

# **DEVELOPMENT OF SOY YOGURT**

**TAN MEI LIN**

**B.Sc. (Hons.) Food Sciences and Nutrition**

**School of Applied Sciences**

**University College Sedaya University**

**2007**



## ABSTRACT

The relation between the fermentation time and the amount of sucrose was used to develop soy-based yogurt. The yogurt was prepared by inoculating with a mixed starter culture of *Bifidobacterium lactis*, *Streptococcus thermophilus* and *Lactobacillus acidophilus*. The yogurt was added with different percentage of sugar 3%, 8% and 10% per 100g and fermented at 3 and 6 hours. The samples were evaluated in terms of pH, titratable acidity, water activity, protein content, plate count and sensory analysis. The control recorded the lowest pH value due to its longer time of fermentation. For soy yogurt, the pH value ranges from 3.99 to 4.71 whereas the titratable acidity ranges from 0.64 to 0.85. The water activity of all samples was the same as pure water, which is 1. The water activity of the samples in this study was in the range of 0.992 to 0.999. Milk-based yogurt contained the highest amount of protein compared to soy-based yogurt. The growth of starter cultures met the standard of at least  $10^7$  CFU/ml. Among the samples, the panelists preferred the control that was made of milk powder in terms of appearance, aroma, sourness, sweetness, texture and overall acceptability. In addition, the soy-based yogurt (10% sucrose, fermentation time 6 hours) and the control (milk-based yogurt, fermentation time 6 hours) does not have significant difference ( $P \leq 0.05$ ) therefore, soy-based yogurt has the potential to penetrate into the market.