ESSENTIAL OIL PLANTS BELONGING TO THE LAMIACEAE FAMILY GROWING IN THE SOUTH OF UZBEKISTAN

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Abstract: In the article, 7 species of plants belonging to the mint family (Lamiaceae) (Melissa officinalis L., Mentha asiatica Boriss., Perovskia scrophularifolia Bge., Hyssorhus seravshanicus (Dubj.) Pazij., Ziziphora brevicalux Jus., Salvia sclarea L., Origanum tyttanthum Gontsch.)) provides information on the amount of essential oils in various organs.

Basic words and phrases: flora, essential oils, essential oil plants, Ginzberg method, Pamir-Aloy, Surkhandarya region, Lamiaceae, leaves and flowers.

There are 102 families, 560 genera and 1602 species of plants in the flora of Surkhandarya region, of which 54 families and 310 species belonging to 165 genera are essential oil plants [2].

The mint family (Lamiaceae) consists of 200 genera and 3500 species. They are mainly distributed in warm and temperate regions of the Earth. Life forms are trees and shrubs in the tropics and subtropics, and grasses in our country [1].

The leaves are simple flat or deeply cut, opposite on the stem. The stem is 4-sided, the flowers are small, rosy, shingle, and form a flower head. Bisexual, zygomorphic. Cauliflower is complex, sepals are 5 fused, sepals are also 5 fused. The upper lip is formed by the fusion of 2 and the lower lip of 3 petals. The number of stamens is 4, of which 2 are short, sometimes there are 2 stamens, and the rest are reduced or turned into whorls. A cenobi (a fruit consisting of 4 erem (nuts)) whose fruit splits into 4 parts [1].

The members of the family are used in the perfumery and food industry because they are rich in essential oils. In addition to these, several species are

considered medicinal and are used in medicine. Most of the species are grown in culture [2].

As the object of our experiments, some essential oil plants belonging to the mint family growing in the Surkhandarya region, which is the southern region of the Republic of Uzbekistan, were selected. The experiments were carried out on plants growing at an altitude of 1400-1800 m above sea level in the Khisar and Kokhitang mountain ranges (Pamir-Aloy mountains). Essential oils were extracted from different organs of plants based on hydrodistillation method [3].

Surkhandarya region is extremely rich in essential oil plant species, especially among the representatives of the mint family (Lamiaceae), these plant species are the majority. In the flora of Surkhandarya, 60 species belonging to 23 genera are essential oil plants [2]).

The essential oils of these plants are widely used in various sectors of the national economy (food, cosmetic and pharmaceutical industries) [4].

The table gives information about the most promising species of essential oil plants belonging to the Lamiaceae family [5]

Table. Amount of essential oils extracted from plant organs (in %).

№	Plant species	Plant organs		
		Leaf	Stem	With a ball
1	Melissa officinalis L.	0.08	Traces	0.14
2	Mentha asiatica Boriss.	0.13-0.17	0.10-0.14	0.19-0.23
3	Perovskia scrophularifolia Bge.	0.60-0.71	0.04-0.07	0.56-0.65
4	Hyssophus seravshanicus (Dubj.) Pazij	0.60-0.75	0.09-0.10	0.72-0.90
5	Ziziphora brevicalux Jus.	0.82-0.97	0.22-0.23	0.90-1.15

6	Salvia sclarea L.	Traces	0.10-0.12	0.24-0.51
7	Origanum tyttanthum Gontsch.	0.38-0.50	0.09-0.10	0.45-0.70

As can be seen from the data in the table, essential oils are maximally collected in inflorescences compared to the stems and leaves of all the plants taken for the experiment. Their amount in flowers can be collected from 0.14% (Melissa officinalis L.) to 1.15% (Ziziphora brevicalux Jus.). Traces of essential oils (below 0.04%) were detected in the leaves of Salvia sclarea L., while in the stems of Melissa officinalis L., the maximum amount of essential oils was found in Ziziphora brevicalux Jus. found in plant leaves (up to 0.97 %).

In conclusion, it can be said that the essential oils of the above-mentioned plant species growing in Surkhandarya region are very fragrant, and they are also used in perfumery-cosmetics (in the preparation of perfumes), food (in order to give flavor to products) and pharmaceutical industries (in the preparation of medicinal preparations). and to improve their taste) can be widely used.

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