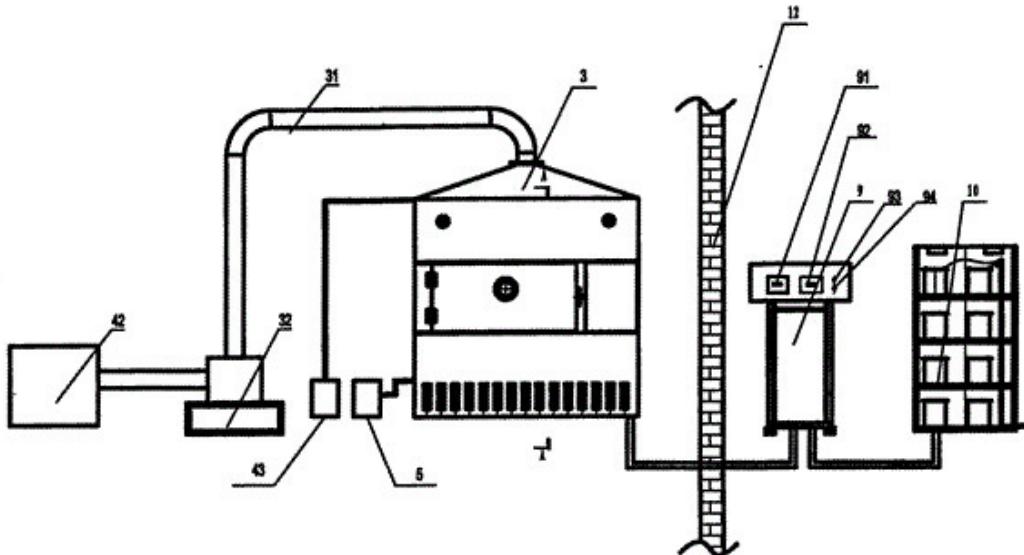
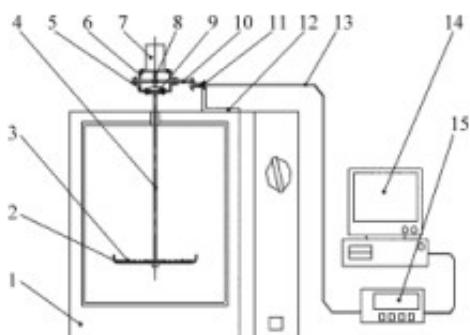


# Microwave drying characteristics of wheat and its effect on quality



**ABSTRACT:** Aiming at the problems existing in wheat hot air drying, the microwave drying characteristics of wheat and its influence on quality and energy consumption after drying were studied by using microwave test equipment through choosing different drying power, material laying thickness and dehumidification air speed. The results showed that the microwave drying of wheat was mainly in the constant speed stage. Microwave drying had a significant effect on wheat quality. The germination rate and SD S sedimentation value of wheat grains were sensitive to microwave treatment. It could be used as the index of heat damage and quality change of wheat. The energy consumption of microwave drying of Wheat was the main factor. Affected by humidity.

Key words: wheat grain; [microwave drying equipment](#); drying characteristics; quality



Quote

Wheat is one of the main grain crops in China. Because of weather, the moisture content is high during harvest. If it can not be dried in time, it will deteriorate and mildew, which seriously

affects the yield and quality of wheat and greatly reduces the economic benefits. However, the traditional hot air drying has many problems, such as long drying time, high energy consumption and poor drying quality. Microwave drying is different from hot air drying and other drying methods. Because of its unique heating characteristics, material drying speed, short time, high quality and heat utilization after drying, it has been paid more and more attention and applied in the fields of medicine, food industry, chemical industry, tobacco and agricultural products processing.

Microwave drying of grains and fruits and vegetables has been studied abroad for more than ten years. In recent years, there are also reports on microwave drying of paddy, rapeseed and litchi in China. Some of them have been successfully applied and achieved remarkable economic benefits. However, there is no literature report on the characteristics of wheat microwave drying. Therefore, wheat microwave drying experiment was carried out to analyze the effects of [wheat microwave drying](#) on quality and energy consumption after drying.