

EXTRACTION OF ESSENTIAL OIL FROM TURMERIC
(*Curcuma longa*)

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ABSTRACT

EXTRACTION OF ESSENTIAL OIL FROM TURMERIC (*Curcuma longa*)

Curcuma longa is a scientific name for turmeric. Turmeric has been used in India cuisine especially curries for long time ago. Turmeric also widely used in traditional medicine and has been proven by researchers where this plant have ability to treat various kind of diseases such as antibacterial, antifungal, anti-inflammatory, anti-tumour, anti-cancer, and used in respiratory and gastrointestinal disorders. In this study, hydro distillation technique was used to extract turmeric essential oil with factor of times. A solvent extraction was used to extract chemical compounds of turmeric. Ethanol and hexane were used as extract solvent to extract compounds from hydro distillation product. Rotary evaporator was used to purify the sample extraction. The samples were placed in rotary evaporation at 60 °C for both solvents. The GC-MS analysis showed the chemical constituent that presented in turmeric essential oil. Several new chemical constituents were detected which are methyl dehydroabietate, 2 - [4 - methyl - 6 - (2, 6, 6 - trimethylcyclohex - 1 - enyl) - hexa - 1, 3, 5 - trienyl] - cyclohex - 1 - en - 1 - carboxaldehyde, 1 - Phenanthrenecarboxylic acid, and Estra-1,3,5 (10)-trien-17 β -ol where are not yet reported in any turmeric essential oil studies. These chemical constituents are might useful for medical purposes as anti-fungal, antibacterial and anti-arrhythmic activities. The high yield of turmeric essential oil was obtained from chloroform solvent extraction for 2 different time compare to yield of hexane solvent.

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