**: -**Times New Roman with a font size of 12 points, **Main body in abstract should be** 200 to 300 words

**Development of a pre-treatment method for rapid diagnosis of pathogenic bacteria from shellfish using PCR**

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Several studies have shown that most aquatic foods are extensively susceptible to a wide range of microorganisms. The recent concern in food hygiene and safety management has necessitated the implementation of an on-site diagnostic method for microbiological risk using rapid detection technologies. Detection techniques focused on gene amplification have been used in a variety of areas of molecular biological science. The gene amplification method is highly reliable, but it requires a lengthy processing period, a high cost, and advanced information. Aquatic product characteristics, in particular high salt concentration and variety, have made on-site implementation challenges. As a result, this research aimed to establish a pre-treatment system of aquatic products for the rapid identification and diagnosis of microbiological hazards using molecular biological methods such as gene amplification. This study developed a pre-treatment approach that allowed three pathogenic bacteria (*Vibrio parahaemolyticus*, *Vibrio cholerae*, and *Vibrio vulnificus*) to be identified using conventional PCR (polymerase chain reaction). The following is the pre-treatment protocol for purifying high-purity DNA from shellfish infected with *Vibrio* species. As a result, PCR amplification products of all concentrations may be detected using electrophoresis. This pre-treatment approach for overcoming aquatic product characteristics is intended to be used as fundamental evidence for rapid molecular biological detection technologies, such as isothermal amplification or isothermal colorimetric amplification.