ABSTRAK

Latar Belakang: Pemeriksaan enzim AST/SGOT adalah salah satu pemeriksaan fungsi hati yang dapat dilakukan untuk memverifikasi dugaan pra-klinis terkait penyakit hati non-spesifik. Penyimpanan serum digunakan untuk *tracking specimen* guna mengantisipasi jika terjadi keraguan hasil dan permintaan pemeriksaan tambahan. Dalam penyimpanan sampel penggunaan tabung SST berfungsi untuk menjaga stabilitas analit.

Tujuan: Untuk mengetahui apakah terdapat perbedaan kadar SGOT pada serum pasien diabetes melitus dengan kadar glukosa lebih dari 250 mg/dL yang disimpan 7 hari suhu 2-8°C pada Serum Separator Tube (SST) untuk konfirmasi pemeriksaan SGOT.

Metode: Jenis penelitian ini adalah *pre-experimental* dengan desain penelitian *one group pretest posttest.* Sampel penelitian ini sebanyak 30 sampel serum sisa pasien rawat jalan di Rumah Sakit PKU Muhammadiyah Yogyakarta.

Hasil: Rerata kadar SGOT segera diperiksa (35,70 mg/dl), rerata kadar SGOT disimpan 7 hari pada suhu 2-8ºC (35,23 mg/dl). Perbedaan kadar SGOT dianalisis statistik dengan uji *wilcoxon* didapatkan nilai signifikansi (*Asymp. Sig*) 0,019 (*p value* < 0.05)

Kesimpulan: Terdapat perbedaan secara statistik serum pasien diabetes melitus yang disimpan 7 hari suhu 2-8°C pada Serum Separator Tube (SST) untuk konfirmasi pemeriksaan SGOT, namun tidak bermakna signifikan secara klinis berdasarkan *Acceptance Limits for Proficiency Testing* CLIA, sehingga boleh digunakan untuk konfirmasi pemeriksaan kadar enzim SGOT.

Kata Kunci: Enzim SGOT, Serum Pasien Diabetes Melitus, Penyimpanan Serum

ABSTRACT

Background: The examination of the enzyme AST/SGOT is one of the liver function tests that can be performed to verify preclinical suspicion related to non-specific liver disease. Serum storage is used for specimen tracking to anticipate doubts about results and requests for additional tests. In sample storage, the use of Serum Separator Tubes (SST) functions to maintain analyte stability.
Objective: To determine whether there is a difference in SGOT levels in the serum of diabetes mellitus patients with blood glucose levels above 250 mg/dL stored for 7 days at 2-8°C in Serum Separator Tubes (SST) for SGOT test confirmation.
Methods: This study is a pre-experimental design with a one group pretest-posttest approach. The sample consisted of 30 leftover serum samples from outpatients at PKU Muhammadiyah Yogyakarta Hospital.
Results: The mean SGOT level immediately tested was 35.70 mg/dL, and the mean SGOT level after 7 days of storage at 2-8°C was 35.23 mg/dL. The difference in SGOT levels was analyzed statistically using the Wilcoxon test, yielding a significance value (Asymp. Sig) of 0.019 ($p < 0.05$).
Conclusion: There is a statistically significant difference in SGOT levels in the serum of diabetes mellitus patients stored for 7 days at 2-8°C in Serum Separator Tubes (SST) for SGOT test confirmation. However, this difference is not clinically significant based on the CLIA *Acceptance Limits for Proficiency Testing*, so the samples may still be used for SGOT enzyme level confirmation testing.

Keywords: SGOT Enzyme, Serum of Diabetes Mellitus Patients, Serum Storage