

Analysis the influence of time and detergent washing to DNA from cement liquids spotted in FGA Locus, D21S11 and DYS19 using STR-PCR Method

Abstrak :

Sex abuse cases, especially by murdering or robbing from year to year have an increasingly tendency. A test which's absolutely done in some cases of sex abuse is the evidence of sperm. In some cases, cement liquids spotted were found in the condition which have been changed because of intentionally washing by detergent to DNA of cement liquids spotted or even it's not like soaked by water. It complicates the identification process and until now, the research about the influence of washing by detergent to DNA of cement liquid spotted is not much known yet. The objective of this study was to analysis cement spot on the effect of time duration and washing by detergent to FGA LOCUS as a forensic molecular identification material. The individual identity can be commonly decided using DNA profiling which is common used to identify is Short Tandem Repeat (STR) by using 13-20 locuses. The focus of this research is to grasp the effect of the time duration (1, 7, 30, 60, and 90 days) and washing by detergent to FGA locus, D21S11, DYS19 as a forensic molecular identification material. The result of this DNA identification showed that the influence of the time duration and washing by detergent to cement liquids spotted, longer time of action made the decreasing of DNA rate. It's showed from the result of KruskalWallis analysis with $p = 0.000$ ($p < 0.05$). Nevertheless, the decreasing of DNA rate in forensic sample will not much significantly influence to the successful of DNA profiling, commonly in Short Tandem Repeat (STR) test. It's happened because the DNA rate which is needed in STR and PCR tests is just a little (1-25 ng/ul), so that the risk of failure in amplification process is very small, with the DNA's not totally degraded as an essential. The visualization results were analyzed descriptively, by seeing the presence of the ribbons or bands based on the size of product (base pair) in each spotted of cement liquids. In this research found that even though there's DNA rate of cements spotted reduction but the result of STR-PCR of FGA Locus, D21S11 and Y chromosome in DYS19 locus still can be all positively detected.

Keyword :

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