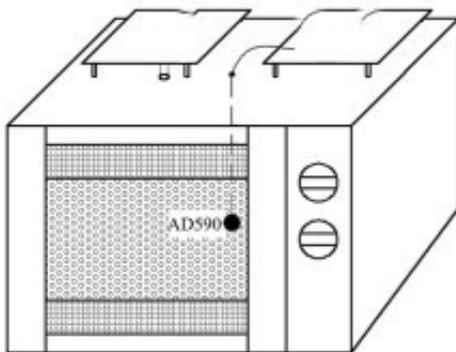


Research Progress in Drying Technology of Dry Flowers

Abstract: Dry flower is an ornamental flower which originates from nature and has both the long-term preservation of artificial flowers and the natural authenticity of flowers. [Microwave drying equipment](#) is a very important link in the process of preparing dried flowers, which directly relates to the naturalness, authenticity and durability of dried flowers.

This paper summarizes the research progress of drying technology of dried flowers in recent 10 years at home and abroad, describes the advantages and disadvantages of traditional and modern drying technology, and makes comparative analysis. It points out the existing problems and development direction of existing technology, aiming at providing reference for further research and large-scale production of drying technology of dried flowers.

Key words: [flower microwave drying](#); vacuum drying; hot air drying; freeze drying



Schematic diagram of microwave drying temperature control

Dry flowers can be divided into two categories: plane dried flowers and three-dimensional dried flowers. They refer to the chemical or physical treatment of plant materials (flowers, stems, leaves, etc.) for shape preservation, color preservation and drying, so that plant materials can be preserved for a long time and have unique artistic and ornamental flowers, which are beyond the reach of fresh flowers. Durability, compared with artificial flowers, is more real and natural, and has a variety of collocation forms, filling the modern people's desire to return to nature. Many flower products stand out and become popular in the international market in recent years.



In the process of preparing dried flowers, drying is a very important link, requiring that the moisture content of flowers should not exceed the safety limit, otherwise the quality of flowers would be easily degraded, while ensuring the shape, color and other appearance indicators of flowers.

Despite its long history of application, most flower drying methods still follow the traditional methods. With the development of drying technology, various new technologies such as microwave, vacuum freeze-drying and other technologies have been applied, and while drying, color-preserving treatment has been carried out to improve the ornamental beauty of dried flowers.

Microwave drying is a new method of drying flowers, which is characterized by short time and no need for other media. In the process of microwave drying, the polar molecule of water changes its polar direction repeatedly by changing the frequency of electromagnetic field in high frequency electromagnetic field, and then forms intense molecular movement and generates heat. Water is heated and gasified to realize material drying. The method of microwave drying is suitable for flowers with large moisture content, soft and thin.