

Effect of antioxidants on prevention of autoxidation in Desiccated Coconut mixed Instant Rice Pittu

Major ingredients of Sri Lanka rice mixtures are prepared by using rice flour, desiccated coconut and salt. Since rancidity is the major problem of oil based food products, rice pittu having containing coconut undergo spoilage due to autoxidation. A study was carried out to comparatively evaluate the effect of antioxidants on the prevention of autoxidative rancidity.

In the preparation of pittu samples, proportions of rice flour, desiccated coconut and salt were kept constantly being 75:25:2 respectively. Antioxidants, ascorbic acid (vitamin C) (0.2%), α tocopherol (vitamin E) (0.2%), Butylated Hydroxy Anisol (BHA) (0.02%), garlic powder (1%) and a combination of citric acid (0.2%) and ascorbic acid (0.2%), were incorporated with the samples and evaluated in terms of their antioxidant effects. The effect of the antioxidants was estimated separately for two types of incorporation methods (*IM*); wet from and dry from. Sensory tests were conducted immediately after the preparation and then with one month intervals continuing for three consecutive months.

BHA was found to be the most effective antioxidant for both forms of incorporation methods. It kept its antioxidative effect for more than three months. Although garlic powder and α tocopherol kept their antioxidative effect in wet *IM* for three months in dry *IM* they were not effective at all. The value for control is also two months. Ascorbic

acid and its combination with citric acid had no antioxidative activity for both *IM*, comparing to the control sample. Wet *IM* with effective antioxidants gave the best results in preventing autoxidative rancidity.