

## Phenylethanoid glycosides from *Eremostachys azerbaijanica* Rech. F.

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**Background and Aims:** The genus *Eremostachys* is one of the largest genera of the Lamiaceae family that about 16 species of this genus are growing in Iran. In traditional medicine of Azerbaijan region of Iran, roots of some species belonging to the genus *Eremostachys* are topically used in treatment of bruises, superficial and local inflammations and pains. In this research, roots of *E. azerbaijanica* were phytochemically studied until perhaps by identification of chemical content of this plant, a step can be taken towards correct use from this natural product in treatment of diseases.

**Methods:** In this research, the roots of *E. azerbaijanica* were sequentially extracted with petroleum ether, chloroform, ethyl acetate and methanol using maceration method. The dried methanolic extract was preliminary fractionated by SPE method on ODS sorbent, and the compounds existing in resulted fractions were purified by preparative HPLC (C18 column and acetonitrile-water solvent system). Extremely, the chemical structures of all compounds separated from MeOH extract were determined by using methods of UV/Visible and one dimensional NMR spectroscopy.

**Results:** Three known phenylethanoid glycosides named Forsythoside B, acetoside and alyssonoside were identified from MeOH extract of *E. azerbaijanica* roots.

**Conclusions:** Since all compounds identified from *E. azerbaijanica* structurally belong to the group of phenylethanoid glycosides with anti-inflammatory and analgesic effects, therefore it is expected that traditional and local application of this plant's roots in treatment of local inflammations and pains is reasonable and beneficial. On the other hand, in laboratory studies conducted on the anti-inflammatory and analgesic effects of several species of the genus *Eremostachys*, such effects in plants belonging to this genus have been proved.

**Keywords:** *Eremostachys azerbaijanica*; Phenylethanoid glycosides; HPLC; NMR