

Preparation of Set Yoghurt using Plant Originated Stabilizer as a Substitute for Gelatine

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The purpose of this research is to select plant originated stabilizer for lacto-ova-vegetarian. Plant originated stabilizer was fully replaced for gelatine through that select best stabilizer from agar-agar, carrageenan and combination of agar and carrageenan. Rheological, microbiological, chemical and sensory properties of set yogurt were determined. For this study agar-agar, carrageenan and combination of agar and carrageenan were used in different concentration (0.225, 0.0725 and 80/20 with a 2% of total concentrations respectively). Agar-agar, carrageenan were extracted by using hot water extraction method. Complete randomized design was used for analysing purpose. The viscosity of samples containing agar-agar increased compared to the carrageenan and combination of carrageenan agar and carrageenan containing samples. However agar containing sample was contained low viscosity compare to the control sample (gelatine containing sample). There was a significant different between syneresis and different plant originated stabilizer contain yoghurt samples ($P < 0.05$) at 4°C and 25°C. Control samples were contained lowest syneresis at 4°C and 25°C. Yogurt treated with agar- agar gained the highest sensory score compared to the other treatments. According to the rheological and sensory properties agar- agar containing sample was selected as best sample from plant originated stabilizer containing samples. pH, total solids and titratable acidity were not big influence on agar-agar containing yogurt samples and control sample. Viscosity of control sample was increased with storage time. However viscosity of agar containing sample was not showed significant changes. pH and total solid values were drastically decreased with storage period at 4°C. As well as titratable acidity values were slightly increased with storage period at 4°C. In addition, mould, yeasts and conform groups were not detected in samples at day 1. Coliform was not identified at the end of storage period. Yeast population was detected with storage period.

Keywords: Agar agar, Carrageenan, Gelatin