

A STUDY OF THE POLYPHENOLIC COMPOUNDS OF

Polygonum amphibium AND *P. scabrum*

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UDC 547.547.972

The raw material for the analysis of *Polygonum amphibium* L. (water lady's thumb) was collected near Lake Dzhaman-Kul, Syr'dar'ya oblast, and that of *P. scabrum* Moench on the banks of the R. Ugam, Tashkent region.

The air-dried raw material was defatted with chloroform and was extracted first with 96% ethanol and then with 70% ethanol. The concentrated alcoholic extracts were treated with hot water. The flavonoids were extracted with ethyl acetate.

The ethyl acetate extracts were dried and concentrated, and the flavonoids were precipitated with a fivefold volume of dry chloroform.

Hydrolysis of the combined flavonoids with 5% sulfuric acid solution for 3 h showed that *P. amphibium* contains glycosides of kaempferol, quercetin, and luteolin and *P. scabrum* those of kaempferol and quercetin.

By chromatography on a column of Kapron powder, the material from *P. amphibium* yielded six individual compounds which were identified by UV and IR spectroscopy, the products of acid hydrolysis, and a comparison with authentic samples as hyperoside (quercetin 3-O- β -D-galactopyranoside), avicularin (quercetin 3-O-L-arabopyranoside), quercimeritrin, and luteolin 7-glucoside. Substances V and VI proved to be aglycones - quercetin and kaempferol.

Similarly, *P. scabrum* yielded the same six compounds: avicularin, hyperoside, rutin, quercimeritrin, quercetin, and kaempferol.

Two phenolic acids were isolated from each of the species of *Polygonum* studied by preparative paper chromatography. By IR spectroscopy and a comparison with authentic samples, they were identified as chlorogenic and caffeic acids.

Tashkent Pharmaceutical Institute. Translated from *Khimiya Prirodnikh Soedinenii*, No. 5, p. 647, September-October, 1970. Original article submitted July 17, 1970.

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