

## Comparative Phytochemical Analysis of Fruit Pulps of Palmyrah Palms of Different Geological Locations of Sri Lanka

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Palmyrah palm has diverse biochemical properties due to the presence of nutritional and bioactive compounds in different parts of the tree. The objective of the study was to identify, determine and to perform a comparative analysis of existing phytochemicals in the fruit pulp of palmyrah palm grown in different geological locations of Sri Lanka such as Point Pedro, Puttalam, Valikamam and Delft. The aqueous extracts of palmyrah fruit pulp obtained from four different locations of Sri Lanka were screened for different phytochemicals such as flavonoids, glycosides, tannins, phenols, terpenoids, gum and mucilages, saponins, alkaloids, carbohydrates and proteins. All the four fruit pulps of palmyrah palm obtained from different locations showed positive results for flavonoids, glycosides, tannins, terpenoids, gum and mucilages, saponins, carbohydrates and proteins. There were significant differences in the quantities of flavonoids, tannins, proteins, carbohydrates and total sugars among the palmyrah fruit pulps of the four locations of Sri Lanka. The pulp of palmyrah fruit collected from Point Pedro showed significantly higher quantity of flavonoid (0.09 mg/mL), tannin (0.18 mg/mL) and protein (0.22 mg/mL) than that of other three locations. The mean carbohydrate content (2.75 mg/mL) of the palmyrah fruit pulp of Delft was significantly higher than that of other three locations. The mean total sugar content (0.11 mg/mL) was significantly higher in the pulp of palmyrah from Valikamam than that of other three locations. This study revealed that the palmyrah pulp obtained from the palms of different locations had specifically different phytochemicals significantly higher in their quantities. However, palmyrah fruit pulp of Point Pedro location was rich in important phytochemicals such as flavonoid, tannins and proteins than that of other three locations of Sri Lanka. Therefore, it could be used for further studies in traditional medicine and other palmyrah fruit pulp related investigations.

**Keywords:** Flavonoids, Fruit pulp, Geological locations, Palmyrah, Phytochemicals.