



IMPROVING THE TECHNOLOGY FOR PREPARING PASTILA BY PROCESSING APRICOT FRUITS GROWN IN THE CONDITIONS OF KARAKALPAKSTAN

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Article history:	Abstract:
Received: 26 th March 2026 Accepted: 24 th April 2026	Studying methods for drying apricot varieties grown in Karakalpakstan and methods for preparing pastila, and selecting pastila samples prepared from various apricot varieties.
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ENTRY. Fruit production is a distinct sector in our republic. Among fruits, the apricot is of particular importance, as humans satisfy their needs by preparing various processed products from it in wet form. According to the data, in 2024, 424,734 tons of apricots were grown in the Republic of Uzbekistan, and 12,915 tons in the Republic of Karakalpakstan. In addition to consuming the harvested fruits fresh, the preparation of dried apricots, jams, and other products through their processing is a pressing issue for year-round supply to the population. In many apricot-growing countries, a number of scientific research works have been conducted on fruit processing. Foreign scientists have provided recommendations on the selection of fruit varieties and processing methods during product processing.

Fruits, especially apricots, contain sugar, organic acids, pectin, vitamins, and other substances necessary for the human body, which are easily digested in the stomach. Many fruits possess medicinal properties and protect and strengthen the human body from various diseases. The favorable soil and climatic conditions of Central Asia, including the Republic of Karakalpakstan, hot and dry summers, and low relative air humidity allow for the cultivation of many fruits. This is because fruits ripen well and with high quality primarily in regions with an average annual temperature of 3000°C. The soil conditions of the districts located in our republic are considered favorable for growing apricots. Today, the following apricot varieties are grown in farms, dekhkan farms, and household plots, yielding a bountiful harvest.

THE RELEVANCE AND NECESSITY OF THE TOPIC. In the Decree of the President of the Republic of Uzbekistan dated January 28, 2022, No. UP-60 "On the Development Strategy of New Uzbekistan for 2022-2026," special attention is paid to "increasing the income of dekhkans and farmers by at least 2 times through the intensive development of agriculture on a scientific basis, bringing the annual growth of agriculture to at least 5 percent, and bringing the volume of food products to 7.4 million tons by 2026, and the processing level of fruit and vegetable products to 28 percent."

Master's activities to a certain extent serve to implement the tasks outlined in the Decrees of the President of the Republic of Uzbekistan No. UP-5388 dated March 29, 2018, "On additional measures for the accelerated development of fruit and vegetable production in the Republic of Uzbekistan," No. UP-5853 dated October 23, 2019, "On approval of the strategy for the development of agriculture of the Republic of Uzbekistan for 2020-2030," Resolutions No. PP-4549 dated December 11, 2019, "On additional measures for the further development of the fruit and vegetable and viticulture sector and the creation of a value-added chain in the sector," and other regulatory legal acts.

PURPOSE OF THE STUDY. It consists of improving the technology for preparing pastila by processing apricot fruits grown in Karakalpakstan and scientifically substantiating the increase of products prepared on their basis.

RESEARCH OBJECTIVES. Based on the purpose of the topic, the scientific work includes the following tasks;

- Studying local types and varieties of apricots for processing and pasta production;
- studying the types of products made from apricots;
- development of technology for preparing apricot products and pasta;
- studying the pastille preparation technology, providing economic justification and conclusions.

TECHNOLOGY FOR PREPARING APRICOT PASTILA

1. Preparation of raw materials.

Ripe, tasty apricots are selected. The fruits are washed and separated. Damaged or decayed parts are removed.

2. Cooking (boiling).

The cleaned apricots are placed in the pot. Add 0.5-1 cup of water (to prevent the apricots from burning). Bake over low heat for 30-40 minutes until tender. When ready, it is mixed in a blender until a puree is formed.

3. Add sugar.

For every 1 kg of apricot puree, 200–300 g of sugar is added. Boil the mixture for another 10-15 minutes. If desired, you can add a small amount of lemon juice (for effect and preservation).

4. Preparation for drying.

The hot puree is spread on a sheet of parchment paper or a silicone mat 0.5 cm thick.

5. Drying.

In the sun: dried for 2-3 days (covered with gauze to prevent dust). Cooking: it can be dried at a temperature of 60-70°C for 6-8 hours. Dry in a special dryer: at 55-60°C for 5-7 hours.

6. Finished product.

Dried pastila should be soft, elastic, and non-stick to the hands. It is cut into pieces or wrapped. Store in an airtight container or bag in a cool place. If dry and with the right amount of sugar, pastila can be stored for up to 6 months.

Honey can also be used instead of sugar (but added later, not hot). You can also add apples or peaches to enhance the flavor.

Ingredients:

Ripe apricots: 1 kg.

Sugar: 200-300 g (depending on the sweetness of the apricot)

Lemon syrup: 1 tablespoon (for taste, flavor, and shelf life)

Steps of preparation:

Preparation of apricots: Wash the apricots thoroughly and separate the pits. If the apricots are ripe and soft, they can be pureed directly. If they are hard, add a little water and boil them until they are soft.

Preparation of puree: Use a blender or sieve the apricots to create a puree of uniform mass.

Boiling: Add sugar to the puree and simmer until thickened by stirring constantly over low heat. This process can take 30–60 minutes. If you want to add lemon soup, add it at the end of the boiling.

Drying: roll out the parchment paper and spread the prepared mass evenly to a thickness of 3-5 mm.

There are two methods for drying:

Sun drying: On sunny and windless days, the pastille can be dried in the sun. This may take a few days.

Drying in the oven: Heat the oven to 50-60°C and let the dough dry for 6-8 hours. Leaving the oven door slightly open ensures air circulation.

Ready pastila: Separate the dried pastila from the parchment paper. It can be cut into various shapes or rolled into rolls.

Storage: Pasty can be wrapped in parchment paper and stored in an airtight container. Can be stored in a cool, dry place for up to 6 months.

If the apricot has a high sugar content, the amount of sugar can be reduced or not added at all. To prepare apricot pastila, varieties are primarily selected that are pure, sweet, and high-quality, rich in dry substances.

PRACTICAL RESULTS OF THE STUDY. Studying methods for drying apricot fruits grown in Karakalpakstan and methods for preparing pastila, as well as selecting pastila samples prepared from various apricot varieties, is considered an important scientific innovation today.

CONCLUSION. To date, insufficient research has been conducted on fruit processing, increasing production efficiency, improving primary processing methods for raw materials, and implementing resource- and energy-saving effective techniques and technologies into drying processes. Therefore, research in this field is of great importance. The aim of the study is to identify varieties of apricot fruits suitable for drying, evaluate their impact on product yield and quality using various drying methods, and develop practical recommendations. Solving these problems will significantly increase the export potential of the republic's dried fruit products. At the same time, scientific research is aimed at increasing the efficiency of drying processes and creating new opportunities for local producers.

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