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Prevalence of *Cronobacter* spp. in infant formula and baby foods in Saudi Arabia

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Cronobacter sakazakii is an opportunistic food borne pathogen that might cause severe consequences in infants and neonates such as meningitis, necrotizing enterocolitis and death in some instances. The outbreaks are associated with the consumption of powdered infant formula and baby foods. The present research was carried out to study the prevalence of *C. sakazakii* in the infant milk formulas and cereal based baby foods. Forty eight different samples that belong to 12 brand names of infant formulas and baby foods were purchased from local grocery stores and analyzed for the presence of *Cronobacter* spp., coliform and total bacterial count. The presence of *Cronobacter* was analyzed using the standard international ISO method. This study showed that *Cronobacter* was isolated from 7.7% of the samples results and coliform from 15.4% of the samples. Also, high total counts in some of the analyzed samples were enumerated (2.82 CFU/g). This study will enabled us to have a clear idea about the safety of infant formula and baby foods sold in the local market of Saudi Arabia. Therefore, enabling the development of more effective strategies and interventions for its control in such products and hence improving infant safety.

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Extraction and application of inulin as prebiotic to develop synbiotic ice cream

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Saccharomyces boulardii (*S. boulardii*) is used in different probiotic foods, which acts as biotherapeutic agent mainly to control the antibiotic associated diarrhea (AAD) which is caused by *Clostridium difficle*. Prebiotics are indigestible component of food that positively affect the host by increasing the movement and escalation of one or inadequate number of microbes in colon. Inulin is a polyfructans which is widely used as prebiotic, sugar replacer, fat replacer and texture modifier. Food products which consist of both probiotics and prebiotics are termed as synbiotics. The objective of the present study was to utilize the indigenously isolated *Saccharomyces boulardii* and inulin for the development of synbiotic ice cream. *Saccharomyces boulardii* was added at the rate of 3% and inulin at different levels (1%, 2% and 3%) in the preparation of synbiotic ice cream. The final product was analyzed for physiochemical, microbial and sensory characteristics. The pH, moisture content and melt down showed decreasing trend as concentration of inulin increased, *Saccharomyces boulardii* and storage time increased and minimum values observed in T3 (5.53, 61.00 and12.80) respectively at 15 days of storage time. The acidity, firmness, viscosity, overrun and ash showed increasing trend as concentration of inulin, *Saccharomyces boulardii* and storage time increased and maximum values observed in T3 (1.03, 20.11, 4480, 60.21 and 0.79) respectively at 15 days of storage time. The treatment T3 showed best results in all the parameters so it was concluded that synbiotic ice cream provides excellent benefits by keeping level of inulin *S. boulardii* both at 3%.

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