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BRIEF COMMUNICATIONS

NEUTRAL LIPIDS OF THE BARK OF *Hippophae rhamnoides* BRANCHES

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Branches of common sea buckthorn *Hippophae rhamnoides* L., fam. Elaeagnaceae (Paltau, Uzbekistan) were freed mechanically from bark. The air-dry bark was ground and extracted with *n*-hexane. The yield of neutral lipids (NLs) amounted to ~1% on the weight of the air-dry bark. The composition of the classes of lipids was studied by CC, ATLC/PTLKC, qualitative reactions, and GLC. Table 1 gives the composition and the amounts of the classes of compounds that were identified.

As can be seen from Table 1, the main components quantitatively were the free fatty acids (FFAs), which shows a high intensity of the metabolic processes taking place in the bark. Triacylglycerols (TAGs) also accumulated in the bark. Moreover, the bark, like other organs of sea buckthorn, contained a high level of cyclic and fatty alcohols, and also of triterpene acids.

In the composition of the FAs, determined for two classes — TAGs and FFAs — we identified 8-9 components by GLC, the three main acids among them being the 16:0, 18:1, and 16:1 species (Table 2). With respect to the level of the 16:1 acid, which is characteristic for sea buckthorn oil, this organ of the plant occupies an intermediate position between the leaves (4.7% in the FFAs and 23.7% in the TAGs [1]) and the pericarp (46.9% in the FFAs and 49.9% in the TAGs [2]).

TABLE 1. Neutral Lipids of the Bark of Sea Buckthorn Branches

Class of lipids	Amount, % by weight
Hydrocarbons	3.4
Aliphatic esters	1.4
Fatty acid esters with cyclic alcohols	5.6
Sterol acetates	4.7
Triacylglycerols	16.4
Free fatty acids	38.6
Fatty alcohols and triterpenols	5.7
Sterols	4.8
Triterpene acids	4.0
Unidentified	5.4

TABLE 2. Fatty Acid Compositions of the FFA and TAG Classes of the Bark of Sea Buckthorn Branches

Class of lipids	Acid, % GLC									
	12:0	14:0	15:0	16:0	16:1	16:2	18:0	18:1	18:2	20:0
FFAs	–	1.0	1.0	34.4	20.5	1.7	7.1	27.9	4.6	1.8
TAGs	1.4	1.5	1.3	29.3	36.7	1.3	–	23.4	5.1	–

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