

**DEVELOPMENT OF NOVELTY SPICY
WATER ICE USING LOCALLY
AVAILABLE SPICES**

A dissertation submitted to the
Faculty of Animal Science and Export Agriculture
Uva Wellassa University
in partial fulfilment of the requirements of
the degree of
Bachelor of Animal Science

By

SAMIRU SUDHARAKA WICKRAMASURIYA

**Animal Science Degree Programme
Faculty of Animal Science & Export Agriculture
Uva Wellassa University of Sri Lanka
2012**

ABSTRACT

Molded novelties of ice cream and water ices are becoming popular frozen confectioneries. Various shapes and flavours are creating huge range of novelty products and creativity is the major factor which develops this sector. The aim of this study was to develop pineapple flavoured water ice incorporating natural spices with higher sensory properties.

Basic water ice mix was prepared according to the standard specification with slight modification of the ingredient percentage. There were two different commercial flavours. Best pineapple flavour was selected by sensory evaluation using 20 semi trained panelist. With the selected flavour, water ice samples were prepared by changing the salt concentration as 0.075% (w/w), 0.095% (w/w) and 0.115% (w/w). Melting trials were conducted for the selection of best salt concentration with the existing captain cool[®] water ice as a control. Water ice was developed with selected salt percentage and then sensory evaluation was conducted to determine the usage of vinegar for further development. There were two treatments as water ice with natural vinegar and water ice without vinegar. By using fifty untrained panelist water ice samples with natural vinegar and water ice sample without vinegar were evaluated. 5 point hedonic scale was used to assess sensory attributes such as appearance, smell, mouth feel, salt level, spicy level, pineapple flavour, melting quality and overall acceptability. Sensory data were analyzed by Friedman nonparametric statistical method in Minitab 16. Final water ice product was subjected to the market survey using 50 school children.

Water ice prepared with Kerry[®] F1141 showed higher ($P < 0.05$) preference with all sensory attributes. All the salt concentration between 0.075% (w/w) to 0.115% (w/w) has almost same melting behavior. The water ice was developed without vinegar showed higher preference with all sensory attributes. Market survey on the developed water ice showed the higher preference than the existing water ice.

Based on the result it can concluded that water ice developed by using Kerry[®] F1141 pineapple flavour with 0.095% (w/w) salt concentration, without adding vinegar, with suitable spices has highest sensory attributes and suitable for the commercial production.