

## Phytochemical Study and Biological Activity of Sage (*Salvia officinalis* L.)

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**Abstract :** This study presents an attempt to evaluate the antioxidant and antimicrobial activity of methanolic extract and essential oils prepared from the leaves of sage (*Salvia officinalis* L.). The content of polyphenols in the methanolic extract of the leaves from *Salvia officinalis* extract was determined by spectrophotometrically, calculated as gallic acid and catechin equivalent. Antioxidant activity was evaluated by free radical scavenging activity using 2,2-diphenylpicryl-1-picrylhydrazyl (DPPH) assay. The plant essential oil and methanol extract were also subjected to screenings for the evaluation of their antioxidant activities using 2, 2-diphenyl-1-picrylhydrazyl (DPPH) test. While the plant essential oil showed only weak antioxidant activities, its methanol extract was considerably active in DPPH (IC<sub>50</sub>= 37.29µg/ml) test. Appreciable total phenolic content (31.25mg/g) was also detected for the plant methanol extract as gallic acid equivalent in the Folin-Ciocalteu test. The plant was also screened for its antimicrobial activity and good to moderate inhibitions were recorded for its essential oil and methanol extract against most of the tested microorganisms. The present investigation revealed that this plant has rich source of antioxidant properties. It is for this reason that sage has found increasing application in food formulations.

**Keywords :** antibacterial activity, antioxidant activity, flavonoid, polyphenol, *salvia officinalis*

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