POLYPHENOLIC COMPOUNDS FROM EUPHORBIA OBLONGIFOLIA AND E. MACROCERAS

Yu. V. Roshchin

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The flowers of the species of Euphorbia mentioned were extracted successively with chloroform and ethanol. The ethanolic extracts were evaporated in vacuum and diluted with water. The solutions deposited a dirty-yellow precipitate which was recrystallized from pyridine.

Both species yielded crystals in the form of yellow needles of the same composition, $C_{14}H_6O_8$, mp 360° C, giving a tetraacetate with mp 342–343° C. A mixture of the substance with ellagic acid gave no depression of the melting point.

UV spectra: 366 and 255 mμ (in absolute ethanol). A bathochromic shift of the long-wave band by 18 mμ on the addition of sodium acetate and boric acid shows the presence of a free ortho-dihydroxy grouping in the substances studied.

IR spectrum: cm^{-1}: 3260, 3250 (–OH), 1720 $\left(>C=O\right)$, 1615 $\left(>=C<\right)$.

The extracts of the above-mentioned Euphorbia species, after the separation of the ellagic acid, were treated with ethyl acetate. The ethyl acetate extracts were combined and evaporated, and the total flavonoids were precipitated with chloroform. Fractional crystallization of the combined flavonoids from each of the species of Euphorbia gave the same substance with the composition $C_{21}H_{20}O_{12}$, mp 233–235° C (from ethanol).

On the basis of the results of UV spectroscopy with ionizing and complexforming additives, the products of alkaline degradation, and a mixed melting point test, the substance was identified as hyperoside [2].

REFERENCES

1. Preparative Organic Chemistry [in Russian], Moscow–Leningrad, 512, 1964.
2. É. T. Oganesyan, V. A. Bandyukova, and A. L. Shinkarenko, Rastit. res., 4, 2, 240, 1968.

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Pyatigorsk Pharmaceutical Institute