

OPTIMIZATION OF EXTRACTION METHOD AND QUALITATIVE FT-NMR ANALYSIS OF *ANDROGRAPHIS PANICULATA* LEAVES

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ABSTRACT

Three parameters; types of solvents, length of extraction time and temperature of medium were chosen in the optimization of *Andrographis paniculata* leaves extraction. Four different solvents, methanol (MeOH), dichloromethane (DCM), ethyl acetate (EtOAc) and water (H₂O) were used in a period of 1, 3, 5 or 7 hours at set water-bath temperature of 25, 30, 40 or 60°C. The extraction yield of about 200 mg ± 0.1 mg fresh cut leaves was measured based on the extract weight, and 1D-Nuclear Magnetic Resonance (NMR) profiles were employed to correlate the obtained yield to the main compound, andrographolide, percentage present.

Methanol was shown to be the best solvent with 13.75% yield in 3 hours extraction at 40°C. The NMR peak intensity analysis of the major compound (andrographolide) is also in support of these obtained parameters.

KEYWORDS: *Andrographis paniculata*, Methanol, Andrographolide, NMR