

POLYPHENOLS OF *Euphorbia soongorica*

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As is known, the euphorbias are poisonous plants. However, the majority of the substances present in them are biologically active. In recent years, the chemical compositions of various species of plants of the Euphorbiaceae family have been studied intensively in Japan [1-3]. Many species of euphorbias are included in foreign pharmacopeias, and they are used in traditional Eastern medicine [4].

Growing in Kazakhstan are 53 species of plants of the family Euphorbiaceae [5].

We have investigated the polyphenols of *Euphorbia soongorica* gathered close to Alma-Ata.

The polyphenol complex of the epigeal part of the plant consisted of flavonoid glycosides, phenolic acids, and hydrolyzable tannin substances, while flavonoids were absent from the roots, in which coumarins were detected. From ethyl acetate and aqueous fractions of an aqueous acetone extract of the herbage, by column chromatography on Sephadex LH-20 using water, aqueous alcohol, and aqueous acetone as eluents, we have isolated nine individual substances of polyphenolic nature. Their structures have been characterized on the basis of the results of a study of the products of chemical transformations (hydrolysis under various conditions, preparation of derivatives) and spectral (IR, UV, and ^1H and ^{13}C NMR) characteristics.

The phenolic acids were identified as gallic, protocatechuic, and dehydrodigallic acids [6], and the flavonoid glycosides as hyperoside (quercetin 3-O- β -D-galactopyranoside) and quercitrin (quercetin 3-O- α -L-rhamnopyranoside) [7].

It was established that the hydrolyzable tannin substances were ellagitannins in which the phenolcarboxylic moiety was represented by hexahydroxydiphenic, valoneic [8], dehydrodigallic, and brevifolincarboxylic [9] acids, while the carbohydrate was glucose.

This the first time that any of these substances have been isolated from this plant.

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