

**Antibacterial Activity, Antioxidant Property and Phytochemical Analysis of Crude
Ethanolic Extract from Dalanghita (*Citrus nobilis*) Peels**

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ABSTRACT

The crude ethanolic extract of Dalanghita (*Citrus nobilis*) was studied for their antibacterial activity, antioxidant and phytochemical properties. The DPPH free radical scavenging assay of extracts with varying concentrations showed strong antioxidant activity with a maximum % inhibition of 92.30 at 80.70 $\mu\text{g/mL}$ concentration. The IC_{50} was calculated to be 26.26 $\mu\text{g/mL}$ against 12.48 $\mu\text{g/mL}$ for Ascorbic acid, the positive control. The antibacterial activity of the extract was determined against *Escherichia coli* and *Staphylococcus aureus* by measuring the mean zones of inhibition using the paper disc diffusion assay at different concentration of crude ethanolic extract. The crude ethanol extract at 100% concentration yielded the highest inhibition for *E. coli* at 21.50 ± 0.50 mm which is comparable to tetracycline, the positive control. The presence of phytochemicals in the extract were evaluated and the phytochemicals identified were: alkaloids, flavonoids, saponins, steroids, tannins, and terpenes.