

**DETERMINATION OF THE OPTIMAL HARVESTING TIME AND DRYING CONDITIONS
FOR THE HERB *GALEGA OFFICINALIS* L.,
GROWING ON THE TERRITORY OF THE REPUBLIC OF BELARUS**

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The purpose of the study was to determine the optimal conditions for harvesting and drying the herb *Galega officinalis* L., growing in the territory of the Republic of Belarus. It has been established that the content of flavonoids in the herb *Galega officinalis* is maximum when harvested during the period of mass flowering (late June – early July), under favorable drying conditions – air-shade drying.

Galega officinalis is an herbaceous plant with a rich chemical composition; used in folk medicine as a hypoglycemic, anthelmintic, antimicrobial agent, cultivated on the territory of the Republic of Belarus, but is not pharmacopoeial [1].

Keywords: *galega officinalis*, flavonoids, harvesting and drying conditions.

The subject of the study was the herb *Galega officinalis*, harvested in 2023 in the Minsk and Vitebsk regions in various phases of the growing season (budding, beginning of flowering, mass flowering, fruiting), dried at 40 °C, 60 °C, 100 °C and under natural conditions. Quantitative determination of the amount of flavonoids in terms of rutin was carried out by the generally accepted method using a complexation reaction with aluminum chloride (extractant – 70% ethyl alcohol, raw material-extractant ratio 1:100).

The content of flavonoids in the herb *Galega officinalis* harvested in the Vitebsk region during different periods of the growing season ranged from 2.94 to 5.79 mg/g, with the maximum content recorded during the period of mass flowering of *Galega officinalis* L. (late June early July). When dried under natural conditions, the content of active substances was 16.25 ± 1.86 mg/g; with increasing temperature, a decrease in the content of flavonoids was observed by almost 3 times (4.5 – 6.75 mg/g).

Thus, the optimal harvesting time for the herb *Galega officinalis* is the phase of mass flowering (late June early July), the drying condition is drying under natural conditions.

Thematic sections

76.01.37 Standardization

76.31.31: Pharmacognosy

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04.14.01 Technology for obtaining drugs. Pharmaceutical chemistry, pharmacognosy. Organization of pharmaceutical business

Thematic rubric OECD Fields of Science

3.01 TU: Pharmacology and pharmaceuticals

ASJC topical rubricator

3003: Pharmacy

References

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Основное содержание

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Целью исследования являлось определение оптимальных условий заготовки и сушки травы галеги лекарственной (*Galega officinalis* L.), произрастающей на территории Республики Беларусь. Установлено, что содержание флавоноидов в траве галеги лекарственной является максимальным при заготовке в период массового цветения (конец июня начало июля), благоприятными условиями сушки – воздушно-теневая сушка.

Ключевые слова: галега лекарственная, флавоноиды, условия заготовки и сушки.

Литература

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