

Extraction of Saponins and Cyclopeptides from Cow Cockle (*Vaccaria hispanica* (Mill.) Rauschert) Seeds Grown in Turkey

Authors : Ihsan Burak Cam, Ferhan Balci-Torun, Ayhan Topuz, Esin Ari, Ismail Gokhan Deniz, Ilker Genc

Abstract : The seeds of *Vaccaria hispanica* have been used in food and pharmaceutical industry. It is an important product due to its superior starch granules, triterpenic saponins, and cyclopeptides suitable for drug delivery. *V. hispanica* naturally grows in different climatic regions and has genotypes that differ in terms of seed content and composition. Sixty-six *V. hispanica* seed specimens were collected based on the representation of the distribution in all regions of Turkey and the determination of possible genotypic differences between regions. The seeds, collected from each of the 66 locations, were grown in greenhouse conditions in Akdeniz University, Antalya. Saponin and cyclopeptide contents of the *V. hispanica* seeds were determined after harvest. Accelerated solvent extraction (ASE) was applied for the extraction of saponins and cyclopeptides. Cyclopeptide (segetalin A) and saponin content of *V. hispanica* seeds were found in the range of 0.165-0.654 g/100 g and 0.15-1.14 g/100 g, respectively. The results were found to be promising for the seeds from Turkey in terms of saponin content and quality. Acknowledgment: This study was supported by the Scientific and Research Council of Turkey (TUBITAK) (project no 112 O 136).

Keywords : *Vaccaria hispanica*, saponin, cyclopeptid, cow cockle seeds

Conference Title : ICACA 2018 : International Conference on Agricultural Chemistry and Agrochemicals

Conference Location : Copenhagen, Denmark

Conference Dates : June 11-12, 2018