

ABSTRAK

Latar Belakang : Pemantapan mutu merupakan kegiatan yang ditujukan untuk menjamin ketelitian dan ketepatan hasil pemeriksaan laboratorium. Bahan kontrol digunakan untuk memantau ketepatan hasil suatu pemeriksaan hasil pemeriksaan klinis di laboratorium. Bahan kontrol yang biasa digunakan di laboratorium klinik yaitu bahan kontrol komersial. Namun, bahan kontrol komersial mempunyai harga relatif mahal dan sulit untuk diperoleh karena untuk pengadaannya perlu diimpor. Sehingga diperlukan pembuatan bahan kontrol alternatif dari serum sapi. Salah satu pemeriksaan kimia klinik yang menggunakan serum kontrol adalah pemeriksaan ureum.

Tujuan : Mengetahui hasil uji homogenitas serum sapi yang diberi Etilen glikol 7,5% sebelum disimpan pada suhu -20°C dan hasil uji stabilitas serum sapi setelah disimpan pada suhu -20°C selama 5, 10 dan 15 minggu.

Metode : Penelitian ini menggunakan jenis penelitian observasi analitik dengan desain penelitian *one group pre and post test*. Penelitian ini dilaksanakan pada bulan Januari sampai bulan April 2021. Analisis data menggunakan perhitungan ISO 13528 : 2005.

Hasil : Sampel serum sapi dinyatakan homogen, karena telah memenuhi kriteria $S_s \leq 0,3 \sigma$ yaitu $0,43532 \leq 0,77339$. Bahan kontrol dinyatakan stabil apabila $|X_r - Y_r| \leq 0,3 \sigma$. Perhitungan uji stabilitas diperoleh nilai Y_r 5 minggu = 18,65, Y_r 10 minggu = 19,18 dan Y_r 15 minggu = 19,71. Berdasarkan data uji stabilitas serum sapi yang disimpan selama 5 dan 10 minggu dinyatakan stabil, sedangkan selama 15 minggu tidak stabil.

Kesimpulan : Kadar ureum serum sapi homogen dan stabil setelah disimpan selama 5 dan 10 minggu, sedangkan selama 15 minggu tidak stabil.

Kata Kunci : *quality control*, ureum, serum sapi, serum kontrol

ABSTRACT

Background : Quality assurance is activity aimed at ensuring the accuracy and accuracy of laboratory examination results. Control materials used to monitor the accuracy of the results of a clinical examination in the laboratory. Control materials commonly used in clinical laboratories are commercial control materials. However, commercial control materials are relatively expensive and difficult to obtain because they need to be imported. So it is necessary to make alternative control materials from bovine serum. One of clinical chemistry test to be used a control serum is ureum test.

Research Objective: To determined the results of the homogeneity test of bovine serum given ethylene glycol 7,5% before stored at -20°C and the results of the stability test of bovine serum after being stored at -20°C for 5, 10 and 15 weeks.

Research Methods : The type of research was analytical observational research with one group pre and post test research design. This research was from January to April 2021. The data analysis used the calculation of ISO 13528 : 2005.

Results : The samples was declared homogeneous, because it had the criteria $S_s \leq 0,3 \sigma$, which was $0,43532 < 0.77339$. Control material declared stable if $|X_r - Y_r| \leq 0.3 \sigma$. The calculation of the stability test obtained the value of Y_r 5 weeks = 18.65, Y_r 10 weeks = 19.18 and Y_r 15 weeks = 19.71. Based on the stability test data, bovine serum stored for 5 and 10 weeks was declared stable, while for 15 weeks it was unstable.

Conclusion : Ureum levels of bovine serum homogeneous and stable after being stored for 5 and 10 weeks, while for 15 weeks it was unstable.

Keywords : quality control, ureum, bovine serum, control serum

