

## **DEVELOPMENT OF SET YOGHURT USING SELECTED VEGETARIAN STABILIZERS**

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Yoghurt is a medium acid fermented milk product obtained from lactic acid fermentation by thermophilic lactic acid bacteria. Consumers are more concerned on health aspects, therapeutic value and nutritional contribution of yoghurt. Scientists and physicians have attributed several nutritional and medicinal properties for vegetarian stabilizers. Therefore, this study was executed to develop and study the quality characteristics in plain set yoghurt with vegetarian stabilizers.

Three treatments (three vegetarian stabilizers: T<sub>1</sub>-pure pectin, T<sub>2</sub>- blend 1, T<sub>3</sub> - blend 2) were used to prepare the samples of set yoghurt. Trial and error method was carried out to determine the best concentration levels from each treatment (concentration levels: T<sub>1</sub>- 0.1%, T<sub>2</sub>- 1.2%, T<sub>3</sub>-1.5%). Predetermined levels from each treatment were analyzed for the physical, chemical and microbial qualities. The sensory evaluation was carried out with 25 semi trained panelists. The results were analyzed by Friedman test.

Shelf life of the set yoghurt was determined at 7 and 14 days respectively by storing at 4 °C. The results of the sensory evaluation revealed that, the highest acceptance was observed for sample yoghurt which was prepared with blend 2 vegetarian stabilizers with 1.5% concentration level, which comprised of whey powder, modified starch & pectin. According to the findings, there was no significant difference ( $P>0.05$ ) in color, flavor, texture, appearance and overall acceptability between control (gelatin base yoghurt) and the T<sub>3</sub>. Chemical composition of the finished product (blend 2 yoghurt) were 3.76% crude protein, 3.5% fat, 0.85 ash, 23.6% total solids, 4.45 pH, 0.90% acidity, 19.5° brix value. Microbiological results revealed that total coliforms, yeast and mould counts conformed to the standard limits while pH and titratable acidity were also complied with Sri Lanka standards institute standards. Finally it can be concluded that, the blend 2 vegetarian stabilizers could be used at an optimum level of 1.5% for set yoghurt production.

**Key words:** Lactic acid, Set yoghurt, Vegetarian stabilizers