Researchers at the University of South Florida have developed a method for rapid detection and quantification of fecal bacteria responsible for human recreational water illnesses (RWIs.)

Bacteria of the genus Enterococci are commonly found in fecal matter of warm-blooded animals, including humans; therefore, presence of these organisms in water is an indication of fecal contamination.

Water contamination with Enterococci strongly correlates with outbreaks of gastrointestinal disease.

Current methods for detection rely on filtration systems and direct enumeration with a considerable lag time between analysis and availability of the data. The present technology overcomes this limitation by using nucleic acid sequence based amplification (NASBA) to detect and amplify ribonucleic acid (RNA). Because this technique uses primers and probes complementary to highly conserved regions of bacterial RNA, it is capable of rapid and accurate detection of fewer than one colony-forming unit (CFU) of viable Enterococci. This technology offers precision and significantly reduces false negative results.

The present technology is a method for rapid detection and quantification of these bacterial indicators using acid sequence based amplification (NASBA) to amplify ribonucleic acid (RNA).

ADVANTAGES:
- Rapid detection
- High sensitivity and precision
- Reduction in false negative results
- High reliability

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