

Detection of three pathogenic vibrio species using multiplex polymerase chain reaction (multiplex-PCR) / Umaporn Khimmakthong, Supaporn Noochu

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Abstrak

ABSTRACT

Vibrio cholera, *Vibrio parahaemolyticus* and *Vibrio vulnificus* are opportunistic pathogens causing disease in weak shrimp and possible food poisoning in shrimp consumers. In this study, three pairs of primers were designed to amplify the target DNA fragments of three *Vibrio* spp. and together with one pair for internal amplification control. The PCR condition was optimized to detect three *Vibrio* spp. in one reaction tube. The specificity and sensitivity of the reaction were evaluated. The results showed that this technique can detect *V. cholera*, *V. parahaemolyticus* and *V. vulnificus* in the same reaction tube with high specificity. Sensitivity is moderate, 0.5 ng-10 pg. In the future, this technique can be used to detect these bacteria in shrimp. It is potentially useful for shrimp farmers and shrimp consumers.