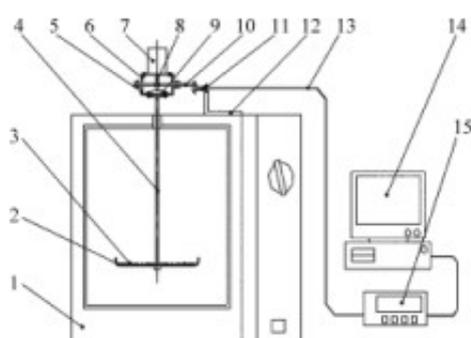


# Study on characteristics and technology of longan drying by microwave

[Abstract] In order to apply microwave drying technology to longan drying production, the microwave drying experiment of longan was carried out by using self-made microwave drying test system. The effects of microwave drying characteristics and technological conditions on the drying process and quality of longan were tested and analyzed, and the drying process was determined.

Key words: Agricultural Engineering; [microwave drying equipment](#); experiment; longan; drying characteristics; Technology

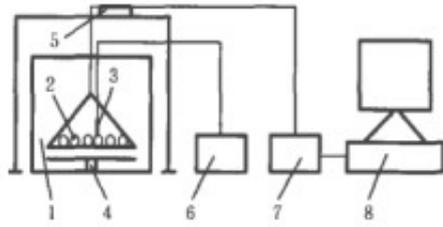
Longan is a high-quality fruit in subtropical zone. Its cultivation area is expanding rapidly in southern China, and its yield is greatly increased. The drying of longan is of great significance for solving the contradiction between production and marketing and increasing the value of products.



However, the whole longan fruit was dried with shell, and the drying was in the state of internal control. The drying time was longer. It took 6 to 9 days to bake and slow-tasting alternately. Microwave has attracted more and more attention and application in food industry and agricultural products processing due to its unique heating characteristics and drying mechanism, but there is no literature report on microwave drying Longan at home and abroad. In order to explore the application prospects of microwave technology in longan drying production, a systematic microwave drying experiment was carried out on longan.

(1) The dehydration process of longan dried by microwave showed a consistent trend, the initial stage was a short slow decline, followed by continuous and rapid.

(2) The whole drying process can be divided into three stages: acceleration, constant speed and deceleration. Most of the material dehydration process is at constant speed. The comprehensive results of different batch ratios show different drying rates.



(3) In the experimental range, excessive pulp drying is the main problem affecting the quality of longan dried by microwave. The drying speed obtained by the combination of microwave heating and intermittent time is an important factor affecting the quality of longan dried.

(4) In [microwave drying Longyan](#), different heating measures should be determined for different drying periods. Within the scope of this experiment, it is feasible to adopt two-stage intermittent drying process.