

ABSTRAK

Bahan kontrol merupakan hal yang sangat penting dalam pemantapan mutu di laboratorium klinik. Bahan kontrol ini digunakan untuk memantau dan mengawasi kualitas hasil pemeriksaan laboratorium sehari-hari. Saat ini, beberapa laboratorium masih menggunakan bahan kontrol komersial. Namun penggunaan bahan kontrol komersial sangat mahal dan sulit dijumpai ketersediaannya sehingga dapat menyebabkan peningkatan biaya. Hal tersebut membuat adanya penelitian mengenai stabilitas serum liofilisat sebagai bahan kontrol. Penelitian ini bertujuan untuk menganalisis stabilitas serum liofilisat sebagai bahan kontrol kualitas terhadap pemeriksaan alkali fosfatase dan bilirubin total pada suhu 2-8°C selama penyimpanan 0 minggu, 1 minggu, 2 minggu, 3 minggu, 4 minggu, 5 minggu, 6 minggu, 7 minggu, dan 8 minggu.

Jenis penelitian yang digunakan adalah *eksperimental* dengan rancangan penelitian yaitu *time series*. Penelitian ini dilakukan di Laboratorium Reference dan Laboratorium Kimia Klinik Teknologi Laboratorium Medis Poltekkes Kemenkes Surabaya. Penelitian ini dilakukan di bulan Maret hingga Mei 2022.

Hasil penelitian pada Uji Regresi menunjukkan adanya pengaruh lama penyimpanan terhadap kadar alkali fosfatase sebesar 74,88% dan 37,73% terhadap kadar bilirubin total. Hasil pemeriksaan kestabilan serum liofilisat selama 8 minggu dianalisis menggunakan Grafik Levey Jenning terlihat tidak ada nilai yang melebihi $\pm 2SD$. Maka dapat disimpulkan bahwa penggunaan serum liofilisat buatan sendiri stabil selama 8 minggu.

Kata Kunci: Bahan Kontrol, Liofilisat, Alkali Fosfatase, Bilirubin Total

ABSTRACT

Control materials are very important in quality assurance in clinical laboratories. This control material is used to monitor and monitor the quality of the results of daily laboratory examinations. Currently, some laboratories still use commercial control materials. However, the use of commercial control materials is very expensive and difficult to find, which can lead to increased costs. This makes research on the stability of serum lyophilized as a control material difficult. This study aims to analyze the stability of serum lyophilized as a quality control material against the examination of alkaline phosphatase and total bilirubin at a temperature of 2-8 °C during storage for 0 weeks, 1 weeks, 2 weeks, 3 weeks, 4 weeks, 5 weeks, 6 weeks, 7 weeks, and 8 weeks.

The type of research used is experimental with a time series research design. This research was conducted at the Reference Laboratory and Clinical Chemistry Laboratory Technology Medical Laboratory Poltekkes Kemenkes Surabaya. This research was conducted from March to May 2022.

The results of the regression test showed that there was an effect of storage time on alkaline phosphatase levels of 74.88% and 37.73% on total bilirubin levels. The results of the examination of the stability of serum lyophilized for 8 weeks were analyzed using the Levey Jenning chart. It was seen that there was no value that exceeded $\pm 2SD$. So it can be concluded that the use of homemade serum lyophilized is stable for 8 weeks.

Keywords: *Control Material, Lyophilized, Alkaline Phosphatase, Total Bilirubin*