

Thesis Title Monitoring Changes in Lactic Acid Bacteria
Population During Fermentation of Nham by DGGE
Technique

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Abstract

Nham is a fermented pork product by natural lactic acid bacteria (LAB) which are present from the beginning to the end of fermentation. Although, addition of bacteria in the production comes into practice, many producers and consumers are still in favor of the traditional process. In this research, DGGE protocol was used to monitor the changes in lactic acid bacteria profile during fermentation of Nham. Total bacterial DNA was extracted directly from the samples. Lysozyme was added and incubated at 37°C for 30 minutes followed with protenase K then incubated at 65°C for 60 minutes. DNA template was then amplified using conventional PCR amplification. The obtained amplicons were analyzed by DGGE. Four predominant lactic acid bacteria i.e. *Lactobacillus plantarum*, *L. sakei*, *L. curvatus* and *Pediococcus pentosaceus* were detected from the first day of fermentation to the consumption period on the fourteenth day then the number decreased when kept for thirty days. The 3 predominant species *L. plantarum*, *L. sakei* and *L. curvatus* found in pork and through the fermentation process. *P. pentosaceus* was detected after the first day of fermentation. DGGE protocol is therefore useful for studying the changes of LAB population of Nham and could be used in the improvement and quality development of traditional Nham production.