

# Microwave Drying Characteristics and Kinetic Model of Mushroom

Abstract: In order to improve the [microwave drying equipment](#) in the production of instant mushrooms, the effects of microwave power and load on the microwave drying of instant mushrooms were studied. The microwave drying characteristics of edible fungi were studied. The effect of water content on sensory quality of edible fungi was discussed.

The optimum water content of edible fungi was obtained. The kinetic model of microwave drying of edible fungi was studied. DPS software was used to fit the fitting data, and the fitting equation was obtained according to the law of microwave drying of mushrooms. The effect is good, which provides a theoretical basis for the production of edible fungi.

Key words: [mushroom microwave drying](#); sensory quality; kinetic model

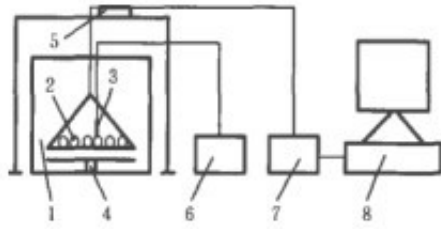


Lentinus edodes is a medicinal fungus of fungi. It is a fungus of lactic acid bacteria, also known as mushrooms, mushrooms, citronella, commonly known as Chinese mushrooms. In 2010, China's mushroom production reached 4.01 million tons. At present, in addition to processing fresh food, Lentinus edodes is also processed into leisure food, seasoning, functional food and medicine.

Lentinus edodes leisure food is delicious and easy to eat, which is deeply loved by consumers. At present, it has been processed into mushroom preserve, mushroom puffed food, mushroom Plush mushroom or mushroom foot, but mushroom leisure food accounts for a small proportion of processed mushroom products. It is far from meeting the needs of consumers and has broad market prospects.

Instant mushroom is instant mushroom food made from instant mushroom through rehydration, halogenation, drying, cooling, vacuum packaging, sterilization and other processes. Its drying process is an important link in the production process of instant mushroom, which directly affects the taste quality of products. And storage stability.

The moisture content of shiitake mushroom after baking is more than 80%. Mushroom pulp is soft and rotten, not compact enough, lack of elasticity, poor taste, too high moisture, can not shorten the shelf life of products. Therefore, appropriate drying and dehydration treatment should be carried out, and puffing, hot air, microwave and other drying technologies should be applied to the development and research of various foods.



These technologies have their own advantages, while microwave drying technology has the characteristics of high drying efficiency and low loss of nutrients. It has great potential in the food industry and has been used in the drying of fruits and vegetables such as Huaishan, Apricot abalone and Spring Bamboo shoots. In this paper, the drying characteristics of microwave drying of edible fungi were studied, and a dynamic model was established to grasp the drying law, which provided a theoretical basis for the production of edible fungi.