

**ISOLATION AND PRELIMINARY IDENTIFICATION OF ACTIVE  
COMPONENTS FROM THE LEAVES OF *LEEA INDICA*  
(MEMALI) USING CHROMATOGRAPHIC TECHNIQUE**

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## ABSTRACT

### ISOLATION AND PRELIMINARY IDENTIFICATION OF ACTIVE COMPONENTS FROM THE LEAVES OF *LEEA INDICA* (MEMALI) USING CHROMATOGRAPHIC TECHNIQUE

This study was conducted to focus on isolation of the *Leea Indica* leaves extract and to reveal the antioxidant activity of *L. indica*. Different crude extract of *L. Indica* leaves extract have been prepared based on different polarities of solvent which were non-polar, medium polar and polar. Two crude extracts which was PE and DCM extract were proceed with the separation by using thin layer chromatography to isolate the biological antioxidant active compound. Different solvent system has been used for each extraction to obtain the best separation using thin layer chromatography. Solvent system for petroleum ether extraction was 30:70 (v/v); PE:DCM, while for DCM extraction was 96:4 (v/v); DCM:Methanol. Results showed that two separated compounds from petroleum ether extract have been detected at retention factor of 0.14 and 0.85. While for dichloromethane extract, one separated compound has been detected at retention factor 0.66. All three separated compounds were further analyzed for antioxidant screening with preparative thin layer chromatography (p-TLC). The isolated compounds were analyzed using GC-MS and NMR for the preliminary structural identification. Three compounds from retention factor 0.14 and four compounds from retention factor 0.85 were positively detected as antioxidant compounds in PE extract. While four compounds from retention factor 0.66 was detected as antioxidant compound in DCM extract. The crude extract were proceed with the antioxidant scavenging on DPPH radicals to assess the antioxidant activity of the crude extracts quantitatively. The result revealed that MeOH extract as the strongest antioxidative extract followed by DCM and PE extract. These quantitative antioxidant result established the antioxidant screening test from dot blot method conducted previously. From the spectroscopic analysis, the antioxidative compounds were suggested as Palmitic acid and Phthalic acid.

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