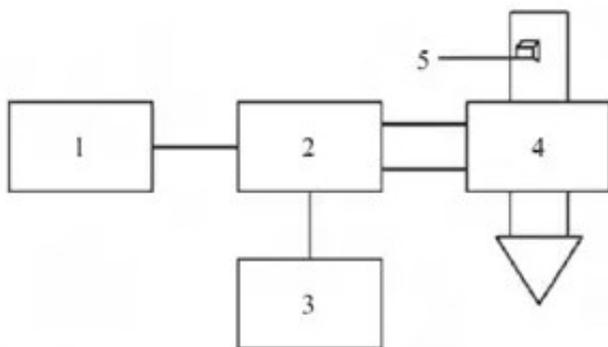


Optimization of beef jerky drying process

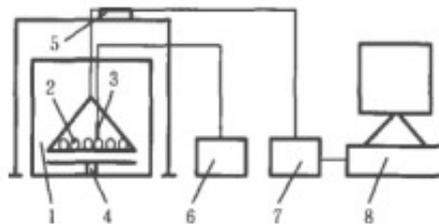
Abstract: The drying process of traditional beef jerky was optimized by introducing microwave-assisted drying. The results show that the [microwave drying equipment](#) can improve the quality of the product while maintaining the traditional flavor of beef jerky, and greatly shorten the drying time of the beef jerky.

The optimum drying conditions for beef jerky were as follows: baking in a far-infrared oven at 70 ° C for 3 h and then drying at 140 W for 7 min. The drying time of microwave-assisted drying of beef jerky is only half of the traditional drying process, which greatly improves the production efficiency of the product.

Key words: [beef jerky microwave drying](#), microwave assisted drying, optimization



The production of beef jerky has a long history and is a traditional food in China. It is rich in nutrients, unique in taste, outstanding in flavor and convenient to carry, and is favored by consumers. Due to the low industrialization of beef jerky processing for a long time, the traditional process has been used. The prepared products have a tough taste, high hardness, dark color, high energy consumption and long time, which can no longer meet the needs of



modern society.

This experiment attempts to introduce microwave drying to optimize the traditional drying process of beef jerky, aiming at improving the quality of beef jerky while shortening the drying time of beef jerky and improving its production efficiency.

Traditional beef jerky is dried naturally and dried in a drying room. Natural drying mainly includes drying and drying. The equipment requirements are simple and the cost is relatively low, but the temperature conditions are difficult to control, the drying time is long, and the quality of the dried beef is produced. Second, the pollution is serious; the drying of the drying room is also called convection hot air drying, the sanitary conditions are improved, and the pollution of

dust and bacteria is reduced, but the utilization rate of heat energy is low, the economic benefit is low, and the sterilization is not complete.

This paper attempts to improve the drying process of beef jerky, solve the problems of long drying time, poor color and hard taste of beef jerky. The innovation lies in the combination of far infrared baking and microwave drying to ensure the safety of beef jerky while maintaining its traditional flavor. And greatly shorten the drying time of beef jerky, improve production efficiency, and provide ideas for its large-scale industrial production. Microwave drying can be applied to the production of beef jerky, and can greatly shorten the drying time while improving the quality of the product. The best drying process for flavored beef jerky is to roast at 70 ° C for 3 h in a far infrared oven, then dry at 140 W for 7 min.