FOOD PRESERVATIVE CHARACTERISTICS OF DEHYDRATED MURUNGA (*Moringa oleifera*) LEAF POWDER

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Murunga (*Moringa oleifera*) is an underutilized plant in Sri Lanka with food, nutritional and medicinal value. This study was carried out to evaluate the food preservative characteristics of dehydrated Murunga leaf powder. Soya meat (textured soy protein) and dhal curries (cooked) and boiled rice (suwandel and red rice) treated with different levels of Murunga leaf powder (1.5, 2.5, 4.5 and 6%) were selected for this experiment. Sensory evaluation was conducted with the help of 30 untrained panelists, using a five point hedonic scale in order to identify the acceptable level of Murunga leaf powder in these foods. Protein content (Kjeldahl method) and pH (using a pH meter) of these food samples in each experiment were determined just after cooking and after 24 hours. Microbial counts and sensory acceptability of the product were determined in eight hour intervals in ambient conditions. Significant differences ($p<0.05$) were observed in the reduction of protein content and increase of pH of above cooked meals with Murunga leaf powder, when compared with the control at the end of storage period. There were significant differences ($p<0.05$) in the total plate counts in all cooked food samples with Murunga leaf powder, when compared to the control. However, no coliform counts were reported for any of the food samples. After 16 hours, colour, flavour, odour and overall acceptability of Murunga leaf powder treated food samples were significantly different ($p<0.05$), compared to the control samples. This study revealed that the dehydrated Murunga leaf powder could be potentially used to extend the shelf life of cooked food products such as rice and curry.

Key words: Food, Murunga leaf powder, Preservative, Shelf life