

FUNDAMENTALS OF MEDICINAL PLANT PRODUCTION TECHNOLOGY

Vahobova Feruzakhon Bakhtiyorjon qizi

Fergana Polytechnic Institute, Faculty of Chemical Technology

2nd Year Student, Tel: +998978134546

Abdullajonova Nafisahon Ilhomjon qizi

Faculty of Light Industry and Textiles

3rd Year Student, Tel: +998998218937

Inomjonov Muhammadali Ilhomjon Ogli

Faculty of Chemical Technology, 2nd Year Student

Tel: +998911266466

ANNOTATION

The role of medicinal plants in human life is unique. Medicinal plants have been used since ancient times. It is important to extract the necessary substances from medicinal plants. In this regard, the technology of collection and preparation of medicinal plants This article provides information on the basics of such technologies

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INTRODUCTION

38-40% of medicines used in Uzbek medicine are herbal. Some of the most important drugs used in the treatment of some serious diseases (cardiac glycosides, a number of alkaloids, terpenes, saponins, steroids and phenolic compounds, and other biologically active substances) have not yet been synthesized. At present, the only source of their production is plants.

The Commonwealth is made up of many different geographical areas. These areas cover all climatic regions except the tropics: permafrost, high mountains, tundra, taiga forests, deserts, semi-deserts, deserts, and humid subtropics. That is why their flora is so rich. It is composed of more than 19,000 plant species. There are many medicinal plants among them. However, at present, not all of them are fully used in medicine for the treatment of diseases. The official list of medicines published by the Ministry of Health includes about 282 medicinal plants used in medicine.

254 types of phytopreparations were produced at the enterprises of the chemical pharmaceutical industry. These drugs are derived from 152 species of medicinal plants and 171 different products. These medicinal products are mainly made from medicinal plants that grow naturally in the territory of our country and are grown in the fields of some farms. As mentioned above, large quantities of medicinal plant raw materials are produced each year to meet the needs of the chemical and pharmaceutical industries, Galen laboratories and pharmacies. Large quantities of medicinal plants are produced each year to meet the needs of the pharmaceutical industry and pharmacies. The products are mainly collected from naturally

growing medicinal plants. The demand for medicinal plant raw materials is growing every year. This, in turn, leads to an increase in the amount of raw materials produced.

No matter how large the raw material reserves of naturally growing medicinal plants, meeting the demand of the pharmaceutical industry for medicinal plant products is of great theoretical and practical importance. This requires the preservation of the natural plant population and the preparation of their raw materials in the prescribed manner. This requires the development and strict adherence to a science-based production plan.

The following works are performed in the preparation of medicinal plant raw materials:

1. Organize the preparation of medicinal plants.
2. Collection of products.
3. Drying the harvested product.
4. Standardization of the collected product.
5. Placement of products in containers (packaging).
6. Transportation of products.
7. Storage of medicinal products.

It is very important to organize the preparation of medicinal plants in a timely manner. Usually, this work is done by the district central pharmacy (TMD). The TMD is staffed by a senior pharmacist-pharmacognost specialist at TMD, and if there is no such position, a deputy pharmacist or other specialist. The following is done and organized in the preparation of medicinal plants:

- To know the plan of preparation of medicinal plants for a certain district and determine it in comparison with the amount of medicinal products that can be collected in the district;
- Carrying out appropriate explanatory work among the population through newspapers and radio, which will provide detailed information on when, how, where to collect, dry, purchase price and where to deliver medicinal plants;
- To publish leaflets with full coverage of these issues and to hang them in public places;
- Short-term training (explanation) for medicinal plant raw materials at the pharmacy;
- Determining the place of collection of medicinal products;
- Identification of habitats and reserves of medicinal plants;
- When choosing a place to collect medicinal products, it is necessary to take into account that it is as far as possible from the place where the vehicle (car) goes and where the population lives. This is because the local population, schoolchildren and retirees are involved in the collection of medicines;
- Organization of production of medicinal products;
- Arrange for drying of the collected medicinal product at the place of preparation.

If it is not possible to dry the product at the place of collection, then transport it to the place of drying immediately and arrange drying. The preparation of medicinal plant products is carried out according to a strict plan approved by the relevant authorities. The planning of this work should take into account the fact that medicinal plants do not disappear under natural conditions and other measures for their protection should be taken into account:

- Not to prepare more than the planned amount;
- Medicinal plant products only from the specified and planned field harvesting and annual replacement of the harvested field in accordance with the rules;
- To ensure that the plan for the collection of medicinal products does not exceed its operational reserves;
- If perennial herbaceous plants are used as medicinal products from their surface, they should not be uprooted, ie to prevent the natural extinction of this medicinal plant, etc.

At present, medicinal plants are grown in all regions. Previously, this work was well established in Ukraine, the Republic of Belarus, the Caucasus and the European regions, autonomous republics and regions of Russia. The following agencies are involved in the preparation, processing and cultivation of medicinal plants:

The Committee for Nature Protection of the Republic of Uzbekistan, Bionazorat, plans the production of naturally growing medicinal plants, determines the amount of medicinal products and the fields to be harvested, and directs them.

The Department of the Republican Pharmaceutical Production Association of the Ministry of Health of the Republic of Uzbekistan and its regional offices produce a large number of various medicinal plant products. For example, corn stalks (beard, popugi), tograykhon, boymodaron, bitter wormwood, namatak and others.

Dori-Darmon State Joint Stock Company annually produces 60-70 tons of 21 types of medicinal plants. produces products in quantities close to These include sagebrush, bitter wormwood, sagebrush, sagebrush, sagebrush, sagebrush, small-flowered sagebrush, corn stalk, sweet fruit and others.

In addition to the collection of medicinal plants, the Ministry of Agriculture and Water Resources and the Forestry Committee of the Ministry of Agriculture and Water Resources and other organizations. These agencies collect medicinal plant products that grow in the territories assigned to them and hand them over to the relevant enterprises. The collection of raw parts of medicinal plants is carried out during the period of accumulation of the maximum amount of active substances in them. The study of plant development (ontogeny) determines the optimal timing of the accumulation of raw materials, depending on the maximum accumulation of biologically active substances in it. Although the timing of the collection of medicinal raw materials is expressed in calendar periods, however they are given as a general guide only. Sometimes collecting them may not coincide with the developmental phase. Plant development depends on several factors: the geographical area in which the plant grows, the characteristics of the plant, the meteorological conditions of the year, soil conditions, and so on. For example, licorice root is harvested in the Urals from May to October, in Dagestan from March to June, and in Uzbekistan from late October to April. Therefore, in determining the exact period of harvesting (depending on external signs), it is necessary to take into account the stages of development. These phases are not the same for some plant species, and their determination depends on the maximum accumulation of biologically active substances in different organs of the plant. Separate parts of some plant representatives are collected, and when the raw part of the plant is collected, it should be collected as accurately as possible (with less mixed parts that are not needed, and no foreign plants at all). For example, special attention should be paid to the preparation and drying of surface (grass) raw materials. In this process, the plant raw

materials are first cleaned, packed and prepared for tying. The threads are then passed between them closer to the grass and tied. In the same way, the second knot is made and tied. Unnecessary surface parts are removed and the two links are connected in pairs. The pairs are then dried in the shade and in a cool place.

Each type of raw material can be harvested at different times of the day. It is convenient to collect raw materials, mainly in the open air, during the day. It is not recommended to collect the raw material in the early morning or after sunset, when the plant is dewy.

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