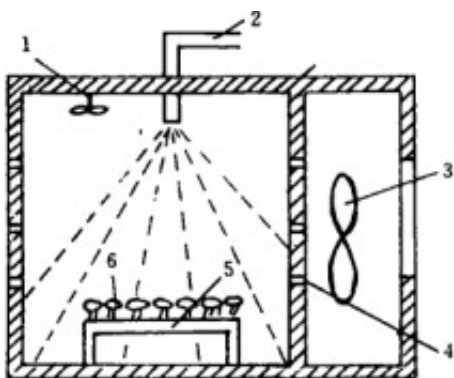


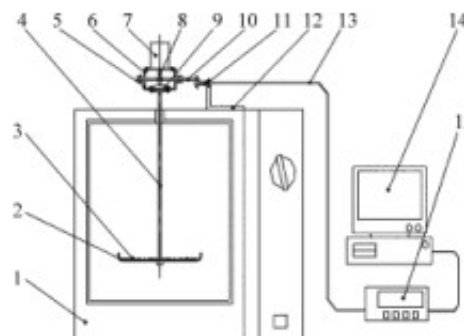
Optimization of microwave drying process conditions for carrot slices

Abstract: The [microwave drying equipment](#) of carrot slices was studied. The effects of different microwave treatments on the water loss rate, sensory quality and rehydration of carrot slices were investigated by single factor and orthogonal test. The microwave dried carrot slices were obtained. The best process conditions.

Key words: [carrot microwave drying](#); process conditions



Carrot belongs to the umbelliferae family. The carrot is native to western Asia. It has red, purple, orange, turmeric and other varieties. Its shape is like ginseng. It has high nutritional value and can enhance the body's resistance. Therefore, it has the reputation of "race ginseng". In addition to protein, fat, minerals and vitamin C, the main nutrients of carrots are



carotene, especially β -carotene.

Carrots produced in most parts of China have carotenoid content of 9 mg / 100 g ~ 13 mg / 100 g, ranking first among common fruits and vegetables. Carotene, also known as lutein, can be converted into vitamin A in the human body, which can treat night blindness caused by lack of vitamin A. It also has an adjuvant treatment for eye dryness and pediatric rickets that lack vitamin A.

According to relevant research, a large intake of carotene can effectively enhance the body's immunity, and has a good protective effect on intestinal barrier function after acute injury,

especially in the prevention and treatment of lung cancer. In addition, the minerals and trace elements necessary for the growth of carrots absorbed from the soil are richer than other vegetables. They contain many nutrients necessary for human growth and development, and have many special pharmacological effects. Therefore, carrots and processed products thereof There are a wide range of needs and applications in the food and medical industries.

Microwave drying is a new technology developed on the basis of microwave theory, microwave technology and microwave tube achievement. Microwave drying has high speed, short drying time, high product quality, uniform heating, high thermal efficiency and small equipment footprint. Safe and sound, this technology has been widely used in many fields. The production of microwave food is still lagging behind in China. Accelerating the development of microwave food and the application research of microwave technology are of great significance to promote the development of China's food industry. This experiment studied the microwave drying process conditions of carrot slices, which can provide a basis for the production of dried carrot processed products.