

**EFFECTS OF DIFFERENT STORAGE CONDITIONS ON THE  
MICROBIOLOGICAL QUALITY AND NUTRIENT CONTENT OF  
AFRICAN BREADFRUIT**

**(*Artocarpus communis*, Forst).**

BY

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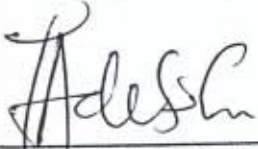
**A THESIS SUBMITTED TO THE DEPARTMENT OF  
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## CERTIFICATION

This is to certify that this project was carried out by Ajayi, Olusegun Babatunde under supervision in the Department of Microbiology, Federal University of Technology, Akure, Ondo State, Nigeria.



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## ABSTRACT

The changes which occurred in the morphology, microbiology and nutrient composition of African breadfruit under different conditions of storage were evaluated in this study. This was done to provide information on the best condition for its storage. Matured fruits were harvested from the tree, washed in chlorinated water and rinsed with sterile distilled water. Some of the fruits were cut while some were left intact. Some of the fruits that were cut into pieces were dried in the oven between 55° and 80°C for 48 hours and ground into flour. Proximate analyses of the flour were done using conventional methods. The fruits that were not dried in the oven were then divided into five (in replicates of four) and stored under the following conditions; The first group of fruits was stored in a room at temperature of  $28 \pm 2^\circ\text{C}$ ; the second group was stored in water at temperature of  $20 \pm 2^\circ\text{C}$ . The refrigerator was used as storage medium for the third group at  $10^\circ\text{C}$  while the fourth group was stored in the freezer at  $-4^\circ\text{C}$  and the last group was stored in vinegar (10% acetic acid). Changes in their morphology were monitored daily for five days. Thereafter, samples from the stored fruits were prepared for microbiological examination using standard methods. The stored fruits were then dried at 55° - 80°C for 48 hours in the oven and blended into flour after which proximate analyses were done using conventional methods.