

**ISOLATION AND DETERMINATION OF DNA SIZE
FROM HUMAN BLOOD**

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ABSTRACT

ISOLATION AND DETERMINATION OF DNA SIZE FROM HUMAN BLOOD

Blood is an important element in all organisms. Blood transfer oxygen throughout the body. Blood samples were collected from two samples of different genders. The aims for this study are to isolate DNA from male and female blood and secondly to determine the DNA size. This study involved the process of DNA extraction, determination of gene amplifications and visualization of polymerase chain reaction (PCR). The blood samples were extracted using Qiagen DNeasy kit. Then, the extraction was amplified using 369 primers. The PCR products were visualized using agarose gel electrophoresis. The optimization of annealing temperature is important to prevent annealing of primers to non targeted sequences. DNA separation in gel electrophoresis is mainly based on its molecular size. From the study, the band that contain DNA molecule of different genders blood samples end at the same distance has proven they are approximately same in size. Meanwhile, amplification of the 369 primer was detected to have 100 base pair (bp) on all blood samples when compared to Lambda *Hind* III or DNA ladder. PCR product is smaller compared to genomic DNA. Hopefully the information gathered from this study will give advantages in the molecular biology field and also in applications of clinical trial.