

“PENGARUH LAMA PENYIMPANAN REAGEN KERJA TERHADAP AKTIVITAS ENZIM ASPARTATE AMINOTRANSFERASE (AST)”

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ABSTRAK

Latar Belakang : Pemeriksaan aktivitas enzim *Aspartate Aminotransferase* (AST) adalah salah satu parameter yang digunakan untuk pemeriksaan tes fungsi hati. Pemeriksaan AST cara manual harus membuat reagen kerja atau monoreagen terlebih dahulu. Pembuatan reagen kerja dalam jumlah lebih menyebabkan reagen kerja tersisa sehingga ada yang dibuang atau disimpan untuk pemeriksaan AST berikutnya. Lama penyimpanan reagen kerja akan mempengaruhi hasil pemeriksaan.

Tujuan Penelitian : Mengetahui pengaruh lama penyimpanan reagen kerja terhadap aktivitas enzim *Aspartate Aminotransferase* (AST).

Metode Penelitian : Penelitian ini eksperimen semu dengan desain penelitian *pretest-posttest only control grup design*. Penelitian ini melakukan intervensi terhadap reagen kerja AST yang segera dipakai dan disimpan selama 8, 10 dan 12 hari pada suhu ruang. Kemudian aktivitas enzim AST diukur menggunakan serum sehingga diperoleh 32 data.

Hasil Penelitian : Analisis deskriptif menunjukkan terjadi penurunan dan peningkatan rerata hasil pemeriksaan aktivitas enzim AST menggunakan reagen kerja segera dipakai dan yang disimpan selama 8, 10 dan 12 hari pada suhu ruang. Analisis statistik *Repeated Measures ANOVA* menunjukkan ada pengaruh variasi lama penyimpanan reagen kerja pada suhu ruang terhadap hasil pemeriksaan aktivitas enzim AST dan menunjukkan lama penyimpanan 10 hari sudah memberikan perbedaan yang signifikan.

Kesimpulan : Ada pengaruh lama penyimpanan reagen kerja yang disimpan selama 8, 10, 12 hari pada suhu ruang terhadap hasil pemeriksaan aktivitas enzim AST. Terdapat pengaruh yang bermakna pada hari ke-10 penyimpanan reagen kerja AST.

Kata Kunci : Lama penyimpanan, reagen kerja, enzim *Aspartate Aminotransferase*

“EFFECT OF STORAGE ON WORKING REAGENTS OF THE ASPARTATE AMINOTRANSFERASE (AST) ENZYME ACTIVITY”

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ABSTRACT

Background : Aspartate Aminotransferase (AST) enzyme activity examination is one of the parameters used for liver function tests. The manual AST examination must be working reagents or monoreagents first. The manufacture of working reagents in excess amounts causes the remaining working reagents to be discarded or stored for the next AST examination. The duration of storage of working reagents will affect the results of the examination.

Research Objective : To determine the effect of variations in the storage time of work reagents at room temperature on the activity of the enzyme AST.

Research Methods : This study was a quasi experiment with a pretest-posttest only control group design. This study interfered with AST working reagents which were immediately used and stored for 8, 10 and 12 days at room temperature. Then, the AST enzyme activity was measured using serum, so that 32 data points were obtained.

Result : Descriptive analysis showed that there was a decrease and an increase in the average of the results of examining AST enzyme activity using working reagents that were immediately used and stored for 8, 10 and 12 days at room temperature. Statistical analysis of Repeated Measures ANOVA showed that there was an effect of variations in storage time of working reagents at room temperature on the results of examining AST enzyme activity and showed that 10 days of storage had a significant difference.

Conclusion : There is an effect of storage time of working reagents stored for 8, 10 and 12 days at room temperature on the results of examining AST enzyme activity. There was a significant effect on the 10 days of storage of the AST working reagent.

Keywords : Storage duration, working reagents, aspartate aminotransferase enzyme