

## ABSTRACT

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This research aims to study whey utilization from used cheese factory in order to improve the quality of soyghurt. The marketing survey showed that 96.61 % of consumer had demand on soyghurt product with the reason of high value nutrition and low price. Selection of 5 whey samples was found that wheys from Gouda and Cheddar factory were suitable for yoghurt mix quality. The extraction of soya milk studied on 2 factors ; 1) 2 types of wheys : whey from gouda and whey from Cheddar factory 2) 2 methods of soy preparation : soaking soy in 0.5 % sodium carbonate solution and soaking soy in 0.05 N sodium hydroxide solution. The statistical analysis were determined by using 2 x 2 factorial, in CRD showed that soaking soy in 0.05 N sodium hydroxide solution and extracting by whey from cheddar was higher fat protein and lactic acid which were suitable for yoghurt mix. Selection of yoghurt starter indicated that yc-380 was fasten complete yoghurt gel within 150 minutes and syneresis content was lower than yc-180 and yc-350. Then research proposes on gel quality of yoghurt using 2 types of calcium chloride : 0.02 and 0.04 %, and storage for 14 days. The fortification of 0.05 % gelatin and 0.02 % calcium chloride improved better gel quality and eleminated syneresis during storage time. Sensory quality development was evaluated by Ratio Profile Test. The formula approched to mean ideal score which consisted of soya milk, sugar, skimmilk, vanilla, gelatin, 0.5% calcium chloride solution, water, Makiang marble and acidity of yoghurt gel equal to percentage of 77.78, 5.0, 5.49, 0.1, 0.5, 0.02, 11.11, 8.0 and 0.85, respectively with shelflife for 19 days. The feasibility study on soyghurt powder using freeze drying equipment for 32 hours showed that the product had brown color with sticky powder but enriched flavor and aroma of yoghurt.