

CHROMATOSPECTROPHOTOMETRIC DETERMINATION OF RUTIN IN THE BUDS OF *Sophora japonica*

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At the present time, rutin is obtained from the buds of imported *Sophora japonica*. It has been shown previously [1] that the buds of *S. japonica* cultivated in Central Asia can also serve as an industrial source for the preparation of rutin. Here we give an account of a method of analyzing rutin that has been recommended for the pharmacopoeial article on the buds of domestic *S. japonica*.

To isolate the rutin, 2 g of the comminuted air-dry buds of *S. japonica* that had been passed through a sieve with apertures of 0.5 mm was placed in a conical flask (750-1000 ml), and 5 g of quartz sand, 15 glass balls ($d=5-10$ mm), and 150 ml of methanol were added. The contents of the flask were shaken for 6 h and allowed to stand for 18 h. A 0.2-ml sample of the filtered methanolic extract was chromatographed by the descending method on type "C" ["medium"] paper in the 15% acetic acid system (R_f of rutin 0.70, R_f of quercetin 0.05) [2-5]. The rutin was detected on the chromatogram by its fluorescence in UV light (yellow-brown spot) and was eluted from the paper with 30 ml of 60% methanol by shaking for 4 h (95-97% desorption). The amount of rutin in the eluate was determined on an SF-4 spectrophotometer at λ_{\max} 358 nm.

Calculation was performed relative to a standard rutin which we prepared from a pharmacopoeia preparation by washing it three times with hot acetone and subsequently recrystallizing it from methanol in accordance with a known procedure [6].

It was established that the amount of rutin in the buds of *S. japonica* cultivated in Central Asia was 19.5-20.5% (maximum deviation from the mean 0.54%), while the flowers contained 16.5-16.0%, the fruit before falling 3.0%, the green shell of the fruit 3.5%, and the heart of the fruit 0.3-0.4%. The amount of rutin decreased at the end of the vegetation period, which agrees with literature information for *S. japonica* [7].

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