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Viability of *Bifidobacterium Bifidum* and *Lactobacillus Rhamnosus* Co-Cultures in Synbiotic Yoghurt Containing Inulin

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Abstract

As a popular dairy product, yoghurt has proven to be an effective delivery food for beneficial probiotic bacteria. However, the health benefits of such probiotic foods are often limited by the survival and viability of probiotic bacteria during the processing and storage of the yoghurt. This study investigated the viability of probiotic co-cultures in yoghurt containing the prebiotic inulin. Skim milk samples containing inulin at concentrations of 0%, 0.3%, and 0.6% were fermented with yoghurt starter cultures (*L. bulgaricus* and *S. thermophilus*) which also incorporated the probiotic bacteria (*Bifidobacterium bifidum* and *Lactobacillus rhamnosus*). The fermentation was carried out at 37ºC until the pH reached 4.6. The yoghurt samples were cooled to and stored at 5ºC for 28 days. The viability of the probiotic bacteria and the starter cultures was monitored by plating every 7 days over the storage period. Physicochemical parameters such as pH, total titratable acidity, viscosity, syneresis, colour, water holding capacity, and texture were also monitored over the storage period. In the poster presentation, the role of inulin as a functional ingredient for the improvement of probiotic viability will be discussed.

Keywords: probiotic, prebiotic, synbiotic yoghurt, inulin.

Biography: Jane Du Plooy

Jane du Plooy is currently completing her Honors degree in Food Science at the University of Pretoria.