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Adapting and Adopting Rapid Molecular Methods for Beach Water Quality Monitoring

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ABSTRACT

Protecting the public from potentially harmful pathogens requires periodic monitoring of recreational waters. For many years, scientists and managers have relied on culturing indicator bacteria from samples to count how many are present, leaving a significant time gap between when the sample is collected and when results become available to make decisions about issuing health warnings. Rapid molecular analytical methods offer a new paradigm in which more timely knowledge of water contamination issues would be available to help prevent exposure-related illness. The most advanced rapid method to date, quantitative polymerase chain reaction (qPCR), takes just a few hours and is on track for nationwide approval in 2012 (USEPA 2007). In addition to research and development, efforts to transition potential new methods and ensure their real-world applicability are critical. Two pilot projects applying a rapid method at Los Angeles and Orange County beaches have demonstrated the feasibility of faster results.

Full Text

ftp://ftp.sccwrp.org/pub/download/DOCUMENTS/JournalArticles/698_RapidMolecularMethodsBWQMonitoring.pdf