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Method repeatability for measuring *Enterococcus* in southern California beach sands

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ABSTRACT

A recent study that evaluated 22 methods for enumerating fecal indicator bacteria in sand recommended standardization to a preferred method, but all researchers involved in that study had extensive experience in processing sand samples. The purpose of the present study was to evaluate how well the recommended method can be transferred to laboratories without such experience. Eight southern California laboratories that rarely measure bacteria in sand processed six sand and three water samples in replicate to assess repeatability. Among-laboratory variability was found to be less than within-laboratory variability, with no significant differences in results among any of the laboratories. Moreover, within-laboratory variability was comparable between the sand and water samples, indicating that the elution procedure added little additional method error even when performed by laboratories without prior experience. The simple extraction method for enumerating *Enterococcus* in beach sands was easily transferable to, and repeatable among, laboratories with little or no prior experience. Demonstrated success of technology transfer will further method standardization and adoption, aiding in understanding of how sands affect surface water quality.

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