Antibacterial Activities and Phytochemical Screening of *Alhagi pseudalhagi*

Abdul-Hafeez, E.Y.1; A.F. Mahmoud and O.H.M. Ibrahim

**Abstract:**

The current study was conducted to test antimicrobial activity of aqueous, ethanol, methanol and acetone extracts of camel thorn (*Alhagi pseudalhagi*) against Gram-positive bacteria (Bacillus subtilis and Clavibacter michiganensis subsp. sepedonicus) and Gram-negative bacteria (Erwinia carotovora subsp. atroseptica), using the agar well-diffusion method. The minimum inhibitory concentration was also determined. Besides, phytochemical constituents of the volatile oil of camel thorn aerial parts were identified using gas chromatography coupled to mass spectrometer (GC-MS) analysis. Data of the antibacterial assay showed significant activity of all extracts against various bacterial strains at the concentration of 256 mg/ml. The methanolic extract showed the highest inhibition zone and the lowest values of minimum inhibitory concentration against all tested bacterial strains. The lowest inhibition zone and comparatively greater minimum inhibitory concentration was induced by the aqueous extract. Ethanol and acetone extracts showed moderate antibacterial activity against all tested bacterial strains. Chromatographic analysis revealed the identification of 66 phytocompounds most of which have been previously reported to possess anti-microbial, antitumor, antiseptic, preservative, insecticidal and antioxidant ac-tivities. The most abundant compounds were 1-(3-Furyl)-4b,7,7,9b,11a-pentamethyl-3,8-dioxohexadecahydroxireno[d]oxireno[7,8]naphtho[2,1-f]isochromen-5-yl acetate; Hexa-t-butylselenatrisiletane; 4-(2-Methyl-cyclohex-1-enyl)-but-3-en-2-one and 1,3-Dimethyladamantane.

**Keywords:**

antibacterial activity, camel thorn, medicinal plants, phytochemical screening,

**Published In:**

Assiut J. Agric. Sci. . Vol. 46 No (5) , 33-47