observed.

OGTT results showed that administration of the herbal tea induced a decrease in blood glucose levels of the test group compared to control group. However, effect on FBG was not apparent. The long term administration of diabetes tea had decreased the HbA1c (15%) of normoglycaemic Wistar rats in the test group compared to the control group. Long term ingestion of the tea had no toxic effects on the kidneys or liver in the rats.

References

1. M. Latha and L. Pari, (2004). "Effect of an aqueous extract of Scoparia dulcis on blood glucose, plasma insulin and some polyol pathway enzymes

- in experimental rat diabetes," Brazilian Journal of Medical and Biological Research, vol. 37, no. 4, pp. 577-586,
- Du Vigneaud V & Karr WG (1925). Carbohydrate utilization rate of disappearance of D-glucose from the blood. Journal of Biological Chemistry, 66: 281-300
- Trivelli LA, Ranney HM & Lai IIT (1971). Hemoglobin components in patients with diabetes mellitus. New England Journal of Medicine, 284: 353-357
- 4. Pari L, Latha M. (2005). Antidiabetic effect of Scoparia dulcis: Effect of lipid peroxidation in streptozotocin diabetes. Gen Physiol Biophys. 24:13-26

Technical Sessions: A - 23

Nutrient composition of some boiled *Ipomea batata* (sweet potatoes) cultivars

GRNN Waidyarathna*, S Ekanayake

Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Nugegoda Email: *nipuni_nayanathara@yahoo.com

Sweet potato (Ipomoea batatas L.) root is an underutilized tuber crop which can be considered as a low cost energy source. This study aims to make available the data on proximate composition of five sweet potato varieties consumed by Sri Lankans. Determination of the proximate composition of CARI 426, Ranabima, Dhawala, Hordi Malee, and CARI 273 was carried out with flour of freshly boiled (home cooked) sweet potatoes of the above varieties. Determination of moisture, ash, crude protein, crude fat, dietary fiber (soluble/insoluble) and digestible carbohydrate were done by standard methods.

Table 1: Proximate composition of boiled sweet potato varieties on dry weight basis. (mean± SD)

Variety	Total starch %					Di Eil (DE)%	
	Digestiba Istarch	Resistant starch	Fat %	Protein %	Ash %	Dietary Fiber (DF)%	
						Insoluble	Soluble
CARI 426 Ranabima Dhawata Hordi Malee CARI 273	35.0±1.7	0.9	4.6±0.6	4.0±0.1	5.0±0.2*	11.4±0.0	1.4±0.0
	31.3±2.7	10.1	5.3±0.4°	3.0±1.0	4.1±0.3	11.4±0.0	4.6±0.0*
	47.3±1.8	7.3	4.6±0.4	3.5±0.1	3.7±0.9	9.1±0.0	0.6±0.0
	44.4±1.3	14.5	3.8±0.2	2.8±0.1	3.7±0.1	10.1±0.0	2.5±0.0
	29.0±1.7	7.3	3.7±0.9	2.8±0.1	3.9±0.1	10.1±0.0	2.9±0.0

In each column, *for indicate significant differences at P < 0.05.

Total starch (digestible and resistant) was the major macronutrient present in all the sweet potato varieties which varied between 35.9% - 58.9%. Hordi malee had the highest resistant starch content among the five tested sweet potato varieties while Dhawala was found to have the highest digestible starch content. The resistant starch content of CARI 426 was negligible compared to other varieties. Fat was the second major macronutrient found in all the sweet potato varieties while protein was the third. Fat content of sweet potatoes varied between 3.7% - 5.3% with the highest (p < 0.05) fat content found in Ranabima variety. CARI 426 had significantly high ash content (5%) indicating high mineral content. Total dietary fiber content constituted approximately 10% of the total dry weight. Insoluble dietary fiber content provided higher contribution to the total dietary fiber content which ranged from 9.1- 11.4% while soluble dietary fiber content ranged between 0.6-4.6% among the five varieties. Ranabima variety had the highest soluble, insoluble and resistant starch content.

References

1. Senanayake S.A., Ranaweera K.K.D.S., Gunaratne A., Bamunuarachchi A., (2013) Comparative analysis of nutritional quality of five different cultivars of sweet potatoes