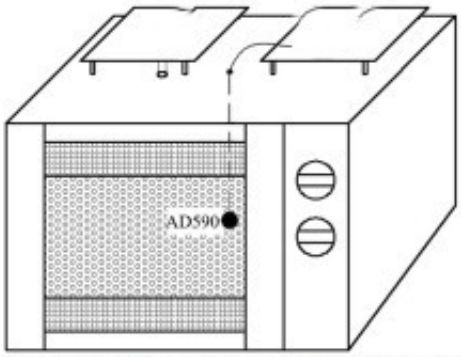
Application of Microwave Technology in the Production of Pork Chop



Schematic diagram of microwave drying temperature control system

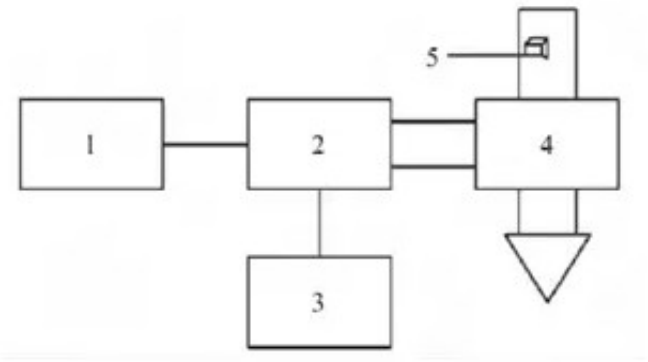
Abstract: The effects of four factors, such as microwave power, microwave drying time, oven temperature and oven baking time, on the quality of meat emulsion were studied. Four-factor and three-level orthogonal tests were carried out on a single factor basis to obtain microwave drying equipment. The optimum conditions for making pork chop were: microwave power of 400 W, microwave drying time of 12 min, oven temperature of 200 °C, and baking time of 2 min. The meat meal samples prepared by the process were uniform in color and rich in flavor. Has a good product quality.

Key words: pork microwave drying; processing technology

Pork chop is a traditional dish in China. Pork chop is popular among consumers because of its beautiful appearance, unique flavor, delicate taste, rich nutrition, and easy to carry and eat. Pork chop is rich in various nutrients required by the human body. It has high nutritional value, rich protein, and low fat content, which helps the body to digest and absorb.

The traditional meat chop making method is raw material selection?dressing?slicing?ingredient?cured?forming?drying?baking?flattening?packaging, wherein the forming and drying stages take about 5 h~6 h, and the product is produced. The cycle is long.

Microwave technology has made great contributions to the heating, sterilization and drying of food, and has an important position in the food processing industry. Microwave drying technology is a drying technology with the same heat conduction direction and water diffusion direction. It has unique heating characteristics, so the material drying speed is fast, the drying time is short, the quality and utilization after drying are high, so it is coming in the agricultural product processing and food industry. The more attention is paid.



As early as a decade ago, foreign countries studied microwave drying food, and in recent years, there have been reports on microwave drying of fresh fruits, fresh vegetables and other raw materials.

At present, domestic research on the application of microwave drying technology in food processing is also increasing, but most of them focus on the research of cereal, fruit and vegetable food raw materials, while the research on microwave drying of animal products is less reported.

Studying the application of microwave technology in dry meat products will broaden the scope of application of microwave technology, and provide a practical energy-saving and low-consumption production process for meat emulsion manufacturers.