

# Effects of Milk, Whey Powder and Lactose Addition on Quality of Soy Yoghurt

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## ABSTRACT

Among dairy products fermented milk products-yoghurt are growing in popularity specifically for their health image in Taiwan. However, the characteristic milky flavor is very important problem for its utilization by some people in Taiwan. Therefore, we tended to add functional compounds to the products to prefer the domestic consumers. Soybeans rich in protein and contain some functional compounds such as isoflavones, oligosaccharides, polyunsaturated fatty acids and dietary fiber. Thus, we try to make yoghurt using soy milk fermentation. Currently, we have not found any good soy yoghurt products in the market. The present study investigated appropriate formula for yoghurt making. We use soy milk added milk, whey powder and lactose as raw materials and *Lactobacillus acidophilus*, *Bifidobacterium longum*, *L. bulgaricus* and *Streptococcus thermophilus* as the starter cultures. The raw materials are pasteurized at 85 °C, 30min, cooled to 43 °C and inoculated with the starter culture, then incubated at 43 °C for 4hr. The moisture content, titratable acidity, pH, lactic acid bacterial counts, viscosity and curd tension and sensory scores of the products are determined. The results were shown in the follows: The values of moisture content, titratable acidity, lactic acid bacterial counts, viscosity and curd tension were found the highest in soy milk added milk(M), the second in soy milk added with milk and whey powder(W) and the lowest in soy milk with milk and lactose(L). However, pH values of the products were found the order as L>W>M. The sensory scores of yoghurt made from the soy milk added with milk and lactose were the highest and the product made from the soy milk with milk and whey powder were the second and the product made from soy milk with milk were the lowest. The functional compounds of soy yoghurt – isoflavone contents were not significant before and after fermentation. The content of exopolysaccharides was found the highest in soy yoghurt added with whey powder, then lactose was next, and the control was the lowest. And the bands of some of the protein components of soy beans and milk were found to be disappeared from the SDS-PAGE electrophoreto.

Keywords : soy milk、 lactose、 whey powder、 yoghurt

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