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VITAMINES IN THE YARROW (ACHILLEA MILLEFOLIUML.)PLANT AND THEIR IMPORTANCE IN HUMAN HEALTH

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ABSTRACT

The article provides detailed information on the botanical and morpho-physiological characteristics of the plant Achillea Millefolium L., one of the medicinal plants used in scientific medicine, systematic, some biologically active substances in the chemical composition, especially Vitamines, their function in the body and their role in human health. data are given. This article focuses on the modern systematic role of yarrow and its application in various forms based on its healing properties. The leaves are evenly distributed along the stem and are double-stalked, 5–20 cm long, almost hairy, and contain kaulin, which is sticky. The flowers are located in a large, compact thyroid inflorescence at the top of the stem, each cluster consisting of 1 or more flower heads. Thus, when the body lacks or lacks any Vitamines, the metabolism is disrupted. Lack of Vitamines in food reduces a person's ability to work, reduces the body's ability to withstand diseases and adverse environmental influences.

KEYWORDS: *Vitamines, Ascorbic Acid, Phylloquinone, Yarrow, Chemical Composition, Macronutrient, Microelement, Medicinal Properties, Medicinal Properties.*

INTRODUCTION

It is worthwhile to define the concept of Vitamines before talking about the Vitamines that are found in the biologically active substances contained in the plant *Achillea Millefolium L.*Vitamines (Latin vita - "life" + amine), drugs - organic compounds necessary for the vital functions of a living organism and normal metabolism. They have different chemical structures. Ancient Chinese books, and later the writings of Hippocrates, reported that people became ill as

a result of nutrient deficiencies. The scientific study of Vitamines began in the 18th century. The English physician J. Lind (1757), the French physiologist F. Majandi (1816), the Russian physician NI Lunin (1880), the Dutch physician Eikman (1897), and the English scientist F. Hopkins (1906) made significant contributions to the study of W.

Vitamines are not synthesized in the body, a person receives the necessary Vitamine with various nutrients. HypoVitamineosis occurs when there is a lack of Vitamines in the diet, and aVitamineosis when there is no Vitamine at all. The main source of Vitamines are plants. Microorganisms also play an important role in Vitamine production.

The biological significance of Vitamines is that they have a regulating effect on metabolism. Vitamines enhance chemical reactions in the body, affect the body's absorption of nutrients, promote the normal growth of cells and the development of the whole organism, enter the body of enzymes and ensure their normal function and activity. Vitamines are involved in energy metabolism (B, B2), amino acids (B_6, B_{12} B.) and fatty acids (pantothenic acid), photoreception (Vitamine A), blood clotting (Vitamine K) and calcium absorption (Vitamine D). Thus, when the body lacks or lacks any Vitamines, the metabolism is disrupted. Lack of Vitamines in food reduces a person's ability to work, reduces the body's ability to withstand diseases and adverse environmental influences. Vitamine deficiency is caused not only by a lack of Vitamines in the diet, but also by a violation of their absorption in the intestine, their delivery to the tissues and their conversion into biologically active forms. However, overdose of some Vitamines can also lead to hyperVitamineosis. In recent years, the chemical structure of more than 30 Vitamines has been fully studied, and many have been synthesized.

Initially, the Vitamine was conditionally denoted by the capital letters of the Latin alphabet: A, B, C, D, E, R and others, the only name of international standardization on the chemical structure of the Vitamine was adopted. Vitamines are divided into water-soluble, fat-soluble and Vitamine-like compounds. Fat-soluble Vitamines include A, D, E and K, water-soluble Vitamines include B complex Vitamines and C, PP. In addition to Vitamines, there are proVitamines, which are converted into Vitamines by various changes in the body. ProVitamines include carotene (proVitamine A) and some sterols (ergosterol) that are converted to Vitamine D. A person's daily Vitamine needs depend on the general condition of the body, work style, health or illness. Vitamines A, B, B_2, C, D, PP are especially important for human life.

Main part: *Achillea Millefolium L.* A branch of the higher plant subclass *Magnoliophyta*, a class of magnolias (*Magnolipsida*), a subclass of *Asteridae*, a genus of *Asterales*. The family *Asteraceae Dumort* belongs to the genus *Achillea* [2, 31-32 pp]. Common *Achillea MillefoliumL.* is common in temperate regions of the Northern Hemisphere, Asia and Europe and North America, and in the desert and mountainous regions of Uzbekistan. It is a perennial plant 0.2–1 m tall (0.66–3.28 feet) and grows flat. The leaves are evenly distributed along the stem and are double-stalked, 5–20 cm long, almost hairy, and contain kaulin, which is sticky. The flowers are located in a large, compact thyroid inflorescence at the top of the stem, each cluster consisting of 1 or more flower heads. The inflorescence has 20-25 yellowish-white (rarely pink) bright flowers. The fruit is flat, ovoid, gray pistachio.

The chemical composition of ordinary *Achillea Millefolium L.* includes carotene, Vitamines K and C, alkaloids of achilles and betonicin, essential oil up to 0.8%, matricarin isomer, millefin lactone, 0.31% choline, asparagine, resin, astringent, bitter (proxamazulen-axillin) and other

substances. The essential oil contains 1-4% of chamazulene (the main component is formed from proxamazulene during the extraction of essential oil), thyme, camphor, borneol, carioffillen, up to 10% of cineole, formic, acetic and valeric acids [4]. One of the most common Vitamines in plants is Vitamine C.

Function of Vitamine C: Vitamine C - reduces the strength of allergic conditions, strengthens blood vessels, increases the body's resistance, improves the condition of connective tissue. Ascorbic acid (Vitamine C) is important in metabolism, the assimilation of connective tissue, and the maintenance and repair of these tissues. At the same time, it keeps the skin smooth and protects it from rapid aging. In addition, ascorbic acid is involved in blood transfusion and is also involved in the production of certain hormones. Vitamine C has protective properties against viral and bacterial infections. Vitamine C helps in the proper distribution of pigment in the skin. Vitamine C. Ascorbic acid is necessary for the formation of intracellular collagen, has the property of strengthening the structure of teeth, bones and capillary walls. Participates in oxidation-reduction reactions, tyrosine metabolism, conversion of folic acid to folic acid, carbohydrate metabolism, lipid and protein synthesis, iron metabolism, cellular respiration, activates the synthesis of steroid hormones. Reduces the need for Vitamines B_1, B_2, A, E, folic acid, pantothenic acid, increases the body's resistance to infections; improves the absorption of iron, helps it to accumulate in a reduced form. Hasantioxidantproperties.

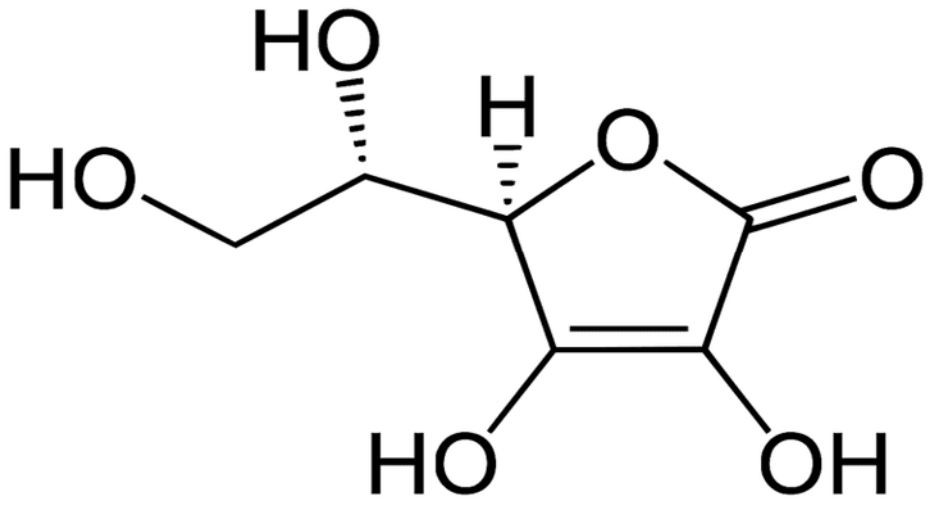

Figure 1. Vitaminee C or L-Ascorbic acid

Vitamine C deficiency can cause discoloration of the skin and fatigue. Lack of Vitamine C in the body leads to a breakdown of the structure of the bones and tissues, as well as leprosy. Ascorbic acid is not formed or accumulated in the body. The daily requirement of a person in this Vitamine is 60-100 mg.

Achillea Millefolium L. also contains Vitamine K.Phylloquinone (Vitamine K) is one of the main factors in blood clotting. When the body is deficient in Vitamine K, bleeding from various organs (nose, gums, gastrointestinal tract) is observed. Phylloquinone is found in lettuce, cabbage, spinach, and the green part of yarrow. Vitamine K is the group name of lipophilic (fat-soluble) and hydrophobic Vitamines required for the synthesis of proteins that maintain a normal level of blood coagulation. It is chemically a derivative of 2-methyle-1,4-naphthoquinone. It

plays an important role in muscle and connective tissue metabolism, as well as in the healthy functioning of the kidneys. In all of these cases, the Vitamine is involved in the absorption of calcium and the interaction of calcium D.

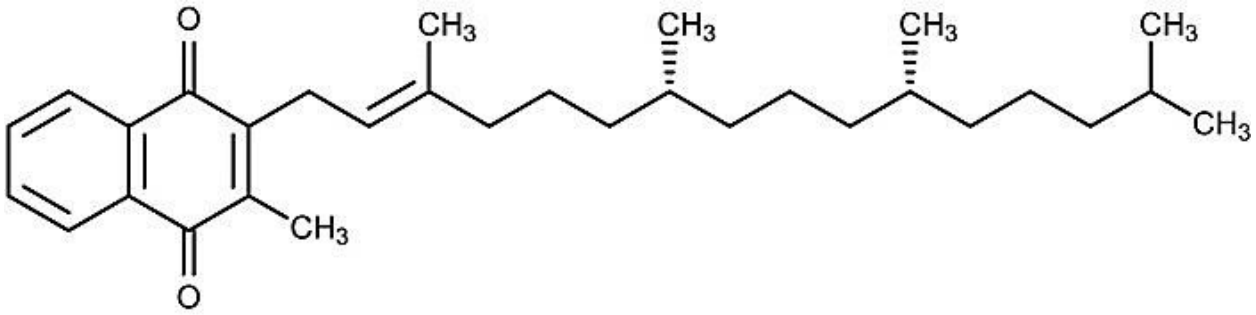

Figure 2. Vitaminee K_1 – Phylloquinone

Vitamines are reduced when fruits, vegetables and medicinal plant products such as yarrow are stored for a long time and cooked improperly. The most volatile of the Vitamines is ascorbic acid, which is broken down by sun, hot and humid air. As a remedy, Achillea Millefolium L. tincture should be soaked in boiling water and the lid should be closed to preserve Vitamines, especially ascorbic acid. Vitamines should be taken only on the advice of a doctor, as they have a strong biological effect.

Along with Vitamines, minerals are also important in plant composition. Their composition is detailed in the table below.

TABLE 1 MINERAL COMPOSITION OF THE PLANT ACHILLEA MILLEFOLIUM L

Name of macro and micro elements		Amount of elements in 100 g of green mass (mg)
Zincum	Zn	3,48
Plumbum	Pb	0,01
Magniyum	Mg	116,00
Natrium	Na	80,09
Ferrum	Fe	8,20
Cuprum	Cu	155,33
Kalium	K	1618,00
Calsiyum	Ca	606,00
Cadmium	Cd	0,01
Niccolum	Ni	1,07

As you can see in the table above, plants are relatively high in potassium, calcium, copper and magnesium. The role of mineral elements in the human body is very diverse. They are components of organs and tissues, part of cell and tissue fluids, as well as enzymes, involved in the molecular mechanism of muscle contraction, the transmission of nerve impulses [3]. Medicinal products of dye products are used in the treatment of diseases of the stomach (gastric ulcer and gastritis and inflammation of the mucous membranes), as an appetite suppressant and

anticoagulant (intestinal, uterine and hemorrhoidal bleeding), as well as in the nose, gums and used to stop it when wounds bleed. Ibn Sina recommended a decoction prepared from the surface of the dye for colds, headaches, uterine ulcers, kidney stones and other diseases. In folk medicine, tinctures or decoctions made from the surface of the plant are used as a hemostatic and appetite suppressant in various hemorrhages (spitting blood, bloody diarrhea, hemorrhoids). These drugs are also used as a headache reliever, diuretic, and in the treatment of pulmonary tuberculosis and gastrointestinal diseases. Vomiting can be caused by eating rosehip powder mixed with honey. In medicine, tinctures and liquid extracts from the surface of the dye plant are used in the treatment of gastrointestinal diseases, as well as as an appetite suppressant and anticoagulant.

In short, the science that studies Vitamines is called Vitamineology. Vitamineology is located at the intersection of biochemistry, food hygiene, pharmacology and some other biomedical sciences, which studies the structure and mechanisms of action of Vitamines, as well as their use for therapeutic and prophylactic purposes.

Today, phytohormones, including biopolymers (proteins and peptides, nucleic acids and nucleotides, lipids, polysaccharides) and bioregulators (enzymes, Vitamines, hormones), as well as biologically active compounds prepared by synthesis, such as drugs, growth agents, herbicides much is being studied. It is important to synthesize them chemically, to determine their structure, to reveal the relationship between the structure and biological properties of these substances, to study the chemical aspects of the biological effects of biopolymers, as well as natural and synthetic bioregulators. If the body lacks any biologically active substances, such as Vitamines, it can lead to various diseases.

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