

PP34. LIPIDS OF HALOPHYTE FRUIT PLANT OF THE *SUAEDA PARADOXA*

N.K. YULDASHEVA¹, Sh.Kh. IBOTOV¹ , S.D. GUSAKOVA¹, S.Z. NISHANBAEV¹ 

¹S.Yu. Yunusov Institute of the Chemistry of Plant Substances of AS of RUZ
Tashkent, Republic of Uzbekistan

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

Suaeda paradoxa Bunge. is a halophytic plant of the family *Amaranthaceae*, which is an endemic species of Central Asia, growing in Uzbekistan on saline lands. Biomass of *S. paradoxa* is recommended as a promising renewable raw material for biogas production in the desert saline regions of Central Asia.

For the first time, we have studied the lipids of seeds (I) and pericarp (II) of *S. paradoxa* fruits that was collected on highly saline soil of the dried bottom of the Aral Sea (2022). By using well-known methods of lipids chemistry, it was determined that samples I and II contain 18.12 and 12.27% neutral lipids (NL), 0.47 and 0.78% glycolipids (GL), 0.77 and 0.89% phospholipids (PL). In the composition of the NL of two samples, the content of unsaponifiable substances was 5.41% (I) and 8.36% (II), carotenoids in the unsaponifiable components, according to spectrophotometers data, 105.38 mg% (I) and 244.13 mg%.

Hydrocarbons, fatty acid esters (FA) with phytosterols and triterpenols, triacylglycerides, free triterpenols, and phytosterols were identified in NL I and II by TLC on silica gel using known solvent systems, qualitative reactions, and model substances. GL included mono- and digalactosyldiacylglycerols, steryl glycosides and their esters with fatty acids; PL included phosphatidylcholines, phosphatidylethanolamines, phosphatidylinositols, and phosphatidic acid.

The lipid FA composition of two samples was determined by GC on an Agilent instrument 6890N, FID, 30 m × 0.32 mm capillary column, HP-5 phase, helium carrier gas, programming temperature 150-270°C. In the LL, 19 (sample I) and 14 (sample II) FAs with dominance ω6-18:2 and 16:0 were found; GL I and II included 24 and 16 FAs, respectively, with basic 16:0 and ω9-18:1; in FL I and II there were 23 and 16 LCDs, where the majors were 16:0, as well as 16:0 and ω6-18:2.

Thus, the fruit pericarp of *S. paradoxa* contains a significant amount of neutral lipids and is enriched in polar lipids and carotenoids.