

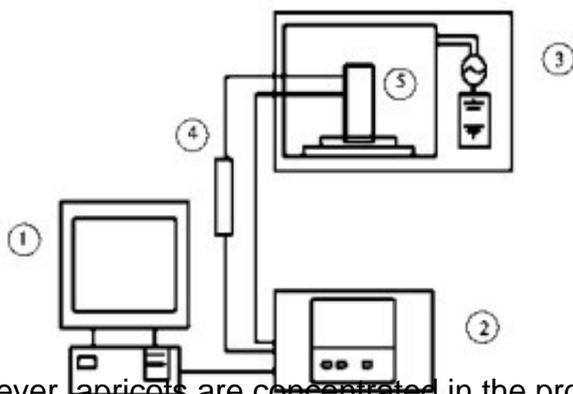
Effect of drying methods on quality of apricot meat

Abstract: Pure natural apricot meat powder was prepared by four drying methods: [microwave drying equipment](#), hot air drying, microwave vacuum drying and microwave convection drying. The effects of drying methods on nutrient composition, physical properties, sensory quality and antioxidant ability of apricot meat powder were compared.

Key words: [microwave drying of apricot meat](#); hot air drying; microwave vacuum drying; microwave convection drying;



Apricot is a plum plant of Rosaceae, originated in Xinjiang, China. It has been cultivated for more than 3000 years. Apricot fruits contain a large number of phytochemicals, such as polyphenols, carotenoids and vitamins. These substances make them not only delicious, sweet and sour, pleasant flavor, but also have certain health effects on cancer and chronic diseases, which are deeply loved by people.



However, apricots are concentrated in the production season, easy to rot, difficult to store and difficult to keep fresh. Generally, they can only be stored for 3-7 days at room temperature. In order to prolong the shelf life, many methods have been adopted, such as processing fresh apricots into preserved apricots, dried apricots and canned apricots, which are suitable for long-term storage. In addition, China has established a production line of apricot pulp and apricot beverage, but the production capacity is still high. Very limited, 40% to 50% of fresh apricots also need to be processed into dried apricot products in the origin.

Natural drying is the most commonly used method to produce dried apricot products at present, but it has the shortcomings of unsanitary and poor product quality. In general, low-concentration

sulfur fumigation in air drying is the most commonly used pretreatment method, which will cause sulfur residue in dried apricot products. Therefore, vigorous development of deep processing technology of apricot is an important way to solve this problem.

Fruit and vegetable powder is a kind of powdered product made from fresh fruits and vegetables by dry or wet method. Because of its rich nutrition, delicious, easy storage, easy to carry, easy to mix and use, it has been favored by scholars at home and abroad. At present, the research on fruit and vegetable powder mainly includes jujube powder, purple potato powder, snow lotus powder, pumpkin powder, kiwifruit powder, pitaya powder and Western Blue pollen, etc. The research on apricot meat powder is less.

Liu Chao and so on concentrated apricot pulp as raw material, diluted, two times homogenization, spray drying process production of apricot powder. At present, the drying technology adopted by fruit and vegetable flour processing enterprises mainly includes spray drying, hot air drying, freeze-drying, microwave drying, variable temperature differential pressure expansion and drying, and ultrafine grinding technology.

Microwave-assisted drying technology combines the advantages of microwave radiation stereo-rapid heating and traditional drying technology, which has the advantages of short drying time and low energy consumption. Compared with traditional drying technology, microwave-assisted drying can shorten drying time by 25%-90%, and reduce energy consumption by 32%-71%. All kinds of methods have their advantages and disadvantages. It is very important to select suitable drying technology for the quality characteristics of fruit and vegetable powder. However, there is no report on the microwave combined drying technology of apricot meat powder.

In this study, four drying methods, microwave drying, hot air drying, microwave vacuum drying and microwave convection drying, were used to prepare apricot meat powder. The effects of drying methods on the nutrient composition, physical properties and antioxidant capacity of apricot meat powder were investigated in order to provide theoretical basis for the preparation of high-quality pure natural apricot meat powder products.