Thesis Title	Hurdle Technology Application for Thai Style Acidified Salad Dressing
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ABSTRACT

Hurdle technology includes several methods that result in minimal microbial contamination in final products as compared to original ingredients. The objectives of this study are to use Hurdle technology during the preparation processes of Thai style acidified salad dressing and evaluate for the ability to decrease microbial contamination, to extend shelf life and to preserve properties of the final product. Several methods of Hurdle technology were used including 1) addition of natural preservatives which have oil with antimicrobial activity (garlic and chilli), 2) addition of fish sauce, salt and sugar to decrease a_w, 3) addition of citric acid and tamarind juice to decrease pH, 4) high temperature (70^oC) to destroy microbial, and cold temperature (5^oC) to preserve the product, and 5) aluminium foil packaging to prevent microbial contamination. After three months the level of microbial contamination in the final product was then compared to that in raw ingredients and final product kept in ambient temperature and 5^oC. We found that the level of microbial contamination in raw ingredients which ranged from 1 log cfu/g to 8.1 log cfu/g was decreased to 1 log cfu/g to less than 1.5 log cfu/g after treatment with Hurdle technology. More importantly pathogen bacteria *Bacillus cereus* and *Staphylococcus aureus* were eliminated in final product. Natural preservatives had the highest ability to decrease microbial contamination, followed by a_w, pH and temperature, respectively. Aluminium foil packaging and cold temperature extended shelf life of the final product. There was no significant statistical difference in other physical (color, a_w and viscosity) properties as well as chemical properties (pH, acidity, %salt and degree brix) of the final product except a_w of product were stored at ambient temperature. When compared cold temperature to ambient temperature, the former was better in sensory test of color, odor,

and taste and overall acceptant. There was no significant statistical difference in overall acceptance of the final product which storage at 5 ^{o}C for 10 weeks.