with centers at 6.07 and 5.47 ppm (J = 3 Hz). The splitting of the signal of the exomethylene group into two doublets confirmed the presence of the acyl group at C_8.

The physicochemical and spectral characteristics of ajadin acetate correspond to those of arteglasin A [4]. Consequently ajadin has the structure of 8α-hydroxy-3,4-epoxy-5,7α(H)-guai-1(10),11(13)-dien-6,12-olide.

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TRITERPENE ACIDS OF RHODODENDRON PLANTS OF THE FLORA OF THE USSR

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Rhododendrons are rich in triterpenoids and the presence of ursolic acid in them is considered as a chemotaxonomic characteristic [1]. The application of the GLC method in the investigation of the triterpene composition of the acid fractions of extracts of rhododendrons permits the identification in these plants not only of ursolic acid but also of oleanolic acid [2].

In the present paper we give information obtained with the aid of GLC on the relative amounts of these acids in 16 species of Rhododendron growing in the USSR.

The plant raw material (leafy branches) was collected in the post-flowering phase.

For the quantitative determination of oleanolic and ursolic acids, they were converted into the methyl esters (I) and (II), respectively, by treating the acid fractions with a solution of diazomethane in diethyl ether.

The apparatus on which the GLC analysis was performed was the same as that employed previously [3]. As the stationary phases we used OV-17 and SE-30. The conditions of analysis (column temperature 280°C, rate of flow of carrier gas (argon) 40 ml/min) ensured a sufficient and approximately equal degree of separation of compounds (I) and (II) [3].

TABLE 1

Plant	Yield of acid fractions of chloroform extracts, % on the air-dry raw material	Ratio of the areas of the peaks of compounds (I) and (II)
Rh. ponticum L.	2,9	10:90
Rh. kotschyi Simk.	0,8	20:80
Rh. adamsii Rehd.	1,7	30:70
Rh. schlippenbachii Maxim.	1,4	30:70
Rh. camtschaticum Pall.	0,1	30:70
Rh. luteum Sweet.	1,2	30:70
Rh. ungernii Trautv.	0,8	30:70
Rh. tschonoskii Maxim.	1,5	30:70
Rh. caucasicum Pall.	1,0	30:70
Rh. parvifolium Adams.	0,5	30:70
Rh. fauriei Franch.	0,7	30:70
Rh. aureum Georgi.	0,9	30:70
Rh. ledebourii Pojark.	0,8	30:70
Rh. dahuricum L.	2,5	40:60
Ph. sichotense Pojark.	1,8	50:50
Rh. mucronulatum Turcz.	0,5	60:40

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The chromatograms were interpreted quantitatively by the method of internal normalization of the areas of the peaks with a relative error of determining the areas of 5%.

In Table 1 we give the results of the GLC analysis of methylated extracts of rhododendrons.

In the species of plants investigated there was less oleanolic acid than ursolic acid. The only exception was *Rhododendron mucronulatum*. Almost equal amounts of these compounds were found in *Rh. sichotense* and *Rh. dahuricum*. As compared with other species, there was a very low proportion of oleanolic acid in the mixture of triterpene acids of *Rh. ponticum*.

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ERYSIMIN AND ERYSIMOSIDE FROM *Erysimum czernjajevii*

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In a study of an ethanolic extract of the seeds of *Erysimum czernjajevii* N.Busch. (Chernyaev's erysimum) by the TLC method, four cardenolides were detected [1]. We have isolated two substances by the same method.

Compound (I), with mp 173-178°C, $[\alpha]_D^{20}$ +29.5° (c 0.1; methanol) gave positive Keller-Kiliani, Lieberman-Burchard, Kedde, and Raymond reactions. Hydrolysis with 0.1 N H_2SO_4 formed digitoxose and strophanthidin. In concentrated sulfuric acid (84%) the following colorations succeeding one another in time appeared: brown–green-brown–blue-brown–gray-violet.

On the basis of these facts we came to the conclusion that the substance isolated was erysimin.

Compound (II) with mp 234-237°C, $[\alpha]_D^{20}$ +21.3° (c 0.1; methanol) gave a positive reaction with the Kedde, Raymond, and Lieberman-Burchard reagents. The compound was cleaved by the gastric juice of the snail *Helix plectotropis* into erysimin and D-glucose. In 84% H_2SO_4 the following colorations changing with time appeared: green–greenish brown–brown. A mixture with an authentic sample of erysimoside gave no depression of the melting point.

It was established by a separate quantitative determination[2] that the seeds of Chernyaev's erysimum contained from 0.25 to 0.3% of erysimin and from 0.85 from 0.9% of erysimoside.

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