

**COMPARATIVE NUTRITIONAL ANALYSIS OF FRESH AND  
PRESERVED PALMYRAH YOUNG FRUIT (ICE APPLE)**

A dissertation submitted to the  
Faculty of Animal Science and Export Agriculture  
Uva Wellassa University  
In partial fulfillment of the requirements for the award of  
Bachelor of Palm & Latex Technology and Value Addition

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2016**

## ABSTRACT

The study aims to determine the nutritional characteristics of fresh and preserved young fruit kernel of palmyrah and to compare the changes of nutritional characteristics of preserved young fruit kernel with the time. Young fruits of palmyrah which are similar in size and at the same maturity were selected and divided in to two potions. Moisture, total ash, protein, total fat, vitamin C, total sugar, reducing sugar, non reducing sugar, dietary fiber, total phenol content phosphorous, calcium, sodium and potassium content were analyzed for fresh and preserved young fruit kernel. The nutrient analysis was done for one portion as a control. The other portion was immersed in palmyrah sweet sap of which the pH and brix values were adjusted to 4 and 25 respectively. The nutrient analysis was conducted for a period of two months consecutively. The results were analyzed by one way ANOVA at 5 % level of significance using MINITAP 17. Preserved young fruit kernel showed significantly a high fat content [0.083( $\pm$ 0.002)] g/100g and total ash content [0.4250( $\pm$ 0.006)] g/100g compared to those in fresh young fruit kernel. Moisture [89.270( $\pm$ 0.241)] g/100g, protein [0.8375( $\pm$ 0.007)] g/100g and vitamin C [4.9382 ( $\pm$ 0.0905)] mg/100g content were significantly high in fresh young fruit kernel compare to those in preserved young fruit kernel. Total sugar [13.8438( $\pm$ 0.054)] g/100g, reducing sugar [3.4632( $\pm$ 0.191)] g/100g and minerals of Ca, Na, K and P were significantly high in preserved young fruit kernel compared to those values of fresh young fruit kernel. There were no significant differences in dietary fiber [0.8709 ( $\pm$ 0.010)] g/100g and total phenol content [0.0578 ( $\pm$ 0.0006)] g/100g of the fresh and preserved young fruit kernel. Furthermore, the abundance of the moisture, total ash, protein, total fat, vitamin C, total sugar, reducing sugar, non reducing sugar, dietary fiber, total phenol content, and minerals remained stable throughout for two months. Based on the result, it can be concluded that the sweet sap preservation method significantly changed the nutrient characteristics it is compared with fresh young fruit kernel. Therefore further studies are required to identify a better preservation technique.

Keywords: Palmyrah young fruit kernel, Palmyrah sweet sap, Preservation