

STR TYPING USING THE 16-CAPILLARY ABI 3100 GENETIC ANALYZER

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We have had the ABI 3100 16-capillary system in our laboratory since April 2001 and have successfully analyzed a variety of STR typing kits including Promega's PowerPlex[®] 16 and Applied Biosystems' Identifiler[™] 16 plex kits. These commercial kits and new research multiplex assays we have developed in-house use a variety of fluorescent dye combinations with both 4-dye and 5-dye chemistries. We have generated DNA fragment analysis matrices on the 3100 using various combinations of the following dyes: 5FAM, JOE, NED, ROX, 6FAM, HEX, FL, TMR, CXR, VIC, PET, and LIZ. Some of the challenges and solutions to obtaining successful results on the ABI 3100 will be presented. We have also performed direct comparisons of samples between the ABI 310 and 3100 instruments.