

## **MICROWAVE-HOT AIR ASSISTED DRYING OF OSMOTICALLY TREATED PINEAPPLE**

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Up to 40 % of agricultural produce is wasted in developing countries, mainly due to the lack of storage and processing facilities, as well as to a limited knowledge of processing technologies. Combination drying of South African grown Cayenne type pineapples was studied with the aim of producing high quality shelf stable dried fruit products.

Combining of osmotic dehydration as a pre-treatment and then microwave-hot air assisted drying was experimented with to evaluate the influence of different processing parameters on the product quality. The processing parameters considered included: osmotic drying time, microwave power, air temperature and air speed. The quality parameters evaluated were: colour, water activity, moisture content, brix, volume, texture and number of charred pieces.

It was found that the microwave power and air temperature at the two processing parameters that have the most significant effect on the quality of the pineapple pieces. Optimum processing conditions were also mathematically predicted and tested.