Comparison of Multiplex Immunochemical and Molecular Serotyping Methods for Shiga Toxin–Producing *Escherichia coli*

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**Abstract**

Traditionally, serotyping of *Escherichia coli* has been performed via slide agglutination methods using antisera. More recently, multiplex immunoassays and “molecular serotyping” via polymerase chain reaction (PCR) have been validated for this purpose. In this study, the serogroups of 161 Shiga toxin–producing *Escherichia coli* (STEC) strains isolated from fecal samples of California cattle were typed by conventional methods using antisera as well as two newly developed multiplex PCR- and antibody-based microbead assays using the Luminex technology. Using the Luminex assays, we were capable of serotyping 11 STEC isolates that were previously determined untypeable for the O antigen by conventional methods using antisera. Except for 14 isolates, results from the 2 Luminex assays agreed.

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