

ABSTRACT

Deoxyribonucleic Acid (DNA) is the blueprint of every living being, which contains a variety of genetic information. In forensic cases, DNA is the primary identification method used during the forensic identification process. DNA can be used as an identification method with the provision of no damage or severe degradation. One of the factor that affects the quality of DNA is the time storage.

This study aims to analyze the effect of sample storage duration at room temperature on differences in DNA quality from day 1, 3, day 7 and DNA detection analysis through STR CODIS FGA and D18S51 with toothbrush samples. The two locuses are chosen because they have great discrimination in the population in Indonesia.

The collection of data used in this research is done by comparing the levels of DNA from the 1st, 3rd and 7th days observed in sequence. The toothbrush sample take 1/3 bristles and do the DNA extraction on each day.

The result of DNA levels in statistic test if p value ($p < 0,05$) is significant, while if ($p > 0,05$) is not significant. The value of DNA level based on statistical test obtained 0,077 which means not significant. While the value of DNA purity obtained 0,011 which means there are significant differences. From the data it can be concluded that there are differences in the levels and purity of DNA was not significant between the 1st, 3rd and 7th days. Toothbrushes can be used as DNA identification materials for forensic purpose.

Keywords : Time Storage, DNA quality, Tooth Brush