

STR ANALYSIS USING POWERPLEX® 35GY ON THE SPECTRUM CE SYSTEM

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Forensic DNA typing relies on capillary electrophoresis (CE) because of its time- and cost-effectiveness. Current multiplex STR systems are limited to 5 or 6 dyes, but the new Spectrum CE system has increased spectral capacity that allows 8 color detection. The PowerPlex® 35GY System is capable of simultaneous amplification of 35 different loci, that includes 20 CODIS core loci, Amelogenin and DYS391 for gender identification and an internal positive control that serves as a Quality Indicator (QI). Ten additional Y-STR loci in the PowerPlex® 35GY System will enhance familial searching and assist with sexual assault evidence in forensic casework. The 8-color system includes 15 autosomal STR loci smaller than 250 bases which will aid in analysis of challenging samples.

Data demonstrating performance of the PowerPlex® 35GY System for sensitivity and linearity, degraded samples and direct amplification will be presented. The new 8-color system will enable comprehensive STR analysis compared to the current 4-, 5- and 6-color systems.