

## Analysis of VNTR using Capillary Electrophoresis

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MCT118 (D1S80) locus is a useful marker for personal identification in Japanese people and is applied for casework study using polyacrylamide gel electrophoresis with PCR amplification.

Using a 310 Genetic Analyzer, fragment analysis shows a little reproducibility for the size range above 600 bp when we use 47 cm capillary with POP 4. It is suitable to use these combination for STR analysis but not for VNTR analysis. Sequencing systems which use 60 cm capillary with POP 6 remarkably improved reproducibility above 600 bp. DNA containing alleles 42, 43, or 44 on MCT118 locus were clearly distinguished with this system. Allele 42, 43, and 44 were calculated as  $12.080 \pm 0.088$  (SD),  $12.976 \pm 0.131$ , and  $13.918 \pm 0.090$ . Using this system, we do not need allelic ladder but just a few control alleles which assign DNA size marker as MCT118 typing marker.