Newly Introduced Makandura Purple Sweet Potato *(Ipomoea batata)* Cultivar: Nutritional Facts

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Introduction: Sweet potatoes are considered as a typical food security crop for Sri Lankans. Due to its unique features and nutritional value, the National Aeronautics and Space Administration (NASA) has selected sweet potatoes as a candidate crop to be grown and incorporated into menus for astronauts on space missions. Sweet potato tubers are rich in carotenoids, dietary fibre, minerals, vitamins, bioactive compounds such as phenolic acids, flavonoids and anthocyanin, which also contribute to the colour of the flesh. The aim of this study is to determine the nutritional composition and glycaemic index (GI) of a newly introduced purple colour sweet potato variety named 'Makandura Purple'.

Materials and Methods: Nutritional composition was determined using flour of raw and freshly boiled (home-cooked) sweet potatoes of the above variety. The GI of boiled sweet potatoes was determined using the WHO standard procedure. Determination of moisture, ash, crude protein, crude fat, dietary fibre (soluble/insoluble) and digestible carbohydrates were carried out using standard methods.

Results: Table 1 shows the nutritional composition of Makandura Purple sweet potatoes. The average GI of Makandura Purple variety is 103.

Discussion: Digestible starch was the major macronutrient present; followed by fat and protein in both raw and boiled forms of Makandura Purple sweet potato variety. Total dietary fibre content constituted aproximately 10% of the total dry weight. However, there was more than 50% reduction in insoluble dietary fibre content in the boiled form compared to the raw form. Makandura Purple sweet potatoes have a high GI.

Conclusion: Makandura Purple sweet potato variety is a rich source of digestible carbohydrate with a small amount of crude fats, crude proteins and minerals in both boiled and raw forms. Although it contains more than 10% total dietary fibre, Makandura Purple elicited a high GI.

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References:

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Variety	Digestible starch %	Crude fat %	Crude protein %	Ash %	Dietary Fibre(DF) %	
					Insoluble	Soluble
Makandura Purple (Raw)	73.2±2.3	4.6±0.2	4.2±0.4	4.2±0.3	13.4±0.0	3.1±0.0
Makandura Purple (Boiled)	88.6±0.9	5.3±0.2	3.4±0.1	3.7±0.3	6.9±0.0	3.1±0.0

Table 1: Nutritional composition of raw and boiled Makandura Purple sweet potato variety on dry weight basis (mean ± SD).