

ABSTRACT

Taxonomical classification of plants had been based on structure, cytology and chemical constituents. The chemical constituents especially the secondary metabolites have definite advantages over morphological studies and even the analytical instruments have greatly facilitated such investigations. It is therefore, *Capparis aphylla* of family *Capparaceae* was taken for ecological and phytochemical studies.

Capparaceae family is a tropical family of 45 genera and 700 species, which are economically very important and contribute much for sustenance of mankind.

Capparis aphylla, known as Kair, Karil or Delha, is widely distributed in the dry region in Pakistan and India. This plant has been studied elsewhere but almost very little data was available about the constituents of *Capparis aphylla*.

Capparis aphylla is an indigenous plant whose root, stems bark and leaves are used to relieve a verity of ailments. The root bark is used in form of powdered and also as infusion against rheumatism, gout, cough and asthma. The powder is locally applied to ulcer and is also used as analgesic, diaphoretic alexetic and anthelmintic. The roots and stems were collected from the Quiad-i-Azam campus of Punjab University Lahore, Pakistan. The fresh plants material was extracted by ethanol. The alcoholic extract was preliminary examined for the presence of alkaloids, flavonoids, steroids, tannins etc which indicated the presence of Alkaloids, Flavonoids, Steroids and Saponins while the Anthraquinones and tannins were found to be absent.

The alcoholic extract of root was concentrated in vacuum to a mainly aqueous fraction. This aqueous fraction was extracted by ethyl acetate. The organic layer after evaporation was subjected to column chromatography using different solvent systems. Thee single fraction FCC-1, FCC-2 and FCC-3 was isolated and identified as β -sitosterol, quercetin and myricetin. Which was confirmed by UV, IR, NMR etc spectral data.

The aqueous layer on evaporation and leaching with methanol gave methanol soluble materials, which on chromatography over alumina gave ACC-1, ACC-2, ACC-3 fraction in single form and ACC-4 in mixture form. These fractions were identified as *Capparin*, *Capparilin* and *Capparinin*.