

## **Identification of Insulin like Polyphenol from The Inner Bark of Cinnamomum Zeylanicum by IR, NMR Spectroscopy**

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### **ABSTRACT**

*Cinnamomumzeylanicum (CZ) 's inner bark has been a product of much interest to scientists owing to its multifaceted medicinal properties. Indian and Chinese traditional medical system have been using cinnamon from antique times due to its antimicrobial, anti-inflammatory and antidiabetic properties. The study aimed to identify, isolate and elucidate the molecular structure of compounds found in methyl hydroxychalcone polymer, which has insulin-like biological activity. The qualitative and quantitative phytochemical assay was carried out to detect various phytochemicals present in Cinnamomumzeylanicum inner bark. Aqueous CZ extract was subjected to purification, and the enriched fraction of methyl hydroxychalcone was isolated. Spectroscopic methods elucidated the chemical structure of the enriched fraction of (MHCP). The results reveal that the bioactive compounds in enriched MHCP fraction were ellagic acid 3-O-pentoside, afzelechin 3-O-glucopyranoside, and galocatechin 3-O-pentoside. It was found that these compounds possessed biological activity similar to grapes and tea polyphenols.*

### **KEYWORDS**

*Cinnamon, polyphenols, mass spectrometry, methyl hydroxychalcone polymer.*