

Volume 2, Issue 12, December - 2024 ISSN (E): 2938-3781



# **MEDICINAL PLANT - MELISSA OFFICINALIS**

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#### Abstract

The study of medicinal plants, identifying their properties, and investigating their applications in traditional medicine is one of the pressing issues of our time. This article scientifically substantiates the botanical classification, distribution areas, chemical composition, unique medicinal properties, and uses in traditional medicine of Melissa officinalis - the medicinal lemon balm plant.

**Keywords**: Melissa officinalis - Medicinal lemon balm, medicinal, concentration, extraction, introducer.

## Introduction

The country's rich plant world contains over six thousand different plant species, including medicinal plants. Such herbs are ecologically clean and serve as raw materials for the production of food, aromatic, and pharmaceutical products. The complex processing of plant materials is carried out in accordance with all modern regulations, including extraction, purification, concentration, and standardization that meet all international quality standards for production. Local populations are often aware of the miraculous power of such plants. They are consumed, added to food as spices, brewed in tea, used as medicine, and also utilized in the field of cosmetology. In the conditions of Uzbekistan, cultivating medicinal plants, preparing quality medicinal products from them, and enriching the local flora with new introduced plant species contribute to an increase in the number of medicinal plant species and ensure the diversity of medicinal plants through introduction and acclimatization. The main goal of propagating and cultivating medicinal plants is to avoid harming Mother Nature while meeting the needs of pharmaceutical industry enterprises, cultivating them culturally, and acclimatizing and cultivating medicinal plants that are not present in our traditional medical practice. One of the widely used plants in terms of its medicinal properties is medicinal lemon balm.

# **RESEARCH METHOD AND METHODOLOGY**

The genus Melissa was first identified and introduced into science by K. Linnaeus in 1753. For over 2000 years, Melissa officinalis has been successfully used in folk and scientific medicine in many countries around the world. The medicinal lemon balm was first described in the works of the great scientist Theophrastus, "Historia plantarum."



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#### Plant World - Flora - Plantae

Division: Angiospermae (flowering plants) Class: Dicotyledones (two seed leaves) Family: Lamiaceae Genus: Melissa Species: Melissa officinalis

Medicinal lemon balm belongs to the family of mint plants, is a perennial herb that emits a lemon scent. It has a branched rhizome and upright stems that can reach a height of 80-100 cm, with four edges, and has serrated, ovate leaves. It blooms in its second year of life, during the summer months, producing small, white-yellow, or pink flowers gathered in false whorls of 3-10 in the leaf axils. Its fruit is a nut, brown or dark brown. The lemon balm is covered by tetrahedral hairs, with petiolate opposite and heart-shaped coarse leaves covered with soft hairs, located on short pedicels with pale pink or white flowers. The plant produces four brown oval nuts as its fruit. The tetrahedral buds of the plant are covered by short and soft hairs.

Melissa is widely used in medicine for its healing properties and contraindications. This plant is primarily used for treating insomnia, neurosis, and various diseases of the nervous system, and it is included in some recipes for weight loss. They consume these medicinal remedies in the form of infusions, tinctures, baths, and add them to tea, and in cosmetology, they frequently use the essential oil of lemon balm which has a healing effect on the skin. Melissa is often confused with other close plants in the family, such as anise and Moldovan snake root. The plant was first cultivated several thousand years ago in ancient Rome and spread from there throughout Europe. Initially, this plant was considered a weed in Mediterranean countries. It is widespread in shaded bushes, forest edges, rocky and grassy areas, forest meadows, riverbanks, and along roadsides. It is commonly found in moist areas. Today, lemon balm is widely cultivated in countries such as the Caucasus, Crimea, Central Asia, Ukraine, and Russia, and it can also be found in the wild in North America and Southern European countries.

Although limited in the plant world, these compounds are widespread in the families of Meliaceae and Rutaceae. Lemonoids attract significant scientific interest because of their rarity among the plant families from which they originate, possessing extensive medicinal properties that enhance health and prevent diseases. In recent years, there has been considerable scientific interest in various plant parts of several species of the genus Khaya in the pharmaceutical industry due to the presence of lemontoids, which could serve as therapeutic molecules.

#### **RESEARCH RESULTS AND DISCUSSION**

Among the important secondary metabolites of the significant medicinal plant are lemonoids, which are mainly found in the families Meliaceae and Rutaceae (citrus) and less frequently in Simaroubaceae and Cneoraceae. Their abundance, often referred to as meliacins, presents unique interest due to their systematic diversity and very potent activity compared to those found in other families. Interestingly, the Meliaceae family has various species of Khaya, with lemonoids commonly found in different plant parts, known for various biological activities. Lemonoids are gaining increasing research interest, including their biological activity and their wide range of applications.

The botanical properties of Melissa belong to the perennial plants of the family Lamiaceae. It has been mentioned in the ancient works of scientists. This plant is widespread in European and American countries, with a total of five species of lemon balm, but in our country, only the medicinal lemon balm typically grows. For allergic diathesis, it is recommended to take an infusion of lemon balm leaves three times a day before meals. Additionally, the infusion of lemon balm is beneficial for treating myositis, arthritis, and bruises in the form of compresses. It is prepared as follows: 4 tablespoons of dried chopped herb are steeped in two cups of boiling water for half an hour; after that, the infusion should be filtered. The same infusion is also helpful for treating skin rashes, furunculosis, and wounds with compresses. For allergic dermatitis, lemon balm juice is used externally. Lemon balm can be used as a diuretic, laxative, diaphoretic, and stimulant in medicinal applications.

## CONCLUSION

Medicinal lemon balm, belonging to the family of mint plants, is considered a perennial herb that emits a lemon scent.

1. Useful in cases of intestinal obstruction, kidney diseases, improving heart function, and energizing the brain.

2. Used as a spice in foods, brewed in tea, used as medicine, and also utilized in cosmetology.

3. Side effects: May sometimes cause allergic reactions; not recommended for those suffering from arterial hypotension.

4. Application: For insomnia and fatigue, 2 tablespoons of lemon balm can be infused in half a liter of boiling water and consumed instead of tea. If taken as a tincture before bedtime, it calms the nerves and promotes peaceful sleep.

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