

## A STUDY OF THE ANTHOCYANINS OF HIBISCUS HYBRIDS

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The anthocyanins of the genus *Hibiscus* (family Malvaceae) have not hitherto been studied. In this communication we give the results of an investigation of the anthocyanins of hybrid forms of hibiscus.

Numerous hybrid forms of hibiscus have been obtained by N. F. Rusanov by interspecies hybridization of the north American species of *Hibiscus* *H. moscheutos*, *H. militaris*, and *H. coccineus*, which are widely represented in the Botanical Garden of AS UzSSR.

The flowers of the hybrid hibiscus of the variety M. Gor'kii were extracted with methanol containing 1% of HCl. The anthocyanins were precipitated from the extract with a threefold volume of ether. The total anthocyanins were separated by chromatography on a column of cellulose powder in the water-acetic acid-concentrated HCl (82:15:3) system. Two individual crystalline substances were obtained. After recrystallization from 2 N HCl in ethanol, the first anthocyanin formed a dark violet microcrystalline powder with a golden tinge having mp 215–217° C (decomp.) with the composition  $C_{21}H_{21}O_{11}Cl \cdot 2H_2O$ ; UV absorption spectrum:  $\lambda_{max}$  525 m $\mu$  [1].

The second anthocyanin formed a red-brown microcrystalline powder with a golden tinge melting at 239–241° C (decomp.) with the composition  $C_{26}H_{29}O_{15}Cl \cdot 4H_2O$ ; UV absorption spectrum:  $\lambda_{max}$  523 m $\mu$ .

The results of a study of the products of enzymatic and acid hydrolysis, oxidative degradation, and alkaline fusion, and UV spectroscopy and paper chromatography in the presence of markers enabled the first anthocyanin to be identified as chrysoanthemin and the second as gossypicianin, which have previously been isolated from the flowers of the cotton plant [2].

The amounts of the anthocyanins in the flowers of hybrid varieties of *Hibiscus* determined spectrophotometrically were (%): in N. Gor'kii 10.6, in *Gladiolus vidnyi* ["gladiolus-like"], 6.7, in Gagarin 5.4, in Alenushka 5.1, in Kolkhoznitsa 5.1, in Krasnyi partizan ["red partisan"] 4.5, and in Kyzil Uzbekistan 4.8.

## REFERENCES

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