

Thesis Title      Effect of Temperature and pH on *Vibrio*  
*mimicus* and *Vibrio parahaemolyticus* in  
Semicooked Seafood under Various  
Conditions

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#### ABSTRACT

The growth and survival of *Vibrio mimicus* and *Vibrio parahaemolyticus* were carried out in selected seafoods under the variation of temperature and pH. Both *V. mimicus* and *V. parahaemolyticus* were inoculated into Fried Rice with Crab (FRC), Shrimp with Fish Sauce (SFS) and Spicy Squid Salad (SSS). Two inoculum sizes,  $10^5$  CFU/ml and  $10^8$  CFU/ml were used for comparative study. No significant difference was observed in the population changes. Low population of two vibrios grew well at 30°C in FRC, SSS and at 37°C in SFS. With larger population, most survivors were present in FRC and SFS except SSS. After inoculation an initial population showed no change. The survivors were declined slowly for several days at

4°C. The effect of pH on *V. mimicus* and *V. parahaemolyticus* was also determined in FRC, SFS and SSS at pH 6, 7, 8 and 9. It was found that a seafood with a pH ranged 7 to 8 was likely to support the growth of two *Vibrios*. Similar results could be observed in both inoculum sizes. Results of these studies suggested that these two species of vibrios could survive at least one day after inoculation in various temperatures. In contrast, they could grow well in FRC, SFS one day after inoculation.