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Extraction, identification and purification of stigmast-5, 22-dien-3-O-α-D- glucopyranoside in Ruscus Aculeatus

Mohammad Mahmoudi Alemi*
Department of Chemistry, Golestan University, Gorgan, Iran
Email: m2alemi@gmail.com

Jila Asghari
Department of Chemistry, Golestan University, Gorgan, Iran

Mohsen Mazaheri Tehrani
Department of Chemistry, Golestan University, Gorgan, Iran

Meysam Sadeghi
Department of Chemistry, Lorestan University, Khorramabad, Iran
Email: meysamsadeghi1364@gmail.com

Pourya Zarshenas
Faculty of Chemistry & Petroleum Sciences, Shahid Beheshti University (SBU), Iran
Email: dr.pouryazarshenas@yahoo.com

Abstract
The genus of Ruscus is a member of Asparginaceae genera. This genus has 6 species. Studies illustrate that, this genus contain steroids derivatives such as steroidal saponins and steroidal glycosides. There is only Ruscus Aculeatus in Iran and grows in northern forests. Extract of this plant has therapeutic properties like vascular preventive and beneficial effect on venous insufficiency, especially in haemorroidal crisis. The rhizomes of this plant were defatted with n-hexane and extracted soxhelet apparatus by methanol. The resulting extracted sample was concentrated in rotary evaporator and subsequently fractionated in n-butanol and water. Diethylether was added into organic phase and steroidal derivatives precipitate. The extracted compound was purified by liquid-liquid chromatography (LLC) and vacuum liquid chromatography (VLC). Identification of sample was determined by HNMR, FTIR and Mass Spectroscopy. The triterpenoid component was found to be stigmast-5, 22-dien-3-O-α-D- glucopyranoside. The steroid part of this substance as a precursor to the production of the progesterone and also as an intermediate in the production of vitamin D_3, Androgens, estrogens and corticosteroids are used. As far as we know, no report on the extraction of this compound in this species and other species the genus Roscus.

Keywords: Ruscus Aculeatus, LLC , VLC, stigmast-5, 22-dien-3-O-α-D-glucopyranoside,