Use of randomly amplified polymorphic DNA analysis to differentiate isolates of Vibrio parahaemolyticus from cockles (Anadara granosa)

ABSTRACT

A total of 35 Kanagawa-negative strains of Vibrio parahaemolyticus isolated from cockles (Anadara granosa) were investigated by randomly amplified polymorphic DNA fingerprinting with three primers and their plasmid profiles. Eighteen strains carried small plasmid(s) of 2.4 to 7.3 kb that enabled the V. parahaemolyticus to be grouped into eight plasmid patterns. The three primers generated polymorphisms in all 35 strains of V. parahaemolyticus tested, producing bands ranging from 0.25 to 3.9 kb. The RAPD profiles revealed a high level of DNA sequence diversity within the Vibrio parahaemolyticus strains tested, and that cockles in the study area are populated by genetically polymorphic strains of V. parahaemolyticus.

Keyword: Cockles (Anadara granosa); Plasmid; RAPD; V. parahaemolyticus