**EFFECT OF DIFFERENT PROCESSING TIME ON RESISTANT STARCH CONTENT OF SELECTED TUBERS**

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**ABSTRACT**

Resistant starch (RS) is a powerful nutrient to our body and it has many health benefits. The consumption of resistant starches may improve glucose and lipid metabolism and can reduce the risk of diabetes and related diseases. A study was conducted to find out the effect of different processing time on resistant starch content of selected cooked tubers such as potato (*Solanum tuberosum),* cassava (*Manihot* *esculenta)* and elephant foot yam (*Amorphophallus paeoniifolius)*, which were commonly consumed in Northern province, Sri Lanka. These tubers were processed by conventional cooking method for different processing time such as 15, 20 and 30 minutes and the changes in resistant starch content with different processing time was estimated. An enzyme method using amyloglucosidase and pancreatic -amylase enzymes was used to estimate the resistant starch content. Results revealed that the mean RS content of raw potato, cassava and elephant foot yam were 26.05(±0.18), 12.64(±0.76) and 26.66(±0.53) g/100 g dry sample, respectively. Resistant starch (RS) content of potato, cassava and elephant foot yam tubers cooked for 15 minutes were 5.79(±0.22), 5.48(±0.04) and 6.98(±0.44)g/100 g dry sample, respectively. Resistant starch (RS) content of selected cooked tubers was significantly lower than their respective raw tubers and their RS content was decreased with increasing processing time. Resistant starch (RS) content of selected tubers cooked for 15 minutes was higher than the tubers cooked for 20 and 30 minutes, respectively. Tubers processed for less than 15 minutes have higher RS content, but their palatability is low. Therefore, the selected tubers can be processed for minimum processing time of 15 minutes to obtain higher level of resistant starch with good sensory properties.

**Key words:** Processing Time, Resistant Starch, Tubers

Bavaneethan,Y, Vasantharuba, S ,Balakumar ,S.and Thayananthan,K.(2015). Effect of Different Processing Time on Resistant Starch Content of Selected Tubers. World Journal of Agricultural Sciences, 11 (4),pp .244-246.

ISSN 1817-3047

DOI: 10.5829/idosi.wjas.2015.11.4.1875