ISOLATION AND PURIFICATION OF BIOACTIVE COMPONENTS FROM THE FRUIT OF *Morinda citrifolia*

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ABSTRACT

Phytochemical screening done on the fruit of "noni" *Morinda citrifolia* revealed the presence of saponins and the absence of alkaloids.

Sequential extraction of active components of noni using n-hexane, dichloromethane and ethyl acetate solvents gave yields of 0.09%, 0.31% and 0.11% as yields respectively.

Crude methanolic concentrate of the noni fruit was subjected into four bioactivity tests.

Toxicity bioassay showed 251.19 g/ml to be the LC_{50}. Antimicrobial bioassay showed that *S. aureus*, *B. subtilis*, *E. coli*, and *P. auruginosa* organisms have no activity against the crude methanolic concentrate. In analgesic bioassay, the crude methanolic concentrate (16.37) is no better or has the same activity with the positive control mefenamic acid (17.51) based on the percentage reduction in squirms of the Swiss Websters mice. Antispasmodic activity showed that the crude methanolic concentrate of the fruit (55.47%) is as active as the positive control, loperamide (58.02%).

In the three fractions, antispasmodic activity of n-hexane and dichloromethane have greater effect than the positive control (loperamide) while ethyl acetate has the same activity with it. The percentages traveled by charcoal in n-hexane (39.929) and dichloromethane (45.908) were lower than that of the positive control, loperamide (60.130) and ethyl acetate fraction (48.352). Antispasmodic bioassay on n-hexane purified through Vacuum Liquid Chromatography showed that the nine fractions (F1-F9) showed no significant difference with the positive control.

Thin Layer Chromatography showed the presence of mono-, di-, and triterpenes; steroid glycosides and saponins in the noni fruit extract.