

THE NEXT GENERATION CAPILLARY ELECTROPHORESIS SYSTEM

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The gold standard for STR fragment analysis continues to be capillary electrophoresis (CE) genetic analysis platforms. The next generation 3500 (8-capillary) and the 3500xL (24-capillary) genetic analysis systems have improved upon the industry standard for CE by providing greater throughput, flexibility, and ease-of use. This newly designed system supports a specific feature set and workflow for Human Identification applications. The 3500-series genetic analysis systems integrate the steps from system set-up to size-called data to improve system quality control and HID workflow efficiency. We will discuss several advancements to this new CE system including: an improved polymer delivery pump design, ready-to-use consumables and containers, radio frequency identification (RFID) consumable tracking, improved user-interface, quality control systems for rapid identification and re-injection of failed samples, increased throughput, improved power efficiency, peak height normalization, intuitive user software, and integrated primary analysis software. In addition, optimized run modules have been developed for the analysis of AmpF ϕ STR[®] kit products. Combining the improvements in next generation genetic analysis systems with STR assay improvements will enhance efficiency and performance across the human identification workflow.