

ABSTRACT

ANALYSIS THE INFLUENCE OF TIME AND DETERGEN WASHING TO CEMENT LIQUIDS SPOTTED DNA IN FGA, D21S11 AND DYS19 LOCI USING STR PCR METHOD

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 or even like soaked by water. It complicates the identification process and until now, the research about the influence of washing by detergent of cement liquids spotted DNA is not much known yet.

The individual identity can be commonly decided using DNA profiling which is common used to identificate is *Short Tandem Repeat* (STR) by using 13 – 20 loci's. The focus of this research is to gasp the effect of the time (1, 7, 30, 60 and 90 days) and washing by detergent of DNA ability from cement liquids spotted in FGA, D21S11, and DYS19 loci as a forensic molecular identification material.

The result of this DNA identification of this research can be concluded 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 *Kruskal Wallis* analysis with $p = 0,000$ ($p < 0,05$). Nevertheless, the decreasing of DNA rate in forensic sample will not much significantly influent 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 kindly 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 assential .

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, here's found that even though there's DNA rate of cements spotted reduction but the result of STR PCR of FGA, D21S11 and Y cromosom in DYS19 loci still can be all positively detected.

Keyword : Cement liquids spotted, the influence of detergen washing to DNA, STR PCR.