ABSTRACT

Aeromonas Hydrophila has been reported to be the most common organism associated with infectious diseases of aquatic animals. Presently, identification and classification of A. hydrophila are entirely based on biochemical reactions. In this study, plasmid DNA of A. hydrophila was investigated to explore the possible correlation with pathogenic strains of the bacteria. The presence of plasmids in various collections of A. hydrophila, with ulcerative diseases, was detected in crude preparation by slot lysis method and confirmed by plasmid extraction using rapid alkaline method. Of 27 isolates investigated, only 11 harboured one or more plasmids. Restriction analyses using EcoR I, Hind III, Bgl II, Pst I, Bgl I and Pvu II to linearlized plasmid DNA indicated that 3 isolates of A. hydrophila contained single species of plasmids which were not identical, 2 isolates contained two identical plasmid species, 3 isolates contained three non-identical plasmids, 2 isolates contained four identical plasmids and 1 isolate contained more than four plasmids. The correlation between plasmid patterns and epidemic area or fish species could not be observed. There was no common fragment observed among the plasmids from the 11 isolates following digestion by restriction enzymes used in this studies.