

## ABSTRACT

**Mirendy Mukhayar. 24020218140024. Compound Screening of Kemuning Leaves (*Murraya paniculata*) Using Solvent Variations (Polar, Semi-Polar, and Non-Polar). Supervised by Endang Kusdiyantini and Ditta Putri Kumalasari.**

*Murraya paniculata* is known to contain various bioactive compounds such as flavonoids, coumarins, and essential oils with pharmacological activities beneficial to human health. This study aimed to determine the effect of solvent polarity—polar (ethanol), semi-polar (ethyl acetate), and non-polar (n-hexane)—on the types and extraction efficiency of bioactive compounds from kemuning leaves. Extraction was carried out by maceration and followed by analysis using Thin Layer Chromatography (TLC), Fourier Transform Infrared Spectroscopy (FTIR), and Gas Chromatography–Mass Spectrometry (GC-MS). TLC results showed the highest R<sub>f</sub> value in ethanol extract (0.672), followed by n-hexane (0.563) and ethyl acetate (0.509), indicating distinct compounds extracted by each solvent. FTIR analysis of ethanol extract revealed the presence of –OH, C=O, and C–O functional groups, indicating phenolics, flavonoids, and esters; ethyl acetate extract showed semi-polar aromatic compounds, while n-hexane extract contained aliphatic and non-polar terpenoid compounds. GC-MS analysis identified active compounds such as “g” and murranganone in the ethanol extract, which exhibit antioxidant and anti-inflammatory potential. Therefore, ethanol and ethyl acetate proved more effective in extracting bioactive compounds than n-hexane.

**Keywords:** *Murraya paniculata*, extraction, ethanol, ethyl acetate, n-hexane, TLC, FTIR, GC-MS, bioactive compounds