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Application of Chitosan as a Natural Antimicrobial Compound in Stirred Yoghurt

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Abstract : The main objective of this research was to increase shelf life of stirred yoghurt by adding chitosan as a naturally antimicrobial compound. Chitosan were added at different concentrations (0.1, 0.3 and 0.6%) to the stirred yoghurt. Samples were stored at refrigerator and room temperature for 3 weeks and tested with respect of microbial properties (counts of starter bacteria, mold and yeast, coliforms and E. coli). Starter bacteria and yeast counts in samples containing chitosan was significantly ($p<0.05$) lower than those in control samples and its antibacterial and anti-yeast effects increased with increasing concentration of chitosan. The lowest counts of starter bacteria and yeast were observed at samples whit 0.6% of chitosan. The Results showed Chitosan had a positive effect on increasing shelf life and controlling of yeasts and therefore can be used as a natural preservative in stirred yogurt.

Keywords : chitosan, natural preservative, stirred yoghurt, self-life
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