嘉南藥理科技大學教師專題研究計畫成果報告

計畫名稱 ： Antioxidant Constituents of the Resin of *Eucalyptus Citriodora*

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摘要

Two triterpenes, two flavonols and a phytosterol were isolate from the resin of diseased *Eucalyptus citriodora*. Their structures were assigned as betulinic acid, ursolic acid, 3-methoxyaromadendrin, 7-methoxyaromadendrin and sitosterol on the basis of spectral and physical properties. The ethyl acetate and *n*-butanol extracts showed antioxidant activities (% inhibition) 68.0% and 67.2%, respectively.

關鍵字 ： *Eucalyptus citriodora*, Resin, Triterpene, Flavonol.

前言

Many eucalyptus species have been found to contain lignins, essential oil, flavones, triterpenes and other components.[1-5] The extracts of eucalyptus species showed antibacterial,[6] antitumor, anti-HIV[7] and antioxidant activities.[8] *Eucalyptus citriodora* distributed in Australia was cultivated in Taiwan. No works has been reported on the antioxidant constituents of the resin of this species. As a continuation for studying the antioxidant components from plants. Here we describe the isolation, structural elucidation and antioxidant activities of the components from the resin of *Eucalyptus citriodora*.

本文

The methonolic extract of the dried resin of *Eucalyptus citriodora* was concentrated *in vacuo* and the residue was extracted with ethyl acetate and *n*-butanol, respectively. The ethyl acetate soluble fraction was applied to repeated silica-gel column and preparative thin layer chromatography to give two triterpenes, two flavonols and a phytosterol. The structures of these compounds were identified as betulinic acid, ursolic acid, 3-methoxyaromadendrin, 7-methoxyaromadendrin and sitosterol by comparison of their spectral and physical data with reported data. The ethyl acetate and *n*-butanol extracts showed antioxidant activities (% inhibition) 68.0% and 67.2% respectively. Further studies on the antioxidant activities of those compounds and the constituents of *n*-butanol soluble fraction are currently underway and will be reported in the course.

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