

## ABSTRACT

Salsabila Alya Lavindi (2022). The Effect of Whole Blood Storage Time on the Number of Erythrocytes in the PMI Madiun Blood Transfusion Unit. D3 Study Program in Blood Bank Technology, Department of Applied Health, Health Polytechnic Ministry of Health Malang, Advisor Nia Lukita Ariani, S.si., M.Sc.

Transfusion "whole blood" is given to improve blood volume and oxygen carrying capacity, but giving blood with sufficient blood volume but lacking erythrocytes and protein (hemoglobin), will benefit less from the transfusion carried out. The purpose of this study was to determine the effect of whole blood storage time on the number of erythrocytes on day 0 and day 4 at the PMI Madiun Blood Transfusion Unit. Storage of whole blood in UTD Madiun City with a shelf life of 35 days at 2-6°C with periodic recording as an effort to determine the number and effect of erythrocytes on whole blood on day 0 and day 4 with a sample of 16 blood bags. This research method is quasy experimental with a prospective cohort approach. Then the results of data collection will be analyzed analytically using SPSS software with normality tests and homogeneity tests as well as paired T tests and the results are presented in tables and diagrams. The results showed that the sig. 0.008, meaning that the sig value <0.05 indicates that there is an effect of storage time on the number of erythrocytes. In other words, on day 0 or before storage, the number of erythrocytes was at 4.85 million/ul but after storage occurred on day 4 the number of erythrocytes decreased to 4.75 million/ul. This condition is caused by lysis of erythrocytes.

Keywords : *Whole Blood, erythrocytes, storage time*