DIFFERENCES IN HEMOGLOBIN AND HEMATOCRIT LEVELS BETWEEN PACKED RED CELL PRODUCTS BY CENTRIFUGATION AND SEDIMENTATION METHODS IN UDD PMI CITY OF MALANG

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ABSTRACT

Background: Blood transfusion is one of the medical activities that aims to treat diseases and restore health, especially through the use of blood components such as Packed Red Cell (PRC). There are two ways of processing PRC components, namely by centrifugation or sedimentation. Hemoglobin and hematocrit are some of the parameters that need to be checked on PRC products to ensure the quality of the products produced. This study aims to compare hemoglobin and hematocrit levels between centrifugation and sedimentation PRC products. **Methods**: The type of research used was quantitative comparative analytic. The population of this study was all PRC products processed at UDD PMI Malang City, those that have undergone quality testing. The samples in this study were PRC products produced by centrifugation and sedimentation methods, which had been analyzed for hemoglobin and hematocrit levels (sample size of 92 PRC bags each for both methods). **Results**: This study showed that the average hemoglobin content in the centrifugation method (51.21 g/bag), while the sedimentation method (51.96 g/bag). The average hematocrit level of the centrifugation method (68.63%) and the sedimentation method (68.19%). Mann-Whitney U statistical test results obtained hemoglobin levels between the two methods (p 0.162 > p 0.05) and hematocrit between the two methods (p 0.218 > p 0.05). **Conclusion**: From the results of statistical tests it can be concluded that Ho is rejected and Ha is accepted, that is, there is no significant difference in hemoglobin and hematocrit levels between centrifugation and sedimentation PRC products.

Keywords: Hemoglobin, Hematocrit, *Packed Red Cell* (PRC), Centrifugation, Sedimentation