POWERPLEX® 35GY – THE COMPLETE 8-COLOR STR SYSTEM FOR THE SPECTRUM CE SYSTEM

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Capillary electrophoresis (CE) technology remains the standard in forensic DNA laboratories for producing reliable data in a cost-effective and timely manner. The new Spectrum CE System builds on this CE tradition of 4-, 5- and 6-color separation and offers an expanded spectral capacity to allow for the separation of 8 color channels. Promega's PowerPlex® 35GY System uses seven of these eight color channels to simultaneously amplify 35 different loci, including the CODIS 20 core loci, three other highly informative autosomal loci, both Amelogenin and DYS391 for gender confirmation, and ten additional Y-STR loci. The inclusion of Y-STR loci increases the amount of genetic information obtained in a single amplification and can provide valuable data for familial searching or can assist in the analysis of sexual assault evidence. Two Quality Indicators (QIS and QIL) are also included in every amplification reaction to assist in determining if a sample is degraded or inhibited. With the two additional colors for detection there are a total of 15 autosomal STR loci smaller than 250bp, which benefits the analysis of challenging samples.

Data will be presented demonstrating the performance of the PowerPlex® 35GY System on the Spectrum CE System including results from a comprehensive concordance study performed in collaboration with the National Institute of Standards and Technology (NIST). Our results highlight the benefits of this new 8-color multiplex as part of a forensic workflow.