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Effect of Different Processing Time on Resistant Starch Content of Selected Cooked Tubers

[1]Y.Bavaneethan, [1]S.Vasantharuba, [2]S.Balakumar and [2]K.Thayananthan

[1]Department of Agricultural Chemistry, Faculty of Agriculture, University of Jaffna, Sri Lanka
[2]Department of Biochemistry, Faculty of Medicine, University of Jaffna, Sri Lanka

Resistant Starch (RS) is a type of bioactive compounds attracting consumer's interest, especially those at risk of diabetes, obesity and other related health problems. A study was conducted to find out the effect of different processing times on RS content of selected cooked tubers, potato (*Solanum tuberosum),* cassava (*Manihot esculenta)* and elephant foot yam (*Amorphophallus paeoniifolius)*, which are commonly consumed in Jaffna. These tubers were processed by the conventional cooking method for different processing times, 15, 20 and 30 minutes and the changes in RS content with different processing times was estimated. RS content was estimated by an enzyme method using amyloglucosidase and pancreatic α- amylase enzymes. Results of the above study revealed that RS content of selected raw tubers was significantly higher than ($p<0.05$) their respective cooked tubers. 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. The RS content of potato processed for 15, 20 and 30 min were 5.79(±0.22), 5.55(±0.17) and 5.55(±0.17) g/100g dry sample respectively and the RS contents of cassava processed for 15, 20 and 30 min were 5.48(±0.04), 3.67(±0.38) and 3.50(±0.03) g/100g dry sample respectively. In elephant foot yam, the RS content for different processing times, 15, 20 and 30 min were 6.98(±0.44), 5.79(±0.07) and 4.69(±0.48) g/100g dry sample respectively. Highest RS content was observed in the raw elephant foot yam when compare to other tubers. RS content of potato was not decreased significantly ($p<0.05$) with increase in processing time. Higher level of RS content was obtained in all tubers during 15 min processing when compared to longer processing times.

Keywords: Cooked tubers; Processing time; Resistant starch.