DETERMINATION OF B-GROUP VITAMINS IN THE AERIAL PART OF SISYMBRIUM LOESELII L. BY HPLC METHOD

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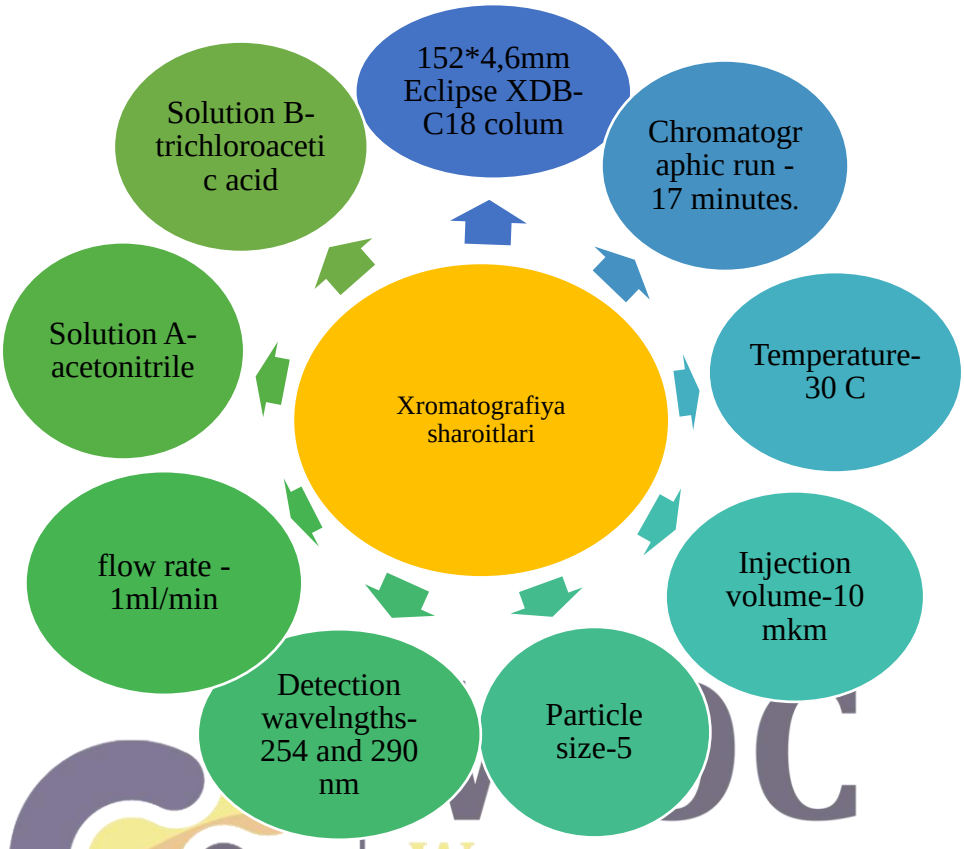
Objective of the study. It is known that B-group vitamins (B1, B2, B3, B5, B6, B7, B9, B12) are water-soluble nutrients essential for energy metabolism, nervous system function, cell regeneration, and the synthesis of red blood cells in the human body. They convert proteins, fats, and carbohydrates into energy, strengthen the immune system, and support skin and hair health. The identification of these compounds in plant raw materials is a relevant issue and plays an important role in the future development of medicinal products. The aim of our study was to determine the content of B-group vitamins in *Sisymbrium loeselii* L. and to analyze the obtained results.

Materials and methods. The aerial part of *Sisymbrium loeselii* L., collected in 2025, was used as the object of the study. The plant raw material was collected according to generally accepted requirements and dried in the shade. High-performance liquid chromatography (HPLC) was used to determine the B-group vitamins. The analysis was performed on a Technologies **Agilent 1260 series** chromatograph.



Results and discussion. The data obtained for the determination of B-group vitamins are presented in Figures 1 and 2.

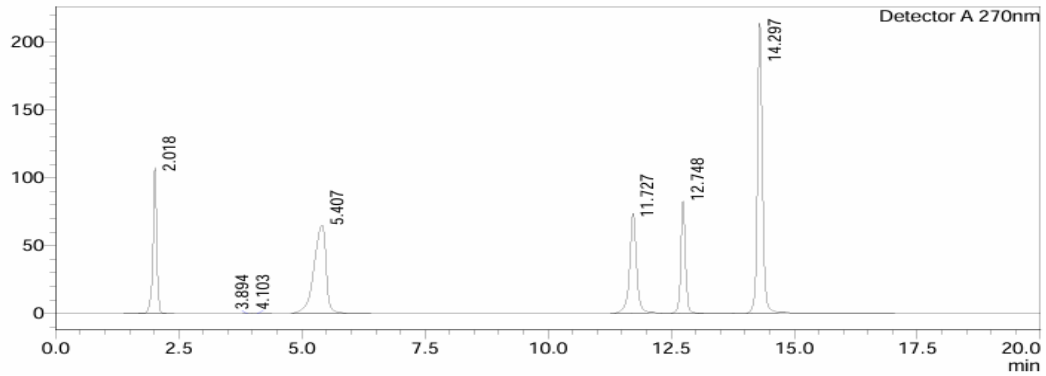


Figure 1. Standard sample of B-group vitamins.

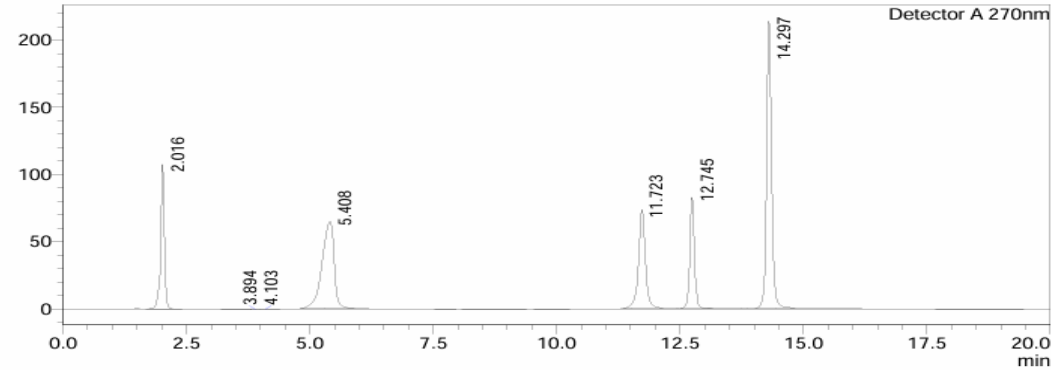


Figure 2. Chromatogram of B-group vitamins in the plant Sisymbrium loeselii L.

The obtained results showed that B-group vitamins present in *Sisymbrium loeselii* L. formed characteristic chromatographic peaks at a wavelength of **256 nm:** vitamin B1 at **14.297 min,** vitamin B2 at **12.745 min,** and vitamin B6 at **11.723 min**. The correspondence of the retention times with those of the working standards indicates the presence of B-group vitamins in the plant raw material.

Conclusion.

For the first time in Uzbekistan, the content of B-group vitamins in the raw material of the wild-growing plant *Sisymbrium loeselii* L. was determined. This result is important for the **standardization of plant raw materials.**