ABSTRACT

Background: Examination of total bilirubin is one of the tests to determine liver function. The quality of total bilirubin examination results can be influenced by preanalytic factors such as storage. The increase in plasma heparin storage time causes a change in the sample which causes a decrease in the total bilirubin level.

Research Objectives: To determine the effect of plasma lithium heparin storage at a temperature of 25±1ºC on total bilirubin levels

Research Methods: The type of research used is a pre-experiment with a posttest only design. This study used lithium heparin plasma samples which were divided into 4 treatment groups, namely storage at a temperature of 25±1ºC for 0 hours (immediate examination), 4 hours, 8 hours and 24 hours. The data obtained were analyzed statistically by data normality test and Repeated Measures ANOVA test.

Results: The results of this study indicate that there are differences in total bilirubin levels in lithium heparin plasma with variations in storage time at 25±1ºC based on the statistical analysis of Repeated Measures ANOVA. The percentage decrease in total bilirubin examination results in lithium heparin plasma stored for 4 hours, 8 hours and 24 hours, respectively, was 2.7%, 8.1% and 18.9%. Further test results showed that the storage time of plasma lithium heparin for 24 hours had a significant effect on reducing total bilirubin levels.

Conclusion: There is an effect of plasma lithium heparin storage at a temperature of 25±1ºC on total bilirubin levels. The examination experienced a decrease in total bilirubin levels along with an increase in plasma lithium heparin storage time at a temperature of 25±1ºC

Keywords: storage time, plasma *lithium heparin*, total bilirubin levels

ABSTRAK

Latar Belakang : Pemeriksaan bilirubin total merupakan salah satu pemeriksaan untuk mengetahui fungsi hati. Mutu hasil pemeriksaan bilirubin total dapat dipengaruhi oleh faktor praanalitik seperti penyimpanan spesimen. Peningkatan lama penyimpanan plasma *lithium heparin* menyebabkan perubahan stabilitas sampel yang menyebabkan terjadinya penurunan kadar bilirubin total.
Tujuan Penelitian : Mengetahui pengaruh lama penyimpanan plasma *lithium heparin* pada suhu 25±1ºC terhadap kadar bilirubin total
Metode Penelitian : Jenis penelitian yang digunakan berupa praeksperimen dengan rancangan *posttest only*. Penelitian ini menggunakan sampel plasma *lithium heparin* yang dibagi menjadi 4 kelompok perlakuan yaitu penyimpanan pada suhu 25±1ºC selama 0 jam (pemeriksaan segera), 4 jam, 8 jam dan 24 jam. Data yang diperoleh dianalisis secara statistik dengan uji normalitas data dan uji *Repeated Measures ANOVA*
Hasil Penelitian : Hasil penelitian ini menunjukkan adanya perbedaan kadar bilirubin total pada plasma *lithium heparin* dengan variasi lama penyimpanan pada suhu 25±1ºC berdasarkan analisis statistik *Repeated Measures ANOVA*. Persentase penurunan hasil pemeriksaan bilirubin total pada plasma *lithium heparin* yang disimpan selama 4 jam, 8 jam dan 24 jam berturut-turut yaitu 2,7%, 8,1% dan 18,9%. Hasil uji lanjut menunjukkan lama penyimpanan plasma *lithium heparin* selama 24 jam memberikan pengaruh signifikan terhadap penurunan kadar bilirubin total
Kesimpulan : Ada pengaruh lama penyimpanan plasma *lithium heparin* pada suhu 25±1ºC terhadap kadar bilirubin total. Pemeriksaan mengalami penurunan kadar bilirubin total seiring dengan peningkatan waktu penyimpanan plasma *lithium heparin* pada suhu 25±1ºC

Kata Kunci : lama penyimpanan, plasma *lithium heparin*, kadar bilirubin total