A-11 The applicability of the human DNA probe 33.15 on the forensic identification of humans in the Sri Lankan population

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Identification of humans based on differences at the level of DNA or DNA fingerprinting, is now a widely accepted tool in forensic investigations. This technique is based on the observation that human DNA contains polymorphic regions with a variable number of tandem repeats (VNTR). Restriction enzyme digestions of a sample of human DNA size fractionated by agarose gel electrophoresis, shows a unique banding pattern when Southern hybridized to labelled DNA probes that bind to polymorphic (VNTR) regions. Many human DNA probes have been developed to date, and evaluated on populations elsewhere. However, the applicability of these probes to the Sri Lankan population has not been tested previously, precluding the use of DNA fingerprinting technology for human identification in Sri Lanka.

We report the applicability of the multi-locus human DNA probe 33.15 (Jeffreys) on the Sri Lankan population. DNA samples (10-20 mcg) extracted from human blood were digested by Hinf I or Hae III and subjected to agarose (0.8 - 1.0%) gel electrophoresis followed by Southern blotting and hybridization with ^{32}P labelled 33.15 probe. The optimized conditions for Southern hybridization were hybridization at 61°C (1 x SSC, 0.5% dried milk, 1% SDS, 6% PEG) and washing under low stringency conditions (3 x SSC, 0.1% SDS, 61°C). Under these conditions a gel containing 4 samples (run in duplicate) showed a unique banding pattern for each sample. This preliminary investigation reveals that the multilocus DNA probe 33.15 is a good candidate for human identification of the Sri Lankan population.

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