ISOLATION AND PHYTOCHEMICAL INVESTIGATION OF ANTIOXIDATIVE FROM THE *CURCUMA LONGA* LEAVES

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ABSTRACT

Curcuma longa leaves were applied in cosmetics, food additive and medicinal purpose. *Curcuma longa* leaves contains secondary metabolites of terpenoids which have been found in antioxidant properties. Based on experiments isolated compound from petroleum ether extract done by GC-MS found the suggested structure of antioxidative components are Benzene, (2,4cyclopentadien-1-ylidenemethyl), Estra-1,3,5(10)-trien-17β-ol, Benzene, 1,3-dimethyl, Hexadecanoic acid, methyl ester, 1H-Indene, 1-methylene, Hexadecanoic acid, 1-(hydroxymethyl)-1,2-ethanediyl ester, Cyclopentanol, 1-methyl and Triphenylphosphine oxide. While, scavenging activity of extract *Curcuma longa* leaves on DPPH radicals IC_{50} value to perform antioxidant properties, it is showed the dichloromethane has the strongest scavenging activity (IC_{50} > 6.25 µg / ml) compared with petroleum ether extract (IC_{50} > 100 µg / ml) and methanol extract (IC_{50} > 100 µg / ml). As *Curcuma longa* leaves has antioxidant properties it has potential for the development of modern medicine for the treatment of various diseases.

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