

Metabolic profiling of flavonoids, saponins, alkaloids, and terpenoids in the extract from *Vernonia cinerea* leaf using LC-Q-TOF-MS

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ABSTRACT

The leaves of *Vernonia cinerea* are widely used for medicinal purposes. Although, different studies have reported on the biological activities of the plant extracts whereas the tentative assignment of secondary metabolites that include flavonoids, saponins, alkaloids, and terpenoids had not been reported. Thus, this study tentatively assigned the flavonoids, saponins, alkaloids, and terpenoids in the extract of *V. cinerea* leaves that are mainly responsible for the reported activities. Liquid chromatography-mass spectrometry quadrupole time of flight (LC-Q-TOF-MS) analysis was employed in the assignments. The results obtained showed that a total number of 221 compounds were tentatively assigned in the extract of *V. cinerea* leaves which include 64 flavonoids, 13 saponins, 36 alkaloids, and 108 terpenoids. These phytochemicals can further be isolated, purified, characterized, and quantified due to their importance..

KEYWORDS: Alkaloids; Flavonoids; Mass spectrometry; Saponins; Terpenoids; *Vernonia cinerea*