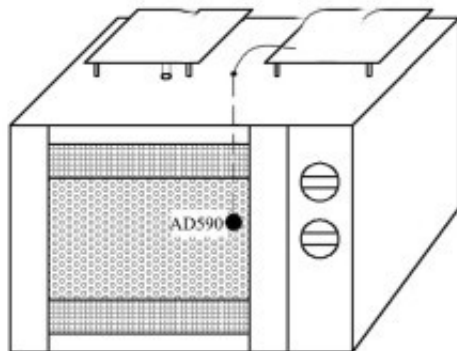


# Study on the drying process of bitter gourd slice

Abstract: The drying characteristics of bitter melon slices under different conditions of different temperature (or power), slice thickness and slice wet weight were studied by hot air drying and microwave drying. The drying curve was drawn.

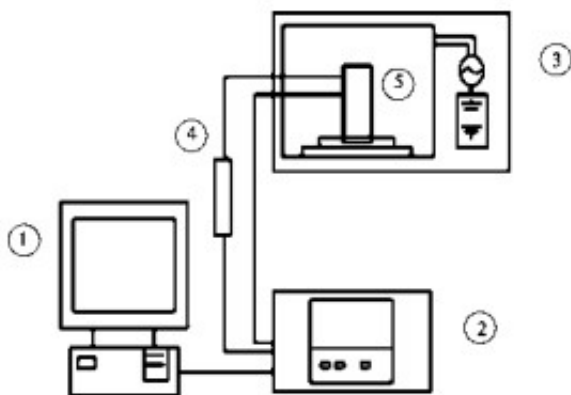


Schematic diagram of microwave drying temperature control system

The results show that the optimum conditions for hot air drying are drying temperature of 60 °C, slice thickness of 0.5 cm, slice wet weight of 20 g, and dehydration rate of 95.9 %. The optimal process conditions for [microwave drying equipment](#) are drying power of 800 W. The slice thickness was 0.5 cm, the wet weight of the slice was 20 g, and the dehydration rate was 96.4%. This study can provide a theoretical reference for the improvement of bitter melon slice drying process.

Key words: [bitter gourd microwave drying](#); hot air drying

Momordica charantia L. is the fruit of the bitter gourd of the Curcu-bitaceae Momordica plant. It is named after its special bitterness. It is also known as cold melon, koi, and melon. The nutrient composition of bitter gourd is comprehensive and unique, and it is a popular vegetable and health food.



According to nutritional analysis, bitter gourd contains water, protein, fat, carbohydrates, crude fiber and various vitamins, as well as bitter melon and protein-like active substances (ie ?-bitterin, ?-bitterin, MAP30), Insulin active substance (ie peptide-P) and a variety of amino acids

and a variety of essential mineral elements are an ideal green food.

In addition, bitter melon not only has the pharmacological effects of clearing heat and heat, clearing eyes and detoxifying, diuretic and cooling blood, but also has the effects of smoothing blood sugar, improving insulin function and protecting cardiovascular and cerebrovascular diseases.

As a food and food homologous health food, bitter melon has a very high value of deep processing development. The bitter melon is low in price and has a wide range of sources. It is a kind of melon vegetable that the Chinese people often eat. Due to its numerous health functions, it has shown a broad prospect in clinical applications such as blood sugar lowering, AIDS treatment and anti-tumor.

At present, the deep-processed products of bitter melon are rarely seen in the market. Most of the bitter melon is mainly sold, but the fresh bitter melon is perishable, and there are many constraints on the fresh sale. The health care function and economic benefits of bitter melon cannot be maximized.

After drying the bitter melon slices, both medicine and food can not only enrich people's diet structure, but also fully play the health care function of bitter melon. At the same time, it can adjust the balanced supply time of bitter melon and open up a new way for the utilization of bitter melon. In order to preserve the nutrition and flavor of fresh bitter melon, it is very important to develop a natural bitter melon food that is convenient to eat and has a unique flavor. It also meets the requirements of modern people for health conditions, and the bitter melon sliced and dried is in line with people's nutrition, health care, Requirements for characteristics such as taste and convenience.