MEDICINAL AND BIOACTIVE PROPERTIES OF BASIL (OCIMUM BASILICUM)

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Annotatsiya: Ushbu maqola o‘zbek oshxonasining ajralmas qismi bo‘lgan rayhon o‘simligiga bag‘ishlangan. Unda rayhonning turlari, tashqi ko‘rinishi, o‘zbek milliy taomlarida qo‘llanilishi haqida ma’lumotlar berilgan. Shuningdek, maqolada rayhonning inson salomatligi uchun foydali xususiyatlari, tarkibidagi vitamin va minerallar, xalq tabobatida qo‘llanilishi haqida batafsil ma’lumot berilgan. Maqola o‘quvchilarga reyhanni nafaqat oshxona bezaklari, balki tabiatning shifobaxsh sovg'asi sifatida tushunishga yordam beradi. Ocimum turlari dorivor birikmalarning ikkita asosiy sinfini o‘z ichiga oladi: uchuvchi yog'lar (efir moylari) va uchuvchan bo'lmagan fenolik moddalar/terpenoidlar. Yangi barglardan efir moyi hosili: turlarga va ekstraktsiya usuliga qarab 0,1-1,5% (w/w). Umumiy efir moyi tarkibiy qismlari va Ocimum spp bo‘ylab odatiy konsentratsiya oralig‘i keltirilgan.

Kalit so‘zlar: Rayhon, rayhonning foydalari, rayhon parvarishi, o‘zbek oshxonasi, dorivor o‘simliklar, xalq tabobati.

Аннотация: Данная статья посвящена растению базилика, являющемуся неотъемлемой частью узбекской кухни. В ней представлена информация о различных видах базилика, его внешнем виде и использовании в национальных блюдах Узбекистана. В статье также подробно описаны полезные свойства базилика для здоровья человека, содержащиеся в нем витамины и минералы, а также его использование в народной медицине. Статья поможет читателям понять базилик не только как кулинарное украшение, но и как целебный дар природы. Виды рода Ocimum содержат два основных класса лекарственных соединений: летучие масла (эфирные масла) и нелетучие фенолы/терпеноиды. Выход эфирного масла из свежих листьев: 0,1–1,5% (масс./масс.) в зависимости от вида и метода экстракции. Основные компоненты эфирных масел и типичные диапазоны концентраций у различных видов рода Ocimum.

Ключевые слова: базилик, польза базилика, уход за базиликом, узбекская кухня, лекарственные растения, народная медицина.

Abstract: This article is dedicatetd to the basil plant, which is an integral part of Uzbek cuisine. It provides information about the different types of basil, its appearance, and its use in Uzbek national dishes. The article also provides a detailed description of the benefical properties of basil for human health, the vitamins and minerals it contains, and its use in folk medicine. The article will help

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readers understand basil not only as a culinary decoration, but also as a healing gift of nature. Ocimum species contain two main classes of medicinal compounds: volatile oils (essential oils) and non-volatile phenolics/terpenoids. Essential oil yields from fresh leaves: 0.1–1.5% (w/w) depending on species and extraction method. Common essential-oil constituents and typical concentration ranges across Ocimum spp.

Keywords: Basil, benefits of basil, basil care, Uzbek cuisine, medical plants, folk medicine.

Introduction.

While different varieties, cultivars, and hybrids of basil exist world-wide, sweet basil has naturalized itself nearly all over the globe. The table of Uzbek households is always full of various delicaces. But one of the most visible and fragrant decoration of this table is basil [1]. It is not only a spice that gives a special aroma and taste do dishes, but also a medical plant that has been used in folk medicine since ancient times. The green and purple varieties of basil are deeply embedded not only in the culinary culture of Uzbeks, but also in their daily lives. In this article, we will take a closer look at the importance of basil in the kitchen, its health benefits and various properties [2,3].

Basil is native to the Indian subcontinent and tropical Asia. Ancient significance:In ancient India, it was called “Holy Basil” and was considered not only a spice but also a sacred plant used in religious ceremonies. This aspect it is of great importance in Hindu religion (especially Vaishnavism). Its Latin name is Ocimum basilium, and the word “Basilium” means “royal” or “royal”. Therefore, it is sometimes called the “Royal Plant” [4].

The benefits of basil are primarily hidden in its composition. It contains A it is rich in vitamin C, which is important for strengthening vision and maintaining skin health. Vitamin K plays an important role in blood circulation and bone strength. In addition, basil is rich in important minerals such as magnesium, calcium, iron and zinc. These elements support heart function, calm the nervous system, renew the blood and strengthen human health. A person who drinks basil tea experiences relief from cold symptoms, sweats and recovers from colds more quickly. If you have digestive problems, consuming basil improves bowel function and reduces bloating. If you have bad breath, just chew a few leaves, bacteria will disappear and your mouth will be cleansed [5,6].

To strengthen immunity, it has long been used to drink basil juice mixed with honey. This not only prevents diseases, but also strengthens the down the aging process. Basil in folk medicine, basil has been used for centuries as a remedy for various ailments. For example, it was consumed in the form of a hot tes for coughs

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and colds. Basil tincture served as a sedative for insomnia, nervousness or stress. Fresh leaves were applied to wounds or cuts as a natural disinfectant.



Fig 1. The content of basil

Antibacterial mechanisms: Inhibition of cell wall synthesis (beta – lactams: penicillins, cephalosporins; target: penicillin – binding proteins, bactericidal); **Methods.** inhibition of protein synthesis at 30 S ribosomal subunit (aminoglycosides: gentamicin, streptomycin; bactericidal); inhibition of protein synthesis at 50S subunit (macrolides: erythromycin; bacteriostatic); inhibition of DNA gyrase/topoisomerase IV (fluoroquinolones: ciprofloxacin; bactericidal); disruption of cytoplasmic membrane integrity (polymyxins: colistin; bactericidal); inhibition of folate synthesis (sulfonamides, trimethoprim; bacteriostatic/bactericidal depending on combination). Bactericidal vs bacteriostatic ratio rule: MBC/MIC ≤4 suggests bactericidal activity.

Results. Common disinfectant concentrations and contact times: ethanol 60 – 90% v/v, optimal ~70%, contact time 15 – 60 s for many enveloped viruses; isoprop anol 60 – 80% v/v, contact time 30 – 60 s for hand sanitation; sodium hypochlorite (bleach) 0.1% (1,000 ppm) available chlorine for general surface disinfection, 0.5% (5,000 ppm) for blood spills, contact time 1 – 10 min depending on soil load; hydrogen peroxide 0.5% – 3% for surface disinfection, contact time 1 – 30 min depending on formulation; peracetic acid 0.2% – 0.35% for high-level disinfection, contact time 5 – 30 min; quaternary ammonium compounds (QACs) typical use concentration 0.05% – 0.2%, contact time 1 – 10 min for bacteria and enveloped viruses; glutaraldehyde 2% for high-level disinfection, contact time 20 min for many organisms.

Basil tea is an herbal infusion made from leaves of Ocimum basilicum and related basil species. It has a long history of culinary and medicinal use in South Asian, Mediterranean, and Southeast Asian traditions. Primary bioactive constituents include essential oils (notably eugenol), phenolic acids (including rosmarinic acid), flavonoids (such as orientin and vicenin), triterpenoids (including ursolic acid), and micronutrients including vitamins A, C, and K and minerals such

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as calcium, iron, and manganese. These constituents contribute antioxidant, anti-inflammatory, mild antimicrobial, and carminative properties observed in laboratory and traditional reports.

Types and appearance of basil. The most common types of basil are green and black (purple) basil. Green basil has green leaves and a slightly milder taste and aroma. Black basil has dark purple leaves and a slightly more bitter taste and aroma. Black basil is used more in Uzbekistan. Basil usually blooms in summer and its flowers can also be of different colors.

Healing properties of basil. Basil not only adds flavor to dishes, but is also very beneficial for human health. It contains vitamins A, K, C, as well as minerals such as iron, calcium and magnesium. Basil has a positive effect on the digestive system, stimulates appetite. It is also widely used in folk medicine to cambat colds, sore throats and coughs. Its anti – inflammatory properties have also been scientifically proven.

The role of basil in Uzbek cuisine. Uzbek table setting it is difficult to imagine life without basil. It is not only served freshly picked, but also is one of the main spices of many national dishes. Adding basil to pilaf, manti, dumplings and various salads enriches their taste and aroma. In addition, it is also commonto prepare vitamin drinks from basil leaves in the summer.

Advantages over other herbs. The smell and taste of basil are much more pungent and distinctive than those of many other herbs (for example, coriander or parsley). This feature has made it an integral part of our national cuisine. In particular, the taste and smell of black basil are very strong. Basil not only enriches the taste os food, but can also be used as a garnish. While other herbs only serve to enrich the taste of food, basil has advantages in terms of both taste and appearance. The healing properties of basil are very versatile. It is used against colds, to improve digestion, and as an anti – inflammatory agent. Other herbs also have beneficial properties, but not as wide a spectrum as basil. Basil has been found to contain more beneficial vitamins and minerals than other plants. In particular, it is a good source of vitamin K. Basil grows very quickly both indoors and outdoors. It is much iasier to care for than some other delicate plants. This allows it to be consumed fresh all the time. The availability of green and black basil allows them to be used interchangeably in various dishes and salads. Black basil is more suitable for meat dishes, while green basil is used in salads and other lighter dishes.

Conclusion. Basil is not only an integral part of Uzbek cuisine, but also an invaluable gift of nature to humanity. It gives a special touch to dishes with its wonderful aroma and unique taste. Most importantly, it is widely used in folk medicine due to its healing properties. That is why we should consider basil not

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only as a culinary decoration. By growing basil and using it wisely, we not only enrich our table, but also strengthen the health of ourselves and our loved ones.

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