

**UNIVERSITI TEKNOLOGI MARA**



**THE PREVALENCE OF DIEGO AND CARTWRIGHT  
BLOOD GROUP PROFILES AMONG MALAYS**

**By**

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**Thesis submitted in Partial Fulfilment of the Requirement for Bachelor of  
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## DECLARATION

I hereby declare that this thesis entitled The Prevalence of Diego and Cartwright Blood Group Profiles Among Malays is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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## **ABSTRACT**

### **THE PREVALENCE OF DIEGO AND CARTWRIGHT BLOOD GROUP PROFILES AMONG MALAYS**

The purpose of this thesis is to determine the prevalence of Diego and Cartwright blood group profiles among Malays population as a basis for improving blood transfusion practices in that area. Different segregation of population and ethnicity represents a different type of blood group antigens, thus can cause transfusion reaction if incompatible blood is given in a transfusion. The Diego and Cartwright blood group profiles is an unknown blood group system in Malaysia and the data regarding these blood group profiles is remain unknown. Therefore, we evaluated the frequency of these rare blood profiles with a molecular study. Genomic DNA of 50 healthy Malays participants were extracted from 3-5 ml whole blood using a DNA purification kit. Polymerase Chain Reaction was performed on the final volumes of 25  $\mu$ l with the aid of Thermal Cycler. In this study, the most frequent allele found in Diego blood group system is Di(b) and for Cartwright blood group system is Yt(a) that shows the prevalence of 100 % respectively. The findings of this pilot study demonstrate that Diego and Cartwright blood group phenotypes are significantly found in Malays population.

**Key words:** Diego blood group, Cartwright blood group, phenotypes, PCR, Malays