## FLAVONOIDS OF THE LEAVES OF Lupinus luteus

A. P. Volynets, S. M. Mashtakov,\* and N. A. Laman UDC 547.972:582.736

From an ethanolic extract (70% ethanol) of the leaves of the lupin (Belorussian and Borovlyanskii varieties) by preparative two-dimensional ascending paper chromatography in the solvents 1) isobutanol-acetic acid-water (4:1:5) and, 2) 15% CH<sub>3</sub>COOH, we have isolated seven substances of flavonoid nature which, according to qualitative reactions, fluorescence, UV spectra, bathochromic shifts with caustic soda, aluminum chloride, sodium acetate, sodium acetate and boric acid, the products of acid hydrolysis and al-kaline cleavage, and comparison with authentic samples have been identified as rutin, isorhamnetin 3-rutinoside, rhoifolin, kaempferol 3-rhamnoglucoside, isoquercitrin, isorhamnetin 3-glucoside, and astragalin.

These flavonoid glycosides have also been found in the stems, root collar, and, to some extent, in the leaves and fruit. The main components in the leaves are rhoifolin and kaempferol 3-rhamnoglucoside.

This is the first time that rutin, isorhamnetin 3-rutinoside, kaempferol 3-rhamnoglucoside, isoquercitrin, isorhamnetin 3-glucoside, and astragalin have been found in the species of Lupinus investigated.

\*Deceased.

Institute of Experimental Botany, Academy of Sciences of the Belorussian SSR. Translated from Khimiya Prirodnykh Soedinenii, No. 1, p. 117, January, 1971. Original article submitted October 5, 1970.

© 1973 Consultants Bureau, a division of Plenum Publishing Corporation, 227 West 17th Street, New York, N. Y. 10011. All rights reserved. This article cannot be reproduced for any purpose whatsoever without permission of the publisher. A copy of this article is available from the publisher for \$15.00.