

## **Marketable wild fruits of Sarawak, Borneo: their mode of consumption, uses and sugar profiles**

### **ABSTRACT**

Eleven wild plant species documented with fruits mainly used for food and other uses were based on the acquired knowledge passed from elders that has provided local people with wide selection of plants in their diets. Based on the information obtained, 11 wild fruit species were investigated for their sugar concentrations. Taste preference (e.g., mainly sweet, sour, bitter), flavour and ripeness were observed to be important for mode of consumption and uses. HPLC method was used to quantify the major sugars in the fruits. The retention times of sucrose, glucose, and fructose measured were 10.3, 12.7, and 15.1 min, respectively. *Artocarpus odoratissimus* has significantly high amounts of glucose (39.9 gm kg<sup>-1</sup> DW) and fructose (48.5 gm kg<sup>-1</sup> DW) whereas *Dialium indum* and *Salacca magnifica* had higher sucrose contents in comparison with other wild fruits. *Etlingera elatior* was found to have the lowest sugar content. Multivariate analysis (PCA) showed 3 groups of fruits species can be separated based on their sugar contents. With respect to glucose/fructose ratio, *Artocarpus odoratissimus* and *Dialium indum* have high amounts of fructose, which may induce fructose malabsorption if taken in excessive amount. Information on the wild plant species and their fruit sugar content is essential to determine their potential for further market utilization and human consumption.

**Keyword:** HPLC; Sarawak; Sugar profile; Sugar-Pak I; Wild fruits