

## FLAVONOIDS OF THE GLUMES OF *Gleditschia australis*

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As reported previously [1], the glycoflavonoids saponaretin and vitexin have been isolated from the glumes of *Gleditschia australis* Hemsl. (Australian honeylocust). In a further study of this plant, from a purified chloroform extract by preparative paper chromatography we have isolated luteolin, homoorientin, and orientin.

The luteolin (3',4',5,7-tetrahydroxyflavone)  $C_{15}H_{10}O_6$ , had mp 330-332°C;  $\lambda_{\text{max}}^{C_2H_5OH}$  255, 269, 352 nm; acetate with mp 225-227°C.

The homoorientin (5-C- $\beta$ -D-glucopyranosyl-3',4',5,7-tetrahydroxyflavone),  $C_{21}H_{22}O_{11} \cdot H_2O$  had mp 228-230°C,  $[\alpha]_D + 22^\circ$  (c 0.46; methanol);  $\lambda_{\text{max}}^{C_2H_5OH}$  258, 271, 352 nm. On hydrolysis by Kiliani's method [2], the homoorientin formed luteolin and D-glucose together with a very small amount of D-arabinose.

The orientin (8-C- $\beta$ -D-glucopyranosyl-3',4',5,7-tetrahydroxyflavone),  $C_{21}H_{22}O_{11} \cdot H_2O$ , had mp 254-257°C;  $[\alpha]_D + 18^\circ$  (c 0.45; aqueous methanol);  $\lambda_{\text{max}}^{C_2H_5OH}$  256, 268, 351 nm. On hydrolysis by Kiliani's method, the flavonoid gave the same products as homoorientin. Under mild conditions of acid hydrolysis (treatment with 2% sulfuric acid for 6 h), the mutual isomerization of the glycoflavonoids isolated took place [3].

The identity of the compounds studied as luteolin, homoorientin, and orientin was also confirmed by their IR and NMR spectra and by comparisons with authentic samples.

### LITERATURE CITED

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