

Vexibia alopecuroides (L.) Yakovl. (*Sophora alopecuroides*) is a perennial herbaceous plant belong to the family Fabaceae. It is widely distributed in Central Asia and is used as a dyestuff, and also in folk medicine in cases of poor digestion and the absence of appetite [1, 2]. There is no information in the literature about the flavonoids of this plant.

From a chloroform fraction of an ethanolic extract of the roots of *V. alopecuroides* collected in territory of Akdar'ya region of Samarkand Province, Uzbek SSR, using column chromatography, we have isolated four individual compounds.

Compound (I) — $C_{20}H_{20}O_4$, M^+ 324, mp 203–204°C (from benzene) $[\alpha]_D - 45.3 \pm 2^\circ$ (ethanol). According to its UV spectrum ($\lambda_{max}^{ethanol}$ 288, 310 nm; $\log \epsilon$ 3.94, 3.74), it was a flavanone derivative. On the basis of IR, mass, and PMR spectra, and also of a comparison with an authentic sample, (I) was identified as isobavachin [3, 4].

Compound (II) — $C_{25}H_{28}O_4$, M^+ 392, mp 136–137°C (from benzene), $[\alpha]_D - 39.2 \pm 2^\circ$ (pyridine); $\lambda_{max}^{ethanol}$ 288, 311 nm ($\log \epsilon$ 4.05, 3.77), was also a flavanone derivative. The mass and PMR spectra of (II) and of the product of its cyclization in the presence of HCl showed that the substance isolated had the structure of 3',8-di(γ,γ -dimethylallyl)-4',7-dihydroxyflavanone and was identical with glabrol, which has been isolated previously from licorice root [5].

Compound (III) — $C_{21}H_{24}O_{10}$, mp 140–142°C (from methanol), $[\alpha]_D - 107.7 \pm 2^\circ$ (c 1.05; pyridine); $\lambda_{max}^{ethanol}$ 280, 286, 312 nm ($\log \epsilon$ 3.56, 3.61, 3.80) we assigned to the pterocarpan glycosides. It formed a tetraacetyl derivative $C_{30}H_{30}O_4$, M^+ 614, mp 187–188°C. Acid hydrolysis with 5% HCl led to d,l-maackiain and D-glucose. On the basis of the IR and PMR spectra of (III), and also the mass and PMR spectra of its acetate, this compound was identified as trifolirhizin (maackiain 7-O- β -D-glucopyranoside) [6].

Compound (IV), mp 112–114°C, composition $C_{25}H_{28}O_4$, M^+ 392 was identified by its UV, IR, PMR, and mass spectra and also its chromatographic mobility as the chalcone ammothamidin [7]. A mixture with an authentic sample of ammothamidin gave no depression of the melting point.

This is the first time that any of these compounds has been isolated from *Vexibia alopecuroides*.

LITERATURE CITED

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