *Order: Laurales*
- *Family: Lauraceae*
- *Genus: Cinnamomum*
- *Species:Cinnamomum zeylanicum*

- **INTRODUCTION: [2][3]**

Cinnamomum zeylanicum is a small, tropical, evergreen tree most noted for its bark, which provides the world with the commonly known spice, cinnamon. Cinnamomum zeylanicum is the scientific name, which refers to the specific species of tree that cinnamon is harvested from. There are many other similar trees that belong to the same family, Lauraceae. The common name, cinnamon, is derived from the Hebraic and Arabic term “amomon” which means fragrant spice plant. Cinnamon is mainly used in the

aroma and essence industries due to its fragrance, which can be incorporated into different varieties of foodstuffs, perfumes, and medicinal products. Cinnamomum zeylanicum is one of the oldest herbal medicine known, having been mentioned in Chinese texts since 4 000 years ago1 . Cinnamomum zeylanicum is an evergreen tropical tree, belonging to the Lauraceae family. Cinnamon barks and leaves are widely used as spice and flavoring agent in foods and for various applications in medicine. Cinnamon is often used for medicinal purposes due to its unique properties. The essential oil from its bark is rich in trans-cinnamaldehyde with antimicrobial effects against animal and plant pathogens, food poisoning and spoilage bacteria and fungi3 . The bark and leaves of Cinnamomum sp are commonly used as spices in home kitchens and their distilled essential oils are used as flavoring agent in the food and beverage industries .

PROPERTIES AND USES:[4]

- Antiseptic activity
- Antifungal activity
- Antiviral activity
- Antibacterial activity
- Antioxidant activity
- Anti-inflammatory activity
- Immunomodulatory activity

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SIDE EFFECTS OF EXCESS CONSUMPTION:[5]

- Cinnamon is **POSSIBLY UNSAFE** when taken in larger amounts or when used long-term. Taking cinnamon oil by mouth is also **POSSIBLY UNSAFE**. The oil can be irritating to the skin and mucous membranes, including the stomach, intestine, and urinary tract. It can cause side effects such as diarrhea, vomiting, dizziness, drowsiness, and others.

DOSAGE: [5]

- Cinnamon is generally given at dosages of 1 to 3 g/day (range, 120 mg/day to 6 g/day).

RESEARCH:

1. Food irradiation to reduce the number of spoilage microorganisms and insects is an ionizing process that induces free radical formation in proteins, lipids, carbohydrates and other molecular structures in food. Antioxidants generally decrease the level of oxidation in such systems by transferring hydrogen atoms to the free radical structure. In the present paper, the effect of ionizing radiation on natural cinnamon antioxidants is studied. Cinnamon samples were purchased from retailers and irradiated with a ^{60}Co source, Gammacell 220 (A.E.C.L.) installed at IPEN (São Paulo, Brazil) using 0, 5, 10, 15, 20, 25 kGy at room temperature. After irradiation 3 kinds of sequential extractions were performed. One was submitted to antioxidant extraction using ethyl ether, the second with ethanol and the last with water. The antioxidant activity was determined by β-carotene/linoleic acid co-oxidation. Irradiation in the dose range applied did not have any effect on the antioxidant potential of the cinnamon compounds. Further studies will be performed to study the possibility to use cinnamon extracts in preserving food from oxidative damage induced by ionizing radiation.[6]
2. Cinnamomum zeylanicum Blume is an important spice and aromatic crop having wide applications in flavoring, perfumery, beverages, and medicines. The steam-distilled volatile oil from cinnamon fruit stalks was analyzed with GC and GC-MS. It showed the presence of hydrocarbons (44.7%) and oxygenated compounds (52.6%). Twenty-seven compounds constituting ca. 95.98% of the volatile oil were characterized. (E)-Cinnamyl acetate (36.59%) and (E)-caryophyllene (22.36%) are found to be major compounds. The volatile oil was screened for its potential as an antioxidant by using in vitro models, such as the â-carotene-linoleate and phosphomolybdenum complex method. The volatile oil showed 55.94% and 66.9% antioxidant activity at 100 and 200 ppm concentration, respectively. Also, the volatile oil showed good antioxidant capacity, using the formation of the phosphomolybdenum complex. A comparison of the chemical composition of the

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volatile oil was made with that of buds, flowers, and fruits. This is the first report on the chemical composition of volatile oil of the fruit stalks of this species and its antioxidant activity.[7]

Precautions & Warnings:[8]

- **Pregnancy and breast-feeding**: Consuming cinnamon bark is **LIKELY SAFE** when taken in food amounts during pregnancy and breast-feeding. Do not take larger amounts of cinnamon bark if you are pregnant or breast-feeding. Not enough is known about the safety of taking larger amounts.
- **Diabetes**: Cinnamon bark might lower blood sugar in people with type 2 diabetes. Watch for signs of low blood sugar (hypoglycemia) and monitor your blood sugar carefully if you have diabetes and use cinnamon bark.
- **Surgery**: Cinnamon bark can affect blood sugar levels and might interfere with blood sugar control during and after surgery. Stop taking cinnamon at least 2 weeks before a scheduled surgery.

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INTERACTIONS WITH MEDICATIONS:[8]

- **Medications for diabetes (Antidiabetes drugs) interacts with CEYLON CINNAMON:** Cinnamon bark might decrease blood sugar. Diabetes medications are also used to lower blood sugar. Taking cinnamon bark along with diabetes medications might cause your blood sugar to go too low. Monitor your blood sugar closely. The dose of your diabetes medication might need to be changed.

  Some medications used for diabetes include glimepiride (Amaryl), glyburide (DiaBeta, Glynase PresTab, Micronase), insulin, pioglitazone (Actos), rosiglitazone (Avandia), chlorpropamide (Diabinese), glipizide (Glucotrol), tolbutamide (Orinase), and others.

References:

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