Effect of Microwave Treatment on Moisture Content and Vitamin C Retention of Papaya

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Due to the increasing demands of fruit drink mixes, papaya fruit tea is proposed for commercialization as a nutritious tea drink by maintaining the quality of the processed fruit. The aim of this project is to study the effect of microwave power input and geometry of fruits during microwave treatment of papaya on quality of the dried products based on moisture content and vitamin C retention. Different geometry (slices of 4.0 x 2.0 x 0.5cm and cubes of $1cm^3$) of papaya were treated in microwave oven at different levels of power input (low to medium) until the moisture content is less than 1.00. Analysis of vitamin C content was then carried out to determine the quality attributes of microwave-treated papaya. Papaya slices treated in medium power microwave oven reached lower moisture content than cubes for a specified time. Both geometries were found to be able to retain vitamin C to a desired level. Microwave treatment by the mean of preservation and drying of fruits has been proved to increase dried product quality retention. A unique processing technique of papaya fruit tea has been established by optimization of the dehydration process.