

Physicochemical, phytochemical and antioxidant studies on leaf extracts of *Mallotus tetracoccus* (Roxb.) Kurz

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ABSTRACT:

In this study quantitative determination of active phytochemicals, physicochemical properties and antioxidant studies of various extracts of *Mallotus tetracoccus* leaves were studied. The *Mallotus tetracoccus* leaf powder was extracted with different organic solvent such as petroleum ether, chloroform, ethyl acetate, acetone and aqueous ethanol. The total phenols and flavonoids content of various organic extracts were determined by folin-cicalteu method and aluminium chloride method. Other antioxidant activities were determined by DPPH free radical scavenging assay, FTC, TBA and phosphomolybdenum methods. Among the various extracts of *Mallotus tetracoccus* leaves, ethanol extract possessed high total phenolic contents (175.67±1.1 mg GAE/g). The reducing power assay values were in the range of 0.013±0.002 to 1.766±0.017 for the extracts with increasing concentrations. Thus the antioxidant activity of different extracts was in the order of ethanol > acetone > ethyl acetate > chloroform > petroleum ether extract. The findings showed that, among the various extracts of *Mallotus tetracoccus*, the organic polar extracts possessed high phenols and antioxidant activities.

Keywords:

Mallotus tetracoccus, Antioxidant, DPPH, Total phenols, Phosphomolybdenum activity.