

PP 015: Phytochemical screening and antimicrobial activity of flower pod extracts from *Spilanthes paniculata* L.

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Spilanthes paniculata (Asteraceae) is commonly known as 'acmella' in Sinhala and 'tooth ache plant' in English. It is highly utilized in traditional medicine to combat tooth aches. However, its antimicrobial activity has not yet been investigated. The present study aimed to investigate the *in-vitro* antimicrobial activity of ethanol, petroleum ether and water extracts of the pods of *S. paniculata*. The phytochemical screening was conducted using standard methods. The pod extracts (20mg/ml) were subjected to screening against both gram positive (*Staphylococcus aureus*) and gram negative (*Escherichia coli*) bacterial strains using standard protocol of Disc Diffusion Method (DDM) and Gentamicin (10 µg) was used as the positive control. Phytochemical screening revealed

the presence of tannin, alkaloids, quinone and total phenols in all three extracts while flavonoid was detected only in the ethanoic extract and saponins and gum mucilage were detected only in the water extract. The extracts exhibited antimicrobial activities with zones of inhibitions ranging from 8.4 to 10, 7.2 to 8.8 and 14 to 18.8 mm respectively for ethanol, petroleum ether and water extracts, which was comparable to the standard drug (22.2 to 24.8). Among the extracts, water extract showed both higher effectivity against *Staphylococcus aureus* and *Escherichia coli* bacteria. The ability of the flower pod extracts of *S. paniculata* to inhibit the growth of both gram negative and positive bacteria is an indication of its antimicrobial potential which may be employed in the management of microbes in food contact surfaces.

Keywords: *Spilanthes paniculata*, phytochemical screening, extraction, antimicrobial activity