

ABSTRACT

Herbal medicines need exploration and development with the variety of drug resistance and high metabolomics dysfunction. The medication by natural God gifted substances has advantages and this has been accepted by whole world. The aim of present research is to explore the *Chenopodium album* and *Bauhinia Variegata* of family Chenopodiaceae and Fabaceae respectively, for their possible medicinal importance and metabolite identification. Available literature shows that limited scientific knowledge is available on these two plants in spite of their applications as a health tonic. The different extracts of aerial parts of these plants were prepared by using methanol, ethyl acetate, chloroform, n-hexane and water. The leaves were quenched with liquid nitrogen for freeze drying. The freeze dried powdered leaves were extracted by submerging in methanol, ethyl acetate, chloroform, n-hexane and water for 2 days and sonicated for 30 minutes. All these extracts were filtered and the extra solvent was removed by evaporation under the vacuum. The extracts were kept in low temperature for further utilization. The prepared extracts were subjected for proximate composition and mineral analysis, total phenolic contents, total flavonoid contents, DPPH scavenging potential, α -amylase and α -glucosidase inhibitions. FTIR and HPLC were employed for phytochemical identification in most vital extract.

The proximate analysis revealed that both plants have high nutritive value. The mineral composition analysis revealed the presence of Pb, Ca, Ni, Co, Mg, Na, and K in reasonable amounts. The both also showed negligible toxicity in hemolytic assay and acceptable thermal stability. The extract yield showed that extract in methanol produced relatively greater amount of extract of both selected plants. The results indicated that extract in methanol of *C. album* and *B. variegata* showed highest total phenolic contents of 134.13 and 124.0 mg gallic acid equivalent per gram dried powdered extract respectively. The highest total flavonoid contents in mg rutin equivalent per gram dried powdered extract was 66.52 and 57.14 for *C. album* and *B. variegata* respectively. Iron chelation activity for *C. album* and *B. variegata* were 79 and 72 respectively.