

ABSTRACT

Development of Yoghurt-Like Product
from Soy Milk

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This research project sought to develop plain and pineapple-flavoured yoghurt-like products by the fermentation of soy milk using *Lactobacillus bulgaricus* and *Streptococcus thermophilus*. A 3% inoculum level and incubation conditions of 42°C/6-7 hours were necessary.

Supplementation of soy milk with various levels of lactose, sucrose and glucose affected the rate and level of acid production by *L. bulgaricus* and *S. thermophilus*. This was determined by monitoring the hourly changes in pH and titratable acidity (as % lactic acid) during the incubation period.

L. bulgaricus was found to be unable to produce acid in unsupplemented soy milk but was able to do so in soy milk with lactose or glucose (2-4%) added. Sucrose addition had no effect on acid production by *L. bulgaricus* but enhanced acid production by *S. thermophilus*, as did glucose and lactose addition. The use of a mixed culture was beneficial to acid production in cow's milk and soy milk supplemented with glucose and/or lactose.

The final formulation for the mix (soy milk 85.78%, sucrose 8.00%, glucose 1.00%, salt 0.2%, starter 3.00%, gelatin 1.00% and vanilla essence 0.02%) produced a firm gelatinous coagulum of slight acidity (pH 4.37 and titratable acidity 0.40%).

A consumer evaluation of the plain and pineapple-flavoured 'yoghurt' was done. A one way analysis of variance (ANOV) was carried out to determine the overall acceptability of the plain and pineapple-flavoured 'yoghurts'. The analysis revealed no significant difference between these products at the 1% confidence level. Additionally, 37.9% and 72.4% of the sample population chose 'like very much' and 'like' as their preference for overall taste of the plain and pineapple flavoured 'yoghurts' respectively.