

PERBANDINGAN KADAR BILIRUBIN TOTAL  
PADA SAMPEL SERUM SEGERA DAN SERUM SIMPAN

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ABSTRAK

Tahapan pemeriksaan laboratorium terdiri dari tahapan pra analitik, analitik dan pasca analitik. Sumber kesalahan terbesar dapat terjadi pada tahapan pra analitik, diantaranya karena ketidaktepatan dalam penyimpanan sampel. Bilirubin merupakan zat yang sensitif terhadap cahaya matahari, waktu dan suhu penyimpanan karena dapat menurunkan konsentrasi bilirubin dalam serum. Namun, penyimpanan yang benar tidak akan berpengaruh terhadap stabilitas serum. Tujuan dari penelitian ini adalah untuk mengetahui ada tidaknya perbedaan kadar bilirubin total dengan perbedaan waktu penyimpanan. Metode penelitian yang digunakan adalah kuasi eksperimen dengan subjek penelitian yaitu serum simpan selama 3, 6 dan 8 hari pada suhu 2-8 °C. Pemeriksaan bilirubin total menggunakan metode DMSO dibaca dengan alat Kenzamax. Data hasil pemeriksaan bilirubin total kemudian dianalisis dengan uji statistik General Linear Model (GLM) repeated measured. Berdasarkan hasil uji GLM repeated measured yang dilakukan tidak terdapat perbedaan yang signifikan pada hasil pemeriksaan bilirubin total dengan nilai Sig. yang diperoleh >0,05. Namun, jika dilihat nilai TE% pada serum simpan selama 3 hari yaitu sebesar 4,84%, pada serum simpan selama 6 hari yaitu sebesar 7,19%, sedangkan pada serum simpan selama 8 hari yaitu sebesar 34,84%, melebihi dari Total Error Allowable (TEa) bilirubin total yaitu 20%, hal ini berarti terdapat perbedaan yang menunjukkan arti klinis. Apabila dilakukan penyimpanan sampel bilirubin total hendaknya disimpan pada suhu rendah, tempat gelap, dan dengan tabung atau botol tertutup kertas gelap atau kertas alumunium foil sehingga kadar bilirubin total tetap stabil.

Kata Kunci : Bilirubin Total, Waktu Penyimpanan, Suhu Penyimpanan

Daftar Pustaka : 32 Pustaka (2004-2020)

# COMPARISON OF TOTAL BILIRUBIN LEVELS IN IMMEDIATE AND STORED SERUM SAMPLES

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## ABSTRACT

The laboratory examination stages consist of pre-analytical, analytical and post-analytical. The biggest source of error can occur at the pre-analytic stage, including due to inaccuracies in sample storage. Bilirubin is a substance that is sensitive to sunlight, storage time and temperature because it can reduce the concentration of bilirubin in serum. However, proper storage will not affect the stability of the serum. The purpose of this study was to determine whether there were differences in total bilirubin levels with differences in storage time. The research method used was a quasi-experimental with research subject namely serum stored for 3, 6 and 8 days at a temperature of 2-8°C. Total bilirubin test used the DMSO method was read with a Kenzamax device. The total bilirubin test results were then analyzed using the General Linear Model (GLM) repeated measured statistical test. based on the results of the repeated measured GLM test carried out, there was no significant difference in the results of the total bilirubin test with the Sig value obtained  $>0.05$ . But when viewed from the value of TE% in serum stored for 3 days was 4.84%, in serum stored for 6 days was 7.19% while in serum stored for 8 days was 34.84% exceeding the Total Arrow Allowable (TEa) total bilirubin is 20%, it's means there was a difference that shows clinical significance. If the total bilirubin sample is stored, it should be stored at a low temperature, in a dark place and with a tube or bottle covered with dark paper or aluminum foil so that the total bilirubin level remains stable.

Key words : total bilirubin, storage time and storage temperature  
bibliography : 33 bibliography (2004-2020)