

ABSTRACT

Background : Internal quality assurance of clinical laboratory is implementing quality control use control material. The control material for quality control in the form of commercial serum are expensive, while every month need 2-4 bottles, that matter be an obstacle in internal quality assurance. Equine serum is recommended by WHO (1986) for material to making of control serum because it's free from infectious disease such as HIV, HBV and HCV. The requirements for making control serum must be homogeneous and stable. One of clinical chemistry test to be use a control serum is ureum test.

Research Objective : To determine for homogeneity and stability ureum levels of equine serum after stored for 10 weeks.

Research Methods : The type of research is quasi-experimental with research design is post-test only design. The data obtained in the form of primary data and calculated by ISO 13528 (2015) for homogeneity and stability test.

Results : The samples was declared homogeneous because it fulfills the criteria of $S_s \leq 0,3 \sigma$ which was $0,5809 \leq 0,8502$. The samples was declared stable because it fulfills the criteria of $|X_r - Y_r| \leq 0,3 \sigma$ which was $0,5789 \leq 0,8502$. Ureum levels of equine serum has fulfilled the requirements for make material control that is homogeneous and stable.

Conclusion : Ureum levels of equine serum homogeneous and stable after stored for 10 weeks.

Keywords : Homogeneity, stability, equine serum, urea.

ABSTRAK

Latar Belakang : Pemantapan mutu internal laboratorium klinik yaitu melaksanakan *quality control* (kontrol kualitas) menggunakan bahan kontrol. Bahan kontrol yang digunakan berupa serum kontrol komersial yang harganya mahal sedangkan setiap bulan membutuhkan 2-4 botol, hal tersebut menjadi kendala dalam pemantapan mutu internal. Serum kuda direkomendasikan oleh WHO (1986) sebagai bahan untuk pembuatan serum kontrol karena bebas dari penyakit menular seperti HIV, HBV dan HCV. Syarat pembuatan serum kontrol harus homogen dan stabil. Pemeriksaan kimia klinik yang menggunakan serum kontrol salah satunya adalah ureum.

Tujuan Penelitian : Mengetahui homogenitas dan stabilitas kadar ureum serum kuda setelah disimpan selama 10 minggu.

Metode Penelitian : Jenis penelitian yang digunakan adalah penelitian eksperimen semu dengan desain penelitian *post-test only design*. Data yang diperoleh berupa data primer dan dihitung menggunakan ISO 13528 (2015) untuk perhitungan uji homogenitas dan stabilitas.

Hasil Penelitian : Sampel dinyatakan homogen karena memenuhi kriteria $S_s \leq 0,3\sigma$ yaitu $0,5809 \leq 0,8502$. Sampel dinyatakan stabil karena memenuhi kriteria $|X_r - Y_r| \leq 0,3\sigma$ yaitu $0,5789 \leq 0,8502$. Kadar ureum serum kuda telah memenuhi syarat dalam pembuatan bahan kontrol yaitu homogen dan stabil.

Kesimpulan : Kadar ureum serum kuda homogen dan stabil setelah disimpan selama 10 minggu.

Kata Kunci : Homogenitas, stabilitas, serum kuda, ureum.