

**COMPARATIVE STUDY OF QUALITY AND  
NUTRITIONAL PARAMETERS OF PALMYRAH  
JAGGERY  
PRODUCED FROM FRESH SWEET SAP AND  
PRESERVED TREACLE**

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

By  
**ROXCY ROBERT**

**Department of Export Agriculture  
Faculty of Animal Science and Export Agriculture  
Uva Wellassa University of Sri Lanka**

**2019**

## ABSTRACT

Palmyrah jaggery is a traditional sweetener and indigenous medicine which is produced by concentrating the unfermented inflorescence sap of palmyrah palm. The palmyrah jaggery obtained after processing is darker and richer in color solid blocks. Palmyrah jaggery has a high demand exists among locally and internationally. Jaggery is produced by sweet sap, is seasonal. To make available throughout the year to consumers, jaggery is produced from preserved treacle to overcome the limitation in the off seasons.

This study aims to evaluate whether palmyrah jaggery produced from preserved treacle could deliver quality and nutrient levels comparable to jaggery produced from fresh sweet sap. Palmyrah sweet sap and treacle were collected and two types of jaggery were produced at production unit of palmyrah development board for the analysis.

The quality analysis revealed that both type of jaggery were in compliance with SLS 521:1981 specifications while there were significant different ( $p < 0.05$ ) among the tested parameters. The Comparative analysis of macro and micro nutrient composition showed that jaggery produced from fresh sweet sap has (373.83±3.2400) Kcal Energy, (0.8367±0.0252)g/100 g protein and (88.4600±0.4390)g/100 g Total sugar, (18.5000±1.1230) mg/100g Vitamin C content, (0.0440±0.0045) g/100g total phenol significantly higher ( $p < 0.05$ ) than jaggery produced from preserved treacle while there were no significant different ( $p > 0.05$ ) in fat content. The minerals analysis revealed that there were significant differences in all the parameters except sodium content.

It can be conclude that jaggery produce from preserved treacle significantly change the nutritional characters it is compared with jaggery produce from sweet sap but as it is comply with SLS 521:1981, preserved treacle could be used to produce the jaggery in the off season instead of jaggery produced from fresh sweet sap.

*Key Words: Palmyrah Jaggery*