

ABSTRAK

Bahan kontrol penting dalam PME laboratorium. Penggunaan bahan kontrol komersial yang mahal menghambat laboratorium untuk melaksanakan PME secara periodik, maka dikembangkan bahan kontrol *homemade* berupa *pooled sera* dan liofilisat. Penelitian bertujuan mengetahui perbandingan *pooled sera*, liofilisat *homemade* dan komersial pada parameter kolesterol dan trigliserida berdasarkan VIS. Penelitian ini berjenis deskriptif komparatif dengan pendekatan kuantitatif. Dilaksanakan di Laboratorium Fakultas Teknobiologi UBAYA untuk pembuatan liofilisat, laboratorium klinik Polttekes Surabaya dan 2 laboratorium rujukan menentukan *true value*, 10 laboratorium klinik pratama di wilayah Surabaya Raya menentukan VIS. Penelitian dilaksanakan dari Desember 2023-Mei 2024 dengan pemilihan 10 laboratorium klinik pratama wilayah Surabaya Raya menggunakan teknik *Purposive Sampling*. Bahan uji menggunakan *pooled sera*, liofilisat *homemade*, dan komersial. Kriteria berdasarkan VIS terhadap *true value* pada kontrol *pooled sera* parameter kolesterol memiliki kriteria baik 80%, cukup 20%, trigliserida kriteria baik 70%, cukup 20%, kurang 10%, liofilisat *homemade* parameter kolesterol kriteria baik 80%, kurang 20%, trigliserida kriteria baik 60%, cukup 30%, kurang 10%, komersial parameter kolesterol kriteria baik 70%, cukup 20%, kurang 10%, trigliserida kriteria baik 80%, cukup 20%, sedangkan terhadap peserta pada kontrol *pooled sera* parameter kolesterol kriteria baik 80%, cukup 20%, trigliserida kriteria baik 80%, cukup 20%, liofilisat *homemade* parameter kolesterol kriteria baik 70%, cukup 30%, trigliserida kriteria baik 70%, cukup 30%, komersial kriteria baik 90%, cukup 10%, trigliserida kriteria baik 60%, cukup 40%. Uji statistik menunjukkan tidak terdapat perbedaan antara ketiga jenis bahan kontrol pada parameter kolesterol dan trigliserida. Disimpulkan bahwa *pooled sera* dan liofilisat *homemade* dapat dijadikan opsi pengganti kontrol komersial dalam pelaksanaan PME.

Kata Kunci: VIS, *Pooled Sera*, Serum Liofilisat *Homemade*, dan Komersial, Kolesterol, Trigliserida

ABSTRACT

Control materials are important in laboratory PME. The use of expensive commercial control materials prevents laboratories from carrying out PME periodically, so homemade control materials in the form of pooled sera and lyophilizates were developed. This study aims to determine the comparison of pooled sera, homemade and commercial lyophilizates on cholesterol and triglyceride parameters based on VIS. This research is a comparative descriptive type with a quantitative approach. Conducted at the UBAYA Faculty of Technobiology Laboratory for the manufacture of lyophilizates, Poltekkes Surabay clinical laboratory and 2 reference laboratories to determine true value, 10 private clinical laboratories in the Greater Surabaya area to determine VIS. The study was conducted from December 2023-May 2024 with the selection of 10 private clinical laboratories in the Greater Surabaya area using Purposive Sampling technique. Test materials used pooled sera, homemade and commercial lyophilizates. Criteria based on VIS on true value in control pooled sera cholesterol parameters have good criteria 80%, enough 20%, triglycerides good criteria 70%, enough 20%, less 10%, homemade lyophilizate cholesterol parameters good criteria 80%, less 20%, triglycerides good criteria 60%, enough 30%, less 10%, commercial cholesterol parameters good criteria 70%, enough 20%, less 10%, triglycerides good criteria 80%, enough 20%, while the participants in the control pooled sera cholesterol parameters good criteria 80%, enough 20%, triglycerides good criteria 80%, enough 20%, homemade lyophilizate cholesterol parameters good criteria 70%, enough 30%, triglycerides good criteria 70%, enough 30%, commercial criteria good 90%, enough 10%, triglycerides good criteria 60%, enough 40%. Statistical tests showed no difference between the three types of control materials on cholesterol and triglyceride parameters. It was concluded that pooled sera and homemade lyophilizate can be used as an option to replace commercial controls in the implementation of PME.

Keywords: *VIS, Pooled Sera, Homemade and Commercial Serum Lyophilisate, Cholesterol, Triglycerides*