

ABSTRACT

Background : Internal quality assurance of clinical laboratories is carried on in order to obtain the right result. One of the stage in internal quality assurance is quality control using control materials. Unassayed control material usually comes from animals. One of the requirements of control material is homogeneous and stable.

Objective : This study aims to determine the homogeneity and stability of the equine serum total protein levels that stored for 9 and 11 weeks.

Methods : This study is a true experimental with a posttest only control group design. The object used in this study is equine serum. Data analysis uses homogeneity and stability test calculation according to ISO 13528:2015.

Result : Homogeneity test calculations obtained the value of $\bar{X}_r = 6,97$, $S_s = 0,074506$ and $0,3\sigma = 0,895905$, then the sample is homogeneous because it qualifies $S_s \leq 0,3\sigma$ which is $0,074506 \leq 0,895905$. Calculation of stability test obtained Y_r 9 weeks = 6,39 and Y_r 11 weeks = 7,18. Base on the stability test data, equine serum that stored for 9 and 11 weeks was stable because it fulfilled $|X_r - Y_r| \leq 0,3\sigma$ requirement, which is $0,58 \leq 0,895905$ and $0,21 \leq 0,895905$.

Conclusion : Equine serum total protein levels that stored for 9 and 11 weeks are homogeneous and stable.

Keywords : Homogeneity, stability, equine serum, total protein levels.

ABSTRAK

Latar Belakang : Pemantapan mutu internal laboratorium klinik dilakukan agar didapat hasil pemeriksaan yang tepat. Tahap pada pemantapan mutu internal salah satunya adalah *quality control* menggunakan bahan kontrol. Bahan kontrol *unassayed* biasanya berasal dari hewan. Salah satu syarat bahan kontrol adalah homogen dan stabil.

Tujuan Penelitian : Penelitian ini bertujuan untuk mengetahui homogenitas dan stabilitas kadar total protein serum kuda yang disimpan selama 9 dan 11 minggu.

Metode Penelitian : Penelitian ini menggunakan jenis penelitian *true eksperiment* dengan desain penelitian *posttest only control group design*. Objek penelitian ini adalah serum kuda. Analisis data menggunakan perhitungan uji homogenitas dan stabilitas menurut ISO 13528:2015.

Hasil Penelitian : Perhitungan uji homogenitas didapatkan nilai $X_r = 6,97$, $S_s = 0,074506$ dan $0,3\sigma = 0,895905$, maka sampel dinyatakan homogen karena memenuhi syarat $S_s \leq 0,3\sigma$ yaitu $0,074506 \leq 0,895905$. Perhitungan uji stabilitas didapatkan Y_r 9 minggu = 6,39 dan Y_r 11 minggu = 7,18. Berdasarkan data uji stabilitas serum kuda yang disimpan selama 9 dan 11 minggu dinyatakan stabil karena memenuhi syarat $|X_r - Y_r| \leq 0,3\sigma$ yaitu $0,58 \leq 0,895905$ dan $0,21 \leq 0,895905$.

Kesimpulan : Kadar total protein serum kuda yang disimpan selama 9 dan 11 minggu dinyatakan homogen dan stabil.

Kata Kunci : Homogenitas, stabilitas, serum kuda, kadar total protein.