

## ABSTRACT

**Agnes Agustin Okpriani, NIM : 1534022.** The different potassium level on the blood serum separated by the centrifugation at 3000 rpm for 5 minutes and 4400 rpm for 3 minutes. Bachelor Thesis. DIV Medical Analysis Study Program, Faculty of Medical Science, Universitas Katolik Musi Charitas Palembang.

**Background:** Potassium level test should be run fast due to easy forming hard-form blood serum (blood clot). Therefore, the optimum speed and time of centrifugation are needed to obtain the high precision of potassium level and avoid the blood clotting. The present study aims to investigate the effect of speed and time of centrifugation in the potassium level. The study is conducted by centrifuging the blood serum at 3000 rpm for 5 minutes and 4400 rpm for 3 minutes.

**Method:** This study is pre-experimental research with *Static Group Comparison* Study. The blood sample is divided into two groups which are the group centrifuged at 3000 rpm for 5 minutes and the group centrifuged at 4400 rpm for 3 minutes. The obtained serum is measured to analyze the potassium level using *EasyLyte Analyzer* with a specific *Ion Selective Electrode* method. *Shapiro-Wilk* method and the paired t-test are used to do the normality test and the statistical analysis, respectively.

**Result:** The result shows that there is no significant effect of centrifugation speed and time in the potassium level analysis. It is based on the statistical analysis showing the probability value (2-tailed) = 0,452 with  $\alpha = 0,025$ . From the result, the p-value is higher than  $\alpha$  value, indicating there is no significant difference in the potassium level centrifuged at 3000 rpm for 5 minutes and 4400 rpm for 3 minutes.

**Conclusion:** According to the study result, there is no significant difference of potassium level centrifuged at 3000 rpm for 5 minutes and 4400 rpm for 3 minutes which is based on the probability value (sig2-tailed)  $p > \alpha$  (0,452 > 0,025).

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Keywords: Time, Centrifugation, Potassium level