



Research Article

***Cinnamomum zeylanicum* essential oil in the management of Anthracnose of Banana Fruits**

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Abstract

Essential oils of 24 angiospermic taxa were screened for their antifungal activity against fruit rotting fungus *Colletotrichum musae* causing anthracnose of banana. The essential oil of three plants viz. *C. zeylanicum*, *A. indica* and *Mentha arvensis* showed 100 % activity against the test pathogen. The essential oil of *C. zeylanicum* oil was selected for further investigation. The minimum inhibitory concentration of *C. zeylanicum* oil was found to be 100ppm. The nature of toxicity of oil was fungistatic at its MIC but turned cidal at hypertoxic concentration of 200ppm. The fungitoxicity of the oil was thermostabal up to 80°C. The shelf life of oil was found to be 24 months. The *C. zeylanicum* oil was found to exhibit a broad fungitoxic spectrum by inhibiting the mycelia growth of 10 common fruit rotting fungi at its MIC. During *in vivo* trial the *C. zeylanicum* oil treated banana fruits showed enhancement of storage life up to 4 days. Therefore, the essential oil of *C. zeylanicum* could be recommended as potential botanical fungicide.

Key words: *Cinnamomum zeylanicum*, essential oil, Anthracnose.

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