

Watch out next time you spice up your dish

Toxic Chinese cinnamon flooding South Indian market raises food safety concern

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The cinnamon you just bought from the local grocery to spice up your dish may not be what the doctor ordered. Chances are the cinnamon bark you picked up from the shelf is a toxic version of the spice imported from China and passed off as the original.

A study conducted by scientists at the Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) here has revealed that South Indian market is flooded with Chinese cinnamon (*Cinnamomum cassia*) containing high levels of coumarin, a hepatotoxic

compound, raising food safety concerns.

While the authentic *Cinnamomum verum* cultivated in South India is a safe food additive with a market price about ₹1,000 a kg, the Chinese version is available for ₹180 to ₹200 per kg, making it an affordable option, albeit one with a health hazard for consumers.

The study conducted by K.B. Rameshkumar and R. Ananthkrishnan from the JNTBGRI found that the maximum coumarin content in authentic cinnamon (*C. verum*) collected from plantations in Kerala is 143 mg/kg while samples collected from various



The *C. verum* tree and the dried bark (inset) used as spice.

markets in South India contained up to 3,462 mg/kg, indicating the widespread use of *C. cassia* as a substitute. The samples collected from the cinnamon estate established by the East India Company at Ancharakandy, Kannur, in 1767 had the lowest coumarin content of 12.3 mg/kg.

The study, using the latest liquid chromatography and mass spectrometry methods, was done with collaboration from the Central Drug Research Institute, Lucknow, and has been published in the *International Journal of Food Properties*.

Recently, Indian cinnamon and food

products containing cinnamon were banned in European countries due to the high content of coumarin.

The Food Safety and Standards Authority of India has set the maximum permissible content of coumarin in food items at 0.3% while the European Food Safety Authority has established the tolerable daily intake of coumarin as 0.1 mg per kg of body weight. "*C. cassia* is remarkably similar to *C. verum*, making it virtually impossible for the consumer to distinguish the substitute from the original," says Dr. Rameshkumar.

Director, JNTBGRI, R. Prakashkumar said the institute would take steps to popularise cinnamon plantations in the State.