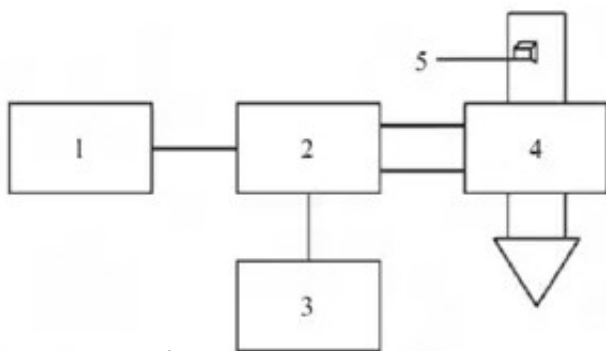


# Application of Microwave Technology in Fermented Food Processing Technology

**Abstract:** As fermented foods become more popular among consumer groups, fermented food processing technologies are rapidly evolving and many new technologies are applied. Based on this, the main types and principles of wave technology are introduced, and the application of wave technology in fermented food processing technology is analyzed.

**Key words:** [microwave drying equipment](#); fermented food; processing technology; application



Microwave refers to an electromagnetic wave with a wavelength of 1mm~1m and a frequency of 300MHz~300GHz. Generally, microwaves can be divided into meters, centimeter waves, millimeter waves and submillimeter waves according to wavelength. Microwave has been studied since its discovery. In the 1940s, microwave technology was officially produced as an application technology. With the successful development of high-power magnetrons, many developed countries have studied microwave heating. As a physical technology, microwave technology has gradually been applied to the food and pharmaceutical processing industries.

China's microwave technology research began in the 1970s, and has achieved good research results after a long period of development. At present, microwave technology is widely used in food, medicine, chemical and other fields in China. Microwave technology has excellent heating, drying, sterilization and other functions, and is widely used in the processing of fermented foods.

Microwave heating can also be used to achieve the drying function. Microwave drying technology can be applied well in many foods that need to be dried and dried. Microwave drying is the process of microwave heating, which can induce the water molecules of the object to diffuse to the surface layer, which is beneficial to eliminate moisture.

In the food industry processing, thermal drying technology is also a commonly used drying technology. However, microwave drying has more outstanding advantages than this conventional technology. The microwave drying technology is fast and efficient. It is important to better preserve the quality and taste of the food compared with the traditional thermal drying technology. After microwave drying, the food has better rehydration and better taste. The

fermented food can better preserve the flavor of the food during the drying process. In addition, microwave drying is shorter, and it takes less time to dry the same food. For example, it takes 6.8 hours to dry 10% potato chips with hot drying technology, and only 23 minutes with 240W microwave drying.

[Microwave drying food](#) processing is widely used in the process of food fermentation, through the appropriate time to remove excess water in the fermentation environment, to avoid the breeding of bacteria in the presence of water, air, for maintaining the fermentation environment



Important role.

In addition, microwave drying technology has important application significance in the preservation process of fermented foods. Fermented foods still have a large number of microorganisms after the completion of production, and maintain high activity, which makes the shelf life ratio of most fermented foods such as yogurt. The average food is shorter and it is more susceptible to deterioration in an environment with more water. Therefore, in the preservation of the fermented food, the preservation environment is first treated with microwaves to achieve a better preservation effect.