Study of the composition of the medicinal plant fruit cappers prickly – "capparis spinosa l."

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Abstract. The article studies the composition of the medicinal plant grown in the Namangan region (Uzbekistan) capers prickly – “Capparis Spinosa L.” Experimental data have shown that the fruits of the medicinal plant capers prickly - “Capparis Spinosa L.” have an oval shape with a length of 3.6 cm and a width of 1.5 - 3 cm. It was revealed that the shape of the fruit of the capers prickly – “Capparis Spinosa L.” can be different, have a smooth surface, green in color, have a long strip of white along the length. The inner part of the fruit of capers prickly – “Capparis Spinosa L.” at the beginning of ripening is white and in the course of ripening they turn into orange, at the end they become red, fleshy. It was found that in the composition of the medicinal plant "capers prickly" there are such vital macro- and microelements as sodium, potassium, calcium, magnesium, iron, zinc. There are also vitamins such as thiamine, riboflavin, lactoflavin, beta-carotene, retinol, axerofol, aeurin, choline, pyridoxine, pyridoxine chloride. The rich of the medicinal plant fruit "capers prickly - Capparis Spinosa L."

1. Introduction
Providing the residents of Uzbekistan with safe, environmentally friendly, effective and high-quality medicines is one of the main tasks in the field of the pharmaceutical industry. In addition, the flora of our country has about 5,000 species of medicinal plants, many of which have long been used in medicine, agriculture, and industry. However, most of it represents an undiscovered reserve, and the State Pharmacopoeia includes only a certain small amount of a medicinal plant [1-4]. One of these cultivated and natural-growing medicinal plants is "capers prickly – “Capparis Spinosa L.” [5-8].

The purpose of this work is to study the composition and selection of the optimal temperature for drying the fruits of the medicinal plant capers prickly – “Capparis Spinosa L.” grown in the Namangan region. Capers prickly - "Capparis spinosa L." is a perennial plant best known for its edible flower buds. Capers buds contain essential oil, mustard oil glycosides, protein substances, nitrogenous substances saponins, fatty substances, ascorbic acid, rutin, quercetin, pectin.

2. Materials and methods
The fruits of the medicinal plant capers prickly – “Capparis Spinosa L.” has an oval, egg-like shape measuring 3-6 cm long and 1.5-3 cm wide, green in color (Fig. 1, a and c.). During the ripening
period, the fruits of capers prickly – “Capparis Spinosa L.” resembles an ordinary cucumber. The shape of the fruit of capers prickly – “Capparis Spinosa L.” can be different, have a smooth surface, green in color, have a long strip of white along the length. The inner part of the fruit of capers prickly – “Capparis Spinosa L.” at the beginning of ripening is white and in the course of ripening they turn into orange at the end they become red, fleshy (figure 1 d and 1 b) [9].

![Figure 1. Fruit of the medicinal plant capers prickly – “Capparis Spinosa L.”.](image)

In this work, the object of research is the fruits of the medicinal plant capers prickly - “Capparis Spinosa L.” grown in the Namangan region. The fruit was harvested in the months of July and August at the beginning of the formation of the capers prickly fruit. To determine the optimal drying temperature, we chose the fruits of the capers prickly – “Capparis Spinosa L.” of a certain size. Selected fruits of capers prickly – “Capparis Spinosa L.” were cut into two pieces of a certain size and placed on an oven and dried at various temperatures ranging from 25°C to 120°C. To dry the research object, a TC-80 thermostat (Made in Russia) was used.

3. Results
To maintain health, a person should receive essential amino acids with food. At the same time, food must not only contain proteins that ensure the intake of these amino acids into the body, but also be rich in carbohydrates and fats necessary for energy. Other substances, both inorganic and organic, are also essential for maintaining health. In addition to essential amino acids, the body also needs small amounts of other organic compounds called vitamins for normal functioning. It is known that a person needs at least thirteen vitamins such as vitamins A - thiamine, B2 - riboflavin, B6 - pyridoxine, B12, C - ascorbic acid, D, K, pantothenic acid, inositol, p-aminobenzoic acid, etc. [10-11]. Experimental data have shown that the composition of capers prickly - “Capparis Spinosa L.” is rich in various vitamins such as: Vitamin A, Vitamin B1, Vitamin B2, Vitamin B3, Vitamin B4, Vitamin B5, Vitamin B6, and Vitamins E, K, PP, C. The quantitative content of these vitamins in the capers prickly – “Capparis Spinosa L.” is shown in the diagram (figure 2).
Figure 2. Diagram of vitamins distribution in the composition of the medicinal plant capers prickly – “Capparis Spinosa L.”

Another class of substances, vitamins, which are present in the form of many compounds, in the form of ions in the blood and intercellular fluids, are also important for the life of the human body. Experimental data have shown that the composition of capers prickly – “Capparis Spinosa L.” contains such macro- and microelements as Potassium - 40 mg, Iron - 1.67 mg, Magnesium - 33 mg, Sodium - 2964 mg, Zinc - 0.32 mg, Copper - 374 mg, Selenium - 1.2 mg, Phosphorus - 10 mg, Manganese - 78 mg, Calcium - 40 mg (figures 3 and 4).

Figure 3. Diagram of trace elements distribution in the composition of the medicinal plant capers prickly – “Capparis Spinosa L.”
4. Conclusion

Thus, the experimental data showed that the chemical composition of the fruits of the medicinal plant capers prickly – “Capparis Spinosa L.” contains such vital macro-, microelements and vitamins as thioglycosides, saponins, ascorbic acid, sugar, essential oils, vitamin C, iodine, Myrosin enzyme, red pigment and organic acids.

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