

THE SPECTRUM COMPACT CE SYSTEM: FRAGMENT ANALYSIS WITH A PERSONAL CAPILLARY ELECTROPHORESIS DEVICE

Robert S. McLaren¹, Cynthia J. Sprecher¹, Michiru Fujioka², Jin Matsumura², Isao Haraura², Asami Terakado², Noriyuki Sumida², Ayaka Okuno², and Douglas R. Storts¹

¹Promega Corporation

²Hitachi High-Technologies Corporation

The Spectrum Compact CE System was developed as a collaborative project between Promega Corporation and Hitachi High-Technologies Corporation. This four-capillary instrument features touch-screen operation and easy to install consumables (capillary array, anode and cathode buffer cartridges and polymer cartridges), being capable of injecting 1-32 samples per run (up to 64 samples may be run per polymer cartridge). The consumables are barcoded for tracking and can be exchanged in a few minutes. The capillary array will support at least 200 injections.

This instrument is capable of detecting up to 6-colors with analysis using either GeneMapper® ID-X or GeneMarker® HID Software for Spectrum CE System. It is backwards compatible for all commercially available existing STR systems (Promega, ThermoFisher and Qiagen chemistries) with performance comparable to current capillary electrophoresis instruments (e.g., sensitivity and mixture samples). Total electrophoresis time for fragment analysis is approximately 40-45 minutes.

Key Words: Spectrum Compact CE System, Fragment Analysis, STR, PowerPlex®