CHEMICAL CONSTITUENTS FROM THE LEAVES OF *JASMINUM SAMBAC* AND ITS ANTIOXIDANT POTENTIAL

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ABSTRACT

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Antioxidant is a substance which can impede the oxidation of other molecules. It plays an important role in impeding free radicals from damaging the skin and harmful ultraviolet rays. Traditional dietary supplement from *Jasminum sambac* extract is not very demanding in the market due to lack of further analysis of antioxidant in J. sambac. Apart from that, antioxidant potential of *J. sambac* may differ due to physical factors such as temperature, humidity, nutrients content in soil and air movement. *J. sambac* is also known as Arabian Jasmine originates from Oleaceae family. The objective of the study is to determine chemical constituents and antioxidant properties of leaves of *J. sambac*. Preliminary screening showed the presence of tannins, cardiac glycoside, steroid and saponins. Essential oil was obtained by hydrodistillation of *J. sambac* leaves mainly containing nonanal and 2-buten-1-one. DPPH assay was applied to determine the antioxidant activities of crude extract. Dichloromethane (DCM) extract showed a moderate scavenging with IC_{50} of 6.24 ppm compared to ascorbic acid as standard which showed highest scavenging effect with IC_{50} of 2.90 ppm. Methanol and petroleum ether extract showed weak scavenging activity with IC_{50} greater than 100 ppm. Hence, DCM extract is the most antioxidative extract compared to methanol and petroleum ether extracts. Phytochemical test for crude extracts mainly showed the presence of terpenoid, aromatic and antioxidative compound. Hence, benzophenone was found as antioxidative compound in dichloromethane extract by GC-MS and its characteristic were confirmed by FTIR and TLC analysis of crude extract.

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