

As the raw material we used the flowers and roots collected in the flowering phase. The lupin (variety Belorusskii kormovoi) was grown under the conditions of a field experiment. The dry raw material was extracted with 80% methanol, and the extracts were hydrolyzed with 5% HCl at 100°C for three hours. The aglycones were extracted with diethyl ether. Identification was performed on the basis of a study of color reactions, the products of alkaline cleavage, and the UV spectra of solutions of the substances in methanol without and with the addition of caustic potash, zirconyl chloride, sodium acetate, and boric acid.

Apart from apigenin, luteolin, kaempferol, quercetin, and isohamnetin, which have been described previously [1], we identified 4',5,7-trihydroxy-3'-methoxyflavone (chrysoeriol), 4',5,7-trihydroxyisoflavone (genistein), 5,7-dihydroxy-3',4'-methylenedioxyisoflavone (O,O'-methyleneorobol), and 4',7-dihydroxy-5-methoxyisoflavone (5-methoxygenistein).

Thus, the main flavonoid aglycones of the European yellow lupin are the following nine compounds: three flavones, three flavonols, and three isoflavones. All the compounds identified apart from 5-methoxygenistein were found in the epigeal organs of the European yellow lupin, while in the roots there were mainly isoflavones: genistein, methyleneorobol, and 5-methoxygenistein. The aglycone present in largest amount in the roots is genistein and in the flowers luteolin. It has been reported [1] that the main flavonoid aglycone of the flowers is an unidentified flavone but not luteolin. A comparison of our results with those of the earlier workers showed that the flavone not identified by these authors is most probably the glycoside roifolin, since they extracted the aglycones from the flowers with ethanol without hydrolysis of the extracts before chromatography.

LITERATURE CITED

1. S. M. Mashtakov, A. P. Volynets, and V. N. Kornelyuk, Dokl. Akad. Nauk BSSR, 15, No. 2, 177 (1971).

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