

ABSTRACT

The antioxidant, antimicrobial and anthelmintic potential of the different parts of *Firmiana simplex* (Linn.) W. F. Wight and *Dombeya mastersii* Hook. F. was evaluated. The extracts were prepared via maceration and were subjected to further analysis. The results indicated that bark of both species contained maximum antimicrobial and antioxidant potential. The phytochemicals were mostly concentrated in the bark and leaf crude extracts. The antioxidant activity was significant in bark followed by leaf and stem crude extracts. The maximum % DPPH radical scavenging activity of *Firmiana simplex* was found 65.5 to 99.7% at 500 µg/ml with maximum scavenging activity in *n*-hexane and ethanol extracts of flower while lowest in *n*-hexane leaf extract. Similarly, the % DPPH radical scavenging activity of *Dombeya mastersii* was found in between 73.9-99.7% at 500 µg/mL and highest activity was assessed in aqueous and *n*-hexane extracts of bark and stem while least in *n*-Hexane extract of leaf. The Ferric-ion Reducing and Antioxidant Power (FRAP) of various extracts of *Firmiana simplex* and *Dombeya mastersii* ranged from 3.20 ± 0.42 to 101.83 ± 1.46 TE µM/mL (Trolox Equivalent µM per ml). The %age inhibition potential in plant extracts was found between 14.23 ± 0.25 to 94.81 ± 2.21 %IP. The highest inhibition potential was provided by bark of *Firmiana simplex*. The antibacterial activity of crude extracts was significant against *Staphylococcus aureus* and *Bacillus subtilis*. The antibacterial activity was minimum against gram negative bacteria i.e. *Escherichia coli* and *Pseudomonas aeruginosa*. The maximum antibacterial activity (42.5 ± 0.66 mm) was observed in *n*-hexane extracts of bark of *Firmiana simplex* while minimum (11.07 ± 0.69 mm) in aqueous extracts of stem of *Dombeya mastersii*. The maximum antifungal activity was shown by stem *n*-hexane extracts of *Dombeya mastersii* having zone of inhibition (49.90 ± 0.76 mm) against *Aspergillus niger*. The capacity of solvents to extract antimicrobial compounds was observed in descending order as *n*-hexane > ethanol > chloroform > aqueous. The anthelmintic activity of crude extracts of *Firmiana simplex* and *Dombeya mastersii* was time and concentration dependent.