

CHEMICAL STUDY OF *Eriobotrya japonica*

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In continuation of the search for sources of biologically active compounds, we studied flowers of *E. japonica* L. (Japanese mimosa, Rosaceae), which is cultivated in Azerbaidzhan as a decorative. In contrast with many plants, it flowers in November—December [1, 2].

Dried flowers (0.5 kg) were collected in December 2002 and extracted successively with hexane, chloroform, and ethanol. Compound **1** was obtained from the hexane extract; **2**, from chloroform.

The ethanol extract was evaporated to dryness and dissolved in water. The aqueous solution was treated with ethylacetate. Solvent was removed. Fraction crystallization from ethanol produced **3** and **4**.

Compound **1** was small needle-like white crystals that were soluble in hexane, chloroform, and ethanol and insoluble in water, mp 138-139°C (ethanol), $[\alpha]_D^{20}$ -37° (*c* 0.25, CHCl₃); acetate, mp 126-128°C (ethanol). It appeared on TLC [developer phosphotungstic acid solution (25%) at 100-105°C] as a pink spot and gave a positive reaction with Burchard—Liebermann and Salkovskii reagents.

Compound **2** was needle-like white crystals that were soluble in chloroform and ethanol and insoluble in hexane and water. It gave a positive reaction with Burchard—Liebermann and Salkovskii reagents. It appeared on chromatograms as a pink spot, mp 280-282°C (ethanol), $[\alpha]_D^{20}$ -64° (*c* 0.94, CHCl₃).

Compound **3** was white crystals, mp 232-234°C (ethanol), $[\alpha]_D^{20}$ -59° (*c* 0.6, CH₃OH), *R_f* 0.73 (*n*-C₄H₉OH:CH₃CO₂H:H₂O, 4:1:5), soluble in water and ethanol. Hydrolysis by H₂SO₄ (4%, 3h) cleaved it into quercetin and L-arabinose. Yield of quercetin, 63.5%.

Compound **4** was white crystals, mp 219-221°C (ethanol), $[\alpha]_D^{20}$ -38° (*c* 0.15, CH₃OH), *R_f* 0.69 (*n*-C₄H₉OH:CH₃CO₂H:H₂O, 4:1:5), soluble in water and ethanol. Acid hydrolysis by H₂SO₄ (5%) quickly cleaved it into quercetin and D-glucose. Yield of aglycon, 64.3%.

Based on the physicochemical properties and chromatographic behavior (comparison with authentic specimens), **1** was identified as β-sitosterol; **2**, ursolic acid; **3**, quercetin-3-O-α-L-arabinoside; **4**, quercetin-3-O-β-D-glucoside [3, 4].

These compounds are widely distributed in various plants.

E. japonica L. from Azerbaidzhan flora was studied for the first time [5].

REFERENCES

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