

Phytoecdysteroid profiling of *Silene vulgaris* by UPLC-ESI-MS

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Abstract

Silene vulgaris is a wild edible plant consumed in both raw as well as cooked forms in several parts of Europe. The phytoconstituents of *Silene* species include phytoecdysteroids, triterpenoidal saponins, terpenoids, flavonoids and phenolics. *S. vulgaris* is a relatively unexplored species and the chemical profiling of this plant has not been attempted. This is the first report of occurrence of phytoecdysteroids in *S. vulgaris*. UPLC-ESI-MS approach was applied to the extracts of flowers, leaves and roots of *S. vulgaris* for the profiling of phytoecdysteroids. The relative distribution of these compounds varied between flowers and leaves; however, the qualitative composition was similar. Only traces of phytoecdysteroids were present in the roots. The aglycones, sugars and other moieties were determined on the basis of ESI-MS. A total of eight previously known phytoecdysteroids were identified. Partial characterization of eight other phytoecdysteroids was also attempted.

Keywords: *Silene vulgaris*, UPLC-ESI-MS, Chemical profiling, Phytoecdysteroids