

## CHEMICAL COMPOSITION OF THE ESSENTIAL OIL AND ANTIMICROBIAL PROPERTIES OF CRUDE EXTRACT FROM *TANACETUM CORYMBOSUM* (L.)

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**Abstract.** The aim of the present study was the determination of the chemical composition of the essential oil and the evaluation of the biological activity of extracts from *T. corymbosum* plants from the Republic of Moldova as a continuation of our previous research. Hydrodistillation and Soxhlet extraction have been used to obtain volatile oil samples and extracts from plants. The components of volatile oil were identified by GC-MS analyses. The antibacterial activity of the extracts was assessed by successive double dilution method. The GC-MS analysis revealed the presence of 38 compounds, including terpenes - germacrene D (33.25-47.50%), (*Z*)- $\beta$ -farnesene (8.56-16.12%),  $\gamma$ -elemene (3.12-5.22%),  $\beta$ -caryophyllene (4.21-6.48%), aliphatic - palmitic (2.23-7.09%) and linoleic (0.21-1.04%) fatty acids, fatty alcohol *n*-octadecanol (0.62-9.74%), higher alkane *n*-heneicosane (1.02-6.96%) as the major constituents. The obtained extract showed promising antibacterial/antifungal activities at 0.03 and 0.015%, respectively. According to the obtained data, the *T. corymbosum* species that grows in Moldova belongs to the germacrene D chemotype. This species holds great potential to be used as an herbal antibacterial agent.

**Keywords:** chemical composition, ethanolic extract, essential oil, Corymbflower tansy, antimicrobial activity.