

RESEARCH ARTICLE

Isolation and identification of *Vibrio* species by multiplex PCR and investigation of its prevention by using Indian spices

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SUMMARY

The present study focuses the incidence of *Vibrio* spp. in water bodies which are used by people in surroundings for their daily needs. *Vibrio* constitute of both pathogenic and non-pathogenic species, thus, for differentiating between them a rapid method named multiplex PCR assay has been for the study. The method used was to first determine the physical and chemical constituents of all the 15 water samples (pond water) collected from different regions of Uttar Pradesh. Isolation of bacteria was done on selective media (TCBS) which showed both green and yellow colonies. These colonies were cultured separately on non selective media. All the pure cultures obtained were thus, used to extract their DNA using Phenol chloroform method. DNA was then visualized on agarose gel and quantified using double beam spectrophotometer. Samples with higher yield of DNA were used for amplification using species specific primers by multiplex PCR. The results were documented and thus, study derived the information that most of the waterbodies showed presence of pathogenic *Vibrio* species while few of them showed presence of non-pathogenic *Vibrio* spp.

Key Words : mPCR, *Vibrio*, Chemical parameters, Water, Amplification, Species specific

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