

## ABSTRAK

**Latar Belakang:** Tahap praanalitik merupakan tahap yang menentukan kualitas sampel. Pemeriksaan laboratorium kadar glukosa darah dapat menggunakan sampel serum. Penyimpanan spesimen yang tidak tepat dapat mempengaruhi hasil pemeriksaan salah satunya adalah kadar glukosa darah. Batas maksimal penyimpanan serum untuk pemeriksaan kadar glukosa darah yaitu selama 12 jam pada suhu 2 – 8°C Serum yang dilakukan penyimpanan pada suhu 4°C dapat meminimalkan penurunan kadar kadar glukosa darah meminimalisir masuknya mikroorganisme lain.

**Tujuan Penelitian:** Penelitian ini bertujuan untuk mengetahui perbedaan kadar glukosa darah pada serum segera diperiksa, disimpan selama 12 dan 24 jam pada suhu 2 – 8°C.

**Metode Penelitian:** Jenis penelitian adalah observasional analitik dengan desain penelitian *cross sectional*. Sampel yang digunakan yaitu berasal dari 12 subyek penelitian. Sampel serum dipindahkan ke dalam cup serum dan disimpan pada suhu 2 – 8°C. Serum dilakukan pemeriksaan segera, disimpan selama 12 dan 24 jam pada suhu 2 – 8°C. Data primer yang diperoleh kemudian dianalisis secara deskriptif dan uji statistik, uji *repeated measures ANOVA* jika data berdistribusi normal dan uji *Friedman* jika data tidak berdistribusi normal.

**Hasil Penelitian:** Hasil penelitian menunjukkan bahwa rerata hasil pemeriksaan serum segera diperiksa, disimpan selama 12 dan 24 jam pada suhu 2 – 8°C yaitu 86,42 mg/dl, 76,77 mg/dl dan 63,57 mg/dl. Hasil analisis deskriptif menunjukkan terdapat penurunan rerata kadar glukosa darah seiring lama penyimpanan serum pada suhu 2 – 8°C. Hasil uji *Friedman* menunjukkan  $p(0,000) < 0,05$ .

**Kesimpulan:** Ada perbedaan kadar glukosa darah pada serum segera diperiksa, disimpan selama 12 dan 24 jam pada suhu ruang.

**Kata Kunci:** Kadar glukosa darah, serum, waktu penyimpanan

## ABSTRACT

**Background:** The preanalytic stage, is the stage that determines the quality of the sample. Laboratory examination of blood glucose levels can use serum. Improper storage of specimens can affect the results of the examination, one of which is blood glucose levels. The maximum limit storage serum for checking blood glucose levels is 12 hours at a temperature of 2 – 8 °C. Serum storage at a temperature 4°C can minimize the decrease in blood glucose levels and minimize the entry of other microorganisms.

**Research Objective:** The study aims to determine the difference in serum blood glucose levels immediately examined, stored for 12 and 24 hours at a temperature of 2 – 8°C.

**Research Method:** This research was an analytic observational study with a study design *cross sectional*. The sample used was serum from 12 research subjects. Serum samples were transferred to a serum cups and stored at a temperature of 2 – 8°C. Serum was examined immediately, stored for 12 and 24 hours at a temperature of 2 – 8°C. The primary data obtained were than analyzed descriptively and statistically including data distribution test and *repeated measures ANOVA* test if the data were normally distributed, and *Friedman* test if the data were not normally distributed.

**Result:** The results showed that the mean serum examination result were immediately examined, stored for 12 and 24 hours at a temperature of 2 – 8°C, namely 86,42 mg/dl, 76,77 mg/dl dan 63,57 mg/dl. The results of the descriptive analysis showed an decrease in the mean of blood glucose levels as the serum was a stored at a temperature of 2 – 8°C. *Friedman* test result showed  $p(0.000) < 0.05$ .

**Conclusion:** There are differences in serum blood glucose levels, checked immediately, stored for 12 and 24 hours at a temperature of 2 – 8°C.

**Keyword:** Blood glucose levels, serum, storage time.