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During an investigation of the ether-soluble fraction of a methanolic extract of the herbage of Equisetum arvense L. (field horsetail) [1, 2] we have isolated two flavone compounds (I) and (II) by chromatography on polyamide.

Substance (I) (7 mg), mp 284-286°C (methanol), λ_{max} (CH₃OH) 269, 335 nm. UV spectroscopy with ionizing and complex-forming reagents showed the presence of free hydroxy groups in positions 5 and 4'. In the mass spectrum there are the peaks of ions with m/e 284 (M⁺), 256 (M - CO)⁺, 241 (M - COCH₃)⁺, 167, and 166. The demethylation of (I) with pyridine hydrochloride [3] formed apigenin, which we have isolated previously [4].

Substance (I) has the structure of 4',5-dihydroxy-7-methoxyflavone (genkwanin) [5].

Substance (II), mp $328-330^{\circ}$ C (methanol), M⁺ 286 (mass spectrum), melting point of the acetyl derivative $224-226^{\circ}$ C. On the basis of UV spectroscopy with additives, PMR spectroscopy of the acetate of (II), and mass spectrometry, (II) was identified as 3',4',5,7-tetrahydroxyflavone (luteolin).

Genkwanin has not previously been detected in the family Equisetaceae.

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