

Development of Avocado (*Persea americana* Mill) Incorporated Set Yoghurt

W.M.A.A. Kulasinghe^{1*} and A.M.N.L. Abesinghe²

Inclusion of avocado (*Persea americana*) into processed food products has limited due to the enzymatic browning of avocado. Polyphenol oxidase (PPO) enzyme in avocado flesh react with oxygen and results undesirable brown colour pigmentation called enzymatic browning. This research on controlling enzymatic browning of avocado pulp and incorporating treated avocado pulp for enzymatic browning in set yoghurt. Seven treatments were used to control enzymatic browning of avocado pulp. Seven equal portions of crushed avocado flesh were treated separately with 1% (w/w) ascorbic acid, 1% (w/w) citric acid, 0.1% (w/w) sodium benzoate, 1% (w/w) citric acid and 1% (w/w) ascorbic acid together, 0.1% (w/w) potassium sorbate, heat treated at 40°C for 30 min and prepared as a sugar preserved avocado pulp by adding 1:1 ratio of sugar: avocado flesh ratio. After selecting the best enzymatic browning controlling method, best avocado pulp, sugar and gelatin incorporation levels were selected by a sensory evaluation using 35 untrained panelists. Shelf life determination was done at 1st, 3rd, 5th, 7th, 9th and 11th day of storage at 5°C. Total plate count, yeast and mold, coliform bacteria, Titratable acid percentage, pH, peroxide value was determined. Samples were visually observed for any colour change due to enzymatic browning. Preserving avocado pulp with 50% sugar was the best method to control enzymatic browning and 20% of its incorporation level into set yoghurt was the best incorporation level with 11% of sugar and 0.8% of gelatin. It was found no or very less microbial spoilage occurs during 11 days of storage, but the enzymatic browning together with lipid oxidation has limited the storage time to 5 days under refrigerated conditions.

Keywords: Avocado, enzymatic browning, preservation, storage, yogurt

¹President's House, Nuwara Eliya.
anupamakulasinghe@gmail.com

²Uva Wellassa University, Badulla, Sri Lanka.