

STUDY OF SUITABILITY OF THREE PLANT DERIVED STABILIZERS FOR MANUFACTURE OF SET YOGHURT USING COW MILK

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ABSTRACT

The experiment was conducted to find out the suitability of three plant derived stabilizer for manufacturing of plant derived stabilizer yoghurt.

Three plant derived stabilizer, namely Gum Arabic, Pectin, Agar – Agar (food grade) were selected under the pretrial from each stabilizer type. Six different concentrations starting at 0.025% (W/V) with an interval of 0.25g of stabilizer /liter of milk were incorporated to prepare set of yoghurt. By subjecting to an expert tasting panel and observing organoleptic characteristics three suitable concentrations from each stabilizer type were selected. Out of the respective stabilizer, the three selected concentrations were subjected to an inexperienced tasting panel to select the most appropriate concentration from each stabilizer type. Finally, the most suitable concentration from each stabilizer type was compared with a control. The score was analyzed using Friedman's test in Minitab statically package. The shelf life of set yoghurt was checked by measuring the pH of respective selected concentration from each stabilizer type including the control, at $14 \pm 1^{\circ}C$ storage temperature.

Yoghurt prepared with 0.05% (W/V) concentration of Agar – Agar was rated as the most suitable level of stabilizer type and concentration by tasting panel for manufacture of set yoghurt. A significant ($P < 0.05$) decrease in pH with subsequent increase in acidity was observed during the storage under the refrigeration at $14 \pm 1^{\circ}C$ for sixteen day period.

The results revealed that the Agar – Agar could be incorporated at a concentration of 0.05% to prepare set yoghurt with a substantial storage life of 16 days at $14 \pm 1^{\circ}C$ without deterioration of quality parameter like pH .

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