UKRAINE – OCCURRENCE OF GERMAN CHAMOMILE (*MATRICARIA RECUTITA* L.) AND ITS CHEMOTYPE DETERMINATION

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Ukraine traditional medicine comprises medical aspects of traditional knowledge that developed over generations within the folk beliefs of various societies before the era of modern medicine. Medicinal plants are used with the intention of maintaining health, to be administered for a specific condition, or both, whether in modern medicine or in traditional medicine. One of the more popular examples of a medicinal plant is the use of the chamomile flowers (*Chamomillae anthodium*) to treat respiratory infections such as a cold or mild flu. Today this drug is officially registered in the Ukraine and European Pharmacopoeia.

Despite its economic importance, however, chamomile, *Matricaria recutita* L., is little known about the extent and nature of the essential oil variability and its composition of this species in Ukraine. Therefore, the information about extent of uses of various gene pools is extremely valuable for the development of future chamomile cultivation and breeding programs. The aim of the study was the analysis of differences among

chamomile plant populations growing naturally in different sites in all parts of Ukraine. The subject was created in collaboration with the Botanical Garden of the Lviv University of Medical Sciences in Lviv, Ukraine.

The quantities of essential oils in the present study were measured from 0.20 ± 0.05 % in Cherson to 0.85 ± 0.10 % in Chernihiv. The yield of volatile oil was depending on geography, altitude, and other factors, including stress influence on site (20) of plant population growth.

Essential oil extracted chamomile inflorescences was recorded to have from 52 to 72 chemical components. It was found that /-/-α-bisabololoxides B and A was the major constituents in 16 samples collected from individual Ukraine sites and only 4 had dominant /-/-α-bisabolol (the most 55.17 % on site Katerinopols). The uniquely determined chemical type of chamomile wild populations in Ukraine is chemical type B (/-/-α-bisabololoxide A > /-/-α-bisabolol > /-/-α-bisabololoxide B) by a large majority. The most important result of our study is the creation of the new map of the plant population distribution in order to the chamomile species in Ukraine with their chemotype determination.