

AGREEMENT TEST OF GAMMA GLUTAMYL TRANSFERASE ACTIVITY
MEASUREMENT BY KINETIC METHOD USING A NEW WORKING
REAGENT AND AFTER STORAGE AT THE ROOM TEMPERATURE

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ABSTRACT

Background : Reagents is once of the analytic factors that influence the results of the examination. The stability of the reagent is the things that need to be considered before using reagents for examination one of them, where the reagent that has been opened has a shorter stability period than the unopened reagent.

Objective : To found out the degree of aggrement of Gamma Glutamyl Transferase enzyme activity for the duration of storage of new working reagents and after storage at room temperature.

Research Methods : This type of research was a quasi experimental design with a post test with control group design. The serum used was 11 of the respondents. The examination serum was divided into four groups, each group carried out storage of work reagents for 0 days, 3 days, 6 days and 9 days. Data analysis uses Interclass Correlation Coefficient (ICC) with the provisions of confidence 80% and $\alpha = 0.05$. The ICC correlation coefficient was calculated using Microsoft Excel software then the degree of conformity between measurements with inter observer reliability was determined.

Research Results : The results of this study showed a decrease in the average activity of the Gamma Glutamyl Transferase enzyme which was examined using a storage work reagent 0 days, 3 days, 6 days and 9 days respectively 0.05 U / L; 0.29 U / L and 0.46 U / L. The percentage of each was 0.37%; 2.15% and 3.41%. The results of the analysis using Interclass Correlation Coefficient (ICC) obtained the value of the correlation coefficient between measurements respectively was 0.97; 0.97 and 0.96.

Conclusion : The degree agreement of Gamma Glutamyl Transferase enzyme activity which was examined using a working reagent stored at 0 days, 3 days, 6 days and 9 days with the analysis of the Correlation Coefficient was very good.

Keywords : Storage of work reagents, gamma glutamyl transferase enzyme activity, ICC, inter observer reliability

UJI KESESUAIAN HASIL PENGUKURAN AKTIVITAS ENZIM GAMMA
GLUTAMYL TRANSFERASE METODE KINETIK MENGGUNAKAN
REAGEN KERJA BARU DAN SETELAH PENYIMPANAN
PADA SUHU KAMAR

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ABSTRAK

Latar Belakang : Salah satu faktor analitik yang mempengaruhi hasil pemeriksaan adalah reagensia. Hal-hal yang perlu diperhatikan sebelum menggunakan reagen untuk pemeriksaan salah satunya adalah mengenai stabilitas reagen, dimana reagen yang sudah dibuka memiliki masa stabilitas yang lebih pendek daripada reagen yang belum dibuka.

Tujuan Penelitian : Mengetahui derajat kesesuaian aktivitas enzim *Gamma Glutamyl Transferase* terhadap lama penyimpanan reagen kerja baru dan setelah penyimpanan pada suhu kamar.

Metode Penelitian : Jenis penelitian ini adalah eksperimen semu dengan rancangan *post test with control group design*. Serum yang digunakan berjumlah 11 dari responden. Serum pemeriksaan dibagi menjadi empat kelompok, masing-masing kelompok dilakukan penyimpanan reagen kerja selama 0 hari, 3 hari, 6 hari dan 9 hari. Analisis data menggunakan *Interclass Correlation Coefficient* (ICC) dengan ketentuan kekuatan keyakinan 80% dan nilai $\alpha = 0,05$. Koefisien korelasi ICC dihitung menggunakan perangkat lunak *Microsoft Excel* kemudian ditentukan derajat kesesuaian antar pengukuran menggunakan *inter observer reliability*.

Hasil Penelitian : Hasil penelitian ini menunjukkan penurunan rerata aktivitas enzim *Gamma Glutamyl Transferase* yang diperiksa menggunakan reagen kerja penyimpanan 0 hari, 3 hari, 6 hari dan 9 hari masing-masing adalah 0,05 U/L; 0,29 U/L dan 0,46 U/L. Persentase masing-masing 0,37%; 2,15% dan 3,41%. Hasil analisis menggunakan *Interclass Correlation Coefficient* (ICC) didapatkan nilai koefisien korelasi antar pengukuran adalah 0,97; 0,97 dan 0,96.

Kesimpulan : Derajat kesesuaian aktivitas enzim *Gamma Glutamyl Transferase* yang diperiksa menggunakan reagen kerja yang disimpan pada 0 hari, 3 hari, 6 hari dan 9 hari dengan analisis *Interclass Correlation Coefficient* adalah sangat baik.

Kata Kunci : Penyimpanan reagen kerja, aktivitas enzim *gamma glutamyl transferase*, ICC, *inter observer reliability*