

Tiwaporn Panprom 2014: Development of Fermented Vinegar Products from Turmeric (*Curcuma longa* L.). Master of Science (Biotechnology), Major Field: Biotechnology, Department of Biotechnology. Thesis Advisor: Associate Professor Vichien Leelawatcharamas, Ph.D. 113 pages.

Study of drinking vinegar from turmeric (*Curcuma longa* L.) was the objective of this research in new order to value added of drinking vinegar from turmeric. Dry turmeric made by hot air dry at 80 °C for 4 hours and curcumin content 207.66 µg/ml. There are two steps of making fermented vinegar. The first step, turmeric wine from dry turmeric 75 g. was fermented by *Saccharomyces cerevisiae* EC1118 and added di-Ammonium phosphate (DAP) to after fermentation for 14 days obtained alcohol of 11.67±0.10 % and curcumin content 89.60±0.40 µg/ml. Secondly, vinegar was fermented by using amount of *Acetobacter aceti* TISTR 102 about 20 % as starter and fermented with turmeric wine mix pineapple wine at ratio 1:1, with 5 % alcohol content for 4 days. The turmeric wine mixwith pineapple wine was clear, light yellow color and contained acetic acid 3.35% with pH 3.70 and curcumin content 6.67±0.18 µg/ml. The application of turmeric and pineapple vinegar was used as drinking vinegar using 6% turmeric and pineapple vinegar mixed with pineapple juice. After consumer's testing, the overall liking score as 6.30. And salad dressing made from 52% turmeric and pineapple vinegar. After consumer's testing, the overall liking score as 6.00. They were agreeable and accepted both products with some suggestions: the products had smelly of turmeric and wanted to approve the flavor.

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Student's signature

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Thesis Advisor's signature