

**PERBEDAAN KADAR BILIRUBIN TOTAL DAN *DIRECT* SERUM
SEGERA DAN TUNDA SELAMA 1, 2, 3, DAN 4 HARI PADA
SUHU 20-25°C**

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ABSTRAK

Dalam proses pengendalian mutu laboratorium dikenal ada tiga tahapan penting, yaitu tahap pra analitik, analitik dan pasca analitik. Pemeriksaan spesimen yang mudah berubah kestabilannya dalam darah harus segera dilakukan pemeriksaan. Salah satu parameter pemeriksaannya adalah bilirubin total dan *direct*. Faktor-faktor yang mempengaruhi hasil pemeriksaan bilirubin diantaranya adalah lama waktu penyimpanan, suhu, dan paparan cahaya. Penelitian ini bertujuan untuk mengetahui perbedaan hasil pemeriksaan bilirubin total dan *direct* serum segera dan serum yang ditunda. Metode yang digunakan adalah eksperimen laboratorium dengan melakukan pemeriksaan bilirubin total dan *direct* segera setelah mendapatkan sampel dan sampel disimpan untuk diperiksa dengan penundaan selama 1, 2, 3, dan 4 hari pada suhu 20-25°C. Analisis data dilakukan menggunakan uji normalitas didapatkan distribusi data normal dan dilanjutkan dengan uji *General Linear Model* (GLM). Hasil penelitian menunjukkan pada pemeriksaan bilirubin total didapatkan nilai rata-rata pada serum segera 0.80 mg/dL dan serum tunda 1 hari 0.75 mg/dL, 2 hari 0.69 mg/dL, 3 hari 0.62 mg/dL, 4 hari 0.53 mg/dL ($P < 0.05$). Pemeriksaan bilirubin *direct* didapatkan nilai rata-rata pada serum segera 0.15 dan serum tunda 1 hari 0.13 mg/dL, 2 hari 0.11 mg/dL, 3 hari 0.09 mg/dL, 4 hari 0.07 mg/dL ($P < 0.05$) yang berarti terdapat perbedaan hasil pemeriksaan bilirubin total dan *direct* segera dan tunda.

Kata Kunci : Bilirubin Total, Bilirubin *Direct*, Waktu Tunda, Suhu

THE DIFFERENCE OF TOTAL BILIRUBIN LEVELS AND DIRECT IMMEDIATE AND DELAYED SERUM FOR 1, 2, 3, AND 4 DAYS AT TEMPERATURE 20-25°C

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ABSTRACT

There are three important stages in laboratory quality control process, namely the pre-analytic, analytic and post-analytic stages. Examination of specimens that are easily changed its stability in blood must be checked immediately. One of the examination parameters is total and direct bilirubin. Factors that affect the results of bilirubin examination include storage time, temperature, and light. This study aims to determine the differences of the results of direct and total serum in bilirubin examination both immediate and the delayed serum. The method used in this study is a laboratory experiment by examining total and direct bilirubin immediately after getting the sample. The sample is stored for examination with a delay of 1, 2, 3, and 4 days at a temperature of 20-25°C. Data analysis was performed using the normality test obtained by normal data distribution and continued with the General Linear Model (GLM) test. The results showed that in total bilirubin examination, the mean value in immediate serum was 0.80 mg/dL and delayed serum was 1 day 0.75 mg/dL, 2 days 0.69 mg/dL, 3 days 0.69 mg/dL, 4 days 0.53 mg/dL ($P < 0.05$). Direct bilirubin examination showed that the mean value of immediate serum was 0.15 mg/dL and delayed serum was 1 day 0.13 mg/dL, 2 days 0.11 mg/dL, 3 days 0.09 mg/dL, 4 days 0.07 mg/dL ($P < 0.05$) which meant that there were differences in the results of total and direct bilirubin tests in immediately and delayed one.

Keywords: Total Bilirubin, Direct Bilirubin, Delayed Time, Temperature