

ABSTRACT

SPOT URINE FOR SEX DETERMINATION IN FORENSIC IDENTIFICATIONS
WITH AMELOGENIN LOCUS AND Y CHROMOSOMES (DYS19)

Background: The location of amelogenin gene for identification of sex chromosome has good variability between the form and the shape of the X chromosome and the Y chromosome and between amelogenin alleles among different populations. Purpose: To prove urine spot examination on the results of the sex determination through Deoxyribo Nucleid Acid (DNA) isolation using amelogenin and Y chromosome loci (DYS19). Methods: Spotting the microscopic examination of urine samples to determine the presence or absence of urethral epithelial cells, followed by isolation Deoxyribo nucleid Acid (DNA) in order to determine the extent and purity of DNA amplification. Then performed Polymerase Chain Reaction (PCR) amelogenin locus at 106bp - 112bp and Y chromosomes (DYS19) at 232 -268 bp. Results: in 9 samples of men from 3 families with 3 kinship of different regions show the results of different test, because of Amel Y variation between individuals and populations method of determining the sex of 100% was inaccurate. In some men Amel Y can be removed entirely. This study should be visualized one band on the Y chromosome (DYS19) and the amelogenin two bands during electrophoresis occurs misidentification of the sample as a woman. Conclusions: Identification of sex using amelogenin locus and Y chromosomes (DYS19) has six identical and ambiguous results because the two samples shown as the sign of men but visualized as women, another sample was not visualized because of the thick level and concentration of Deoxyribo nucleid Acid (DNA).

Keywords: Urine Spot, Sex Determination, Amelogenin, Y chromosome (DYS19).