



Comparative Assessment of Phytochemicals in Fresh and One Week Old *Carica Papaya*

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Received : November 2014

Accepted : March 2015

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Abstract : *Papaya (Carica papaya L. cv. Eksotika) of Caricaceae family is one of the most consumed fruits and has been used as a remedy against a variety of diseases. In the present study, a comparative assessment of phytochemicals present in fresh and one week old Carica papaya was done and it was found that except for the phenolic content of the samples which was 30 µg ml⁻¹ for fresh papaya extract and 25 µg ml⁻¹ for the one week old papaya extract, the flavonoid content (2 µg ml⁻¹ for fresh papaya extract and 2.5 µg ml⁻¹ for the one week old papaya extract), the sugar content (50 µg ml⁻¹ for fresh papaya extract and 110 µg ml⁻¹ for the one week old papaya extract) and the protein content (1 mg ml⁻¹ for fresh*

papaya extract and 1.6 mg ml⁻¹ for the one week old papaya extract) were more in one week old papaya sample than that in the fresh papaya sample. The freeze-dried sample minimized the loss of phytochemical components in the sample. Freeze-drying of foods can preserve the labile analytes and at the same time rupture the cell compartments. This rupturing by lyophilization could result in better extraction efficiency compared to extracting fresh materials.

Keywords: *Papaya, photochemical, antioxidants, tannin, flavonoid, phenol.*

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Introduction :

Work on natural products has gained a wide popularity due to the potential of discovering active compounds. Plants are endowed with various phytochemical molecules such as vitamins, terpenoids, phenolic acids, lignins, stilbenes, tannins, flavonoids, quinones, coumarins, alkaloids, amines, betalains, and other metabolites, which are rich in antioxidant activity (Zheng and Wang, 2001; Cai *et al.*, 2003). Phenolic compounds have been considered to have high antioxidant ability, protecting the human body against oxidative damage by free radicals (Jayakumar, 2011). Free radicals are naturally produced in the body through normal metabolism of carbohydrates, amino acids and fats. Other