

LITERATURE CITED

1. Z. Westfelt, *Acta Chem. Scand.*, **20**, 2893 (1966).
2. A. I. Rezvukhin, V. A. Babkin, and Zh. V. Dubovenko, *Zh. Org. Khim.*, **8**, 2332 (1972).
3. A. I. Rezvukhin, V. A. Khan, and Zh. V. Dubovenko, *Izv. Akad. Nauk SSSR, Ser. Khim.*, No. 6, 1310 (1975).
4. V. G. Dashevskii, *Conformations of Organic Molecules* [in Russian], Moscow (1974).

GLYCOSIDES OF *Caltha polypetala*

G. E. Dekanosidze

UDC 547.918:547.597

A number of plants of the genus *Caltha* have been investigated previously for their saponin content. The majority of species studied contained triterpene glycosides [1, 2]. A saponin of steroid nature was found in one of them [3].

We have investigated the hypogean organs of *Caltha polypetala* Hochst. (great marsh marigold) collected in June in Bakuriani (Georgian SSR). By TLC on silica gel we detected no less than 7 glycosides of triterpene nature in a methanolic extract, and we have called them in order of increasing polarity polypetalosides A, B, C, D, E, F, and G. After appropriate purification, and also repeated partition chromatography on a column of silica gel, from the total glycosides we isolated two individual components: polypetaloside C with mp 220-222°C, $[\alpha]_D^{20} +21^\circ$ (c 1.1; methanol), and polypetaloside G with mp 200-202°C, $[\alpha]_D^{20} 0^\circ$ (c 1.5; methanol).

The complete acid hydrolysis of both glycosides yielded a crystalline genin with mp 326-328°C; $[\alpha]_D^{20} +79.2^\circ$ (c 1.1; pyridine), identified as hederagenin [4], while the carbohydrate moieties were each found to include D-glucose, L-arabinose, and L-rhamnose. A rough comparison of the glycosides that we have obtained with kalopanax saponin B [5] and leontoside D [6], which have the same aglycone and set of monosaccharides, did not confirm their identity.

LITERATURE CITED

1. L. I. Strigina, T. M. Remennikova, A. P. Shchedrin, and G. B. Elyakov, *Khim. Prir. Soedin.*, 303 (1972).
2. B. A. Figurkin, V. D. Khidasheli, E. L. Pidemskii, and A. F. Goleneva, *Rast. Res.*, **4**, No. 1, 93 (1978).
3. V. P. Konyukhov, B. S. Subbotin, A. F. Sviridov, O. S. Chizhov, and V. S. Konyushko, Abstracts of Lectures at the Fifth All-Union Conference on the Chemistry and Biochemistry of Carbohydrates [in Russian], Tbilisi (1973), p. 85.
4. L. G. Mzhel'skaya, V. K. Yutsyn, and N. K. Abubakirov, *Khim. Prir. Soedin.*, 421 (1966).
5. A. Ya. Khorlin, A. G. Ven'yaminova, and N. K. Kochetkov, *Izv. Akad. Nauk SSSR, Ser. Khim.*, 1588 (1966).
6. L. G. Mzhel'skaya and N. K. Abubakirov, *Khim. Prir. Soedin.*, 153 (1968).

I. G. Kutateladze Institute of Pharmacochemistry, Academy of Sciences of the Georgian SSR, Tbilisi. Translated from *Khimiya Prirodnykh Soedinenii*, No. 2, p. 235, March-April, 1979. Original article submitted November 10, 1978.