

OP11. GC-MS ANALYSIS OF ESSENTIAL OILS AND FATTY ACIDS OF LIPIDS FROM *FERULA* SPECIES GROWING IN UZBEKISTAN

Khayrulla M. BOBAKULOV^{1*}, Daniya T. ASILBEKOVA¹, Nasrulla D.ABDULLAEV¹

¹Acad. S.Yu. Yunusov Institute of the Chemistry of Plant Substances, Academy of Sciences of the Republic of Uzbekistan, 77, M.Ulugbek str., 100170, Tashkent, Uzbekistan

*Corresponding Author. E-mail: khayrulla@rambler.ru

Many higher plants including the species of the Apiales order (Umbelliferae) produce economically important organic compounds that are in demand to the production of pharmaceuticals, food and cosmetic products. Our investigations is devoted to the study of essential oils (as volatile compounds) and lipids (as nonvolatile fixed oils) of Apiaceae plants growing Uzbekistan. More than 200 species of the Apiaceae family are distributed in the flora of our region, as well as about 40 species of wild-growing *Ferula*

L. The species of this genus are resinous, essential oil, melliferous, fodder, medicinal plants.

Essential oil composition and fatty acid profile of lipids from *F. foetida* (Bunge) Regel, *F. karatavica* Regel & Schmalh., *Ferula kuhistanica* Korovin, *Ferula moschata* (H.Reinsch) Koso-Pol., *Ferula prangifolia* Korovin, *Ferula olgae* Regel & Schmalh., *Ferula tenuisecta* Korovin, *Ferula tschimganica* Lipsky ex Korovin and *Ferula ugamica* Korovin were analyzed. Differences and similarities in the composition of these substances depending on various factors have been revealed. Monoterpenes were considered to be the main constituents responsible for the aroma of essential oil of *Ferula kuhistanica*, *Ferula tenuisecta*, *F. tschimganica* and *F. olgae*. Other studied species except *F. foetida* were more enriched with sesquiterpene constituents. High percentage of octadecenoic acids consisting (Z)-octadec-6-enoic (petroselinic) and (Z)-octadec-9-enoic (oleic) isomers was detected in the fruit lipids.

We can conclude that generalization of studies the essential oil composition and fatty acid profile of lipids could be useful for the taxonomy of the Apiales species.

Keywords: Apiaceae; *Ferula*; GCMS