EXTRACTION OF *Centella asiatica* LEAVES: POTENTIAL ANTIOXIDANT AND ANTIBACTERIAL ACTIVITY ON SKIN

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ABSTRACT

EXTRACTION OF *Centella asiatica* LEAVES: POTENTIAL ANTIOXIDANT AND ANTIBACTERIAL ACTIVITY ON SKIN

Centella asiatica has been used for centuries to treat a variety of ailments. Many studies have shown that it has antioxidant activity, antibacterial, antifungal and wound healing effects. The aims of this study are to identify the phytochemical constituents present in *Centella asiatica* leaves extracts, to investigate the antioxidant activity of the *Centella asiatica* extracts using DPPH radical scavenging assay and Total Phenolic Content and to examine the antibacterial activity of *Centella asiatica* leaves extracts using disc diffusion method. Initially, the leaves of *C. asiatica* were extracted via maceration process using 95% ethanol as solvent. According to this study, the percentage yields obtained is 13.44%. Six phytochemical screening test was conducted to determine the phytochemical constituent present in leaves of *C. asiatica* which are alkaloid, steroid, flavonoid, terpenoid, saponin, protein and amino acid. However, only four phytochemical constituents were identified from this plant which are alkaloid, steroid, flavonoids and terpenoids. The antioxidant activity of *C. asiatica* were investigated using DPPH radical scavenging assay and Total Phenolic Content. The ethanolic extracts of *C. asiatica* showed highest inhibitory DPPH free radical up 76.96% at 100 ppm. The total phenolic content obtain in this study is 0.61 mg GAE/g. Furthermore, antibacterial activity was done to investigate the effectiveness of *C. asiatica* leaves as antibacterial agent against gram-positive bacteria which is *B. Licheniformis* and gram-negative bacteria which is *E. coli*. Zone inhibition of *C. asiatica* was tested on three different concentrations which are 15 ppm, 30 ppm and 40 ppm. Both bacteria showed highest zone inhibition at 40 ppm which 16 mm for *B. licheniformis* and 15 mm for *E. coli*. *B. licheniformis* showed higher zone of inhibition in all concentrations as compared to *E. coli*. Hence, the ethanol extracts proved to be more effective against *B. licheniformis*. Based on the results obtained in this study, *C. asiatica* can be used as another alternative to replace synthetic antioxidants and as antimicrobial agents.

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