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Eco-phytochemistry of important medicinal and aromatic plants of Iran

Medicinal and aromatic plants are offered in a wide variety of products on the world market. Iran, located in Middle East, played a key role in connecting various cultures and civilizations. Ethno-herbal and phytochemical dates back to a long time ago and a number of writings regarding this issue are left by great physicians e.g., Avicenna and Rhazes. Iranian botanists have recognition of around 1450 genera and 8000 species which nearby 2000 species are endemic. Iranian traditional medicine had cited pharmaceutical dosage forms, e.g., powders, syrups, ointment, extracts, powders, mucilages, nectars, etc. In this presentation phytochemical screening of aromatic plants, e.g., *Rosa damascena*, *Thymus* spp., *Anthemis* spp., *Hypercom* spp., are reviewed. Also, the effect of ecological zone of growing, methods of extraction and identify their components are in our project. *Rosa damascena* cultivated in extensive zone of Iran and produce rose water and essential oils out of it. In this research, few samples of essential oil were extracting by different methods, e.g., traditionally, industrial and laboratory scales. Samples of oil were analyzed by GC and GC/MS. The main constituents of oil by traditional, Ghatran Gool Co. were n-nonadecane (33.1%), geraniol (14.6%), n-heneicosane (13.2%). Kashan sample were shown, n-nonadecane (33%), n-heneicosane (18.1%), methyl hexadecane (12.9%). Laboratory essential oils samples were extracted by two hydrodistillation method which are designed by authors in Research Institute of Forests and Rangelands which were named plan-1 and plan-2. The main isolated constituents in plan-1 were geraniol (21.8%), n-nonadecane (21.3%) and citronellol (12%), with yield of (0.015%) and in plan-2 were n-nonadecane (21.8%), geraniol (19.1%) and citronellol (15%) with yield of 0.023%. In other studies, investigated the effect of storage and time on essential oil composition in normal temperature of *Rosa damascena* were down. We used different vessels e.g., glass, color glass and aluminum quality. Main components of primary essential oils were citronellol (33.5%), cis-p-menth-2-en-1-ol (7.3%) and geraniol (7.2%). Storage in three months in simple glass in refrigerator was better than other methods. Storage of essences in six months of periods of time in simple glass and normal temperature is better than other. In this presentation also shown how variety, ecotype, different part of plants and methods, effected on the essentials oil of other aromatic plants.

Biography

Mohammad Bagher Rezaee has extended his valuable service as a Professor in Department of Medicinal Plants in Research Institute Forests and Rangelands. Currently he is working on extraction and purification of components from medicinal, aromatic and poisonous plants by different methods.

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