

## **AN IMPROVED CAPILLARY ELECTROPHORESIS SYSTEM FOR HUMAN IDENTIFICATION**

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Rapid DNA and Next Generation Sequencing (NGS) hold great promise for the forensics community to extend the reach and depth of DNA typing. While both of these approaches are powerful complements to traditional capillary electrophoresis (CE) STR typing, neither approach is likely to replace CE analysis for the majority of forensic samples. Capillary electrophoresis will very likely remain the “workhorse” of forensic DNA typing. As such, improving upon CE technology is critical for the advancement of forensic DNA typing. The Spectrum CE System offers increased spectral capacity, which will allow analysis of existing 4-, 5- and 6-color multiplexes as well as a new family of 8-color multiplex STR systems. With the inclusion of additional colors, smaller, more numerous loci will increase a laboratory’s chance of success with degraded samples. Additionally, improved multiplex configurations will provide more complete and informative results with inhibited casework samples, while the narrower range of product amplicon sizes will enable more consistent results with variable “direct amp” samples. The system also offers increased workflow flexibility with four continuously-accessible plate positions. This design improves laboratory efficiency by reducing scheduling conflicts, increasing overnight/weekend throughput and reducing the number of instruments needed in the laboratory. Lastly, the system’s analysis software provides fast, reliable and accurate forensic data analysis.