World Academy of Science, Engineering and Technology
International Journal of Biomedical and Biological Engineering
Vol:10, No:06, 2016

Environmental Efficacy on Heracleum persicum Essential Oils

Authors : Rahele Hasani, Iraj Mehregan, Kambiz Larijani, Taher Nejadsattari, Romain Scalone

Abstract : Essential oils of Heracleum persicum (Apiaceae) have been widely used from many years ago, but the difference of its properties among different populations have not been identified up to now. Hydrodistilation Clevenger type was used to obtaining the fruit essential oils of four populations of H. persicum from different localities in Iran, then they were characterized by GC-FID and GC-MS analyses. Some ecological factors were also measured. The oils of four populations were compared to determine the similarities and differences and the relationships between these factors and ecological factors. Based on the result, 18-32 different components were identified in four populations, while the percentage of the main components was higher in population with lower number of components. According to the statistical analyses of chemical components and ecological factors, it can be concluded that some ecological factors such as altitude, less humidity, high difference between day and night temperature and salty soil would lead to lower number of components in essential oil, whereas they consist the higher percentage.

Keywords : Chemotaxonomy, Persian hogweed, Ecological factors, Apiaceae.
Conference Title : ICMPNP 2016 : International Conference on Medicinal Plants and Natural Products
Conference Location : San Francisco, United States
Conference Dates : June 09-10, 2016