

## ABSTRAK

Peningkatan pelayanan laboratorium kesehatan sangat berhubungan dengan pemantapan mutu laboratorium kesehatan salah satunya adalah serum kontrol. *Homemade Lyophilized Human Serum* merupakan jenis serum kontrol liofilisat buatan sendiri dengan cara mengumpulkan serum manusia lalu dilakukan proses beku kering menggunakan alat freeze-drying pada suhu dan tekanan yang sangat rendah. Penelitian ini bertujuan untuk mengetahui stabilitas *Homemade Lyophilized Human Serum* selama penyimpanan 8 minggu terhadap pemeriksaan glukosa dan asam urat.

Penelitian ini diolah secara deskriptif dengan mengukur kadar glukosa dan asam urat terhadap *Homemade Lyophilized Human Serum* yang disimpan pada suhu 2 – 8°C selama 8 minggu. Kestabilan diperoleh dengan menggunakan uji regresi dan grafik levey-jenings dari hasil pemeriksaan glukosa dan asam urat yang dilakukan di Laboratorium Pramita dan Laboratorium Kampus Poltekkes Surabaya Jurusan Teknologi Laboratorium Medis pada bulan Maret 2022 – Mei 2022.

Hasil uji regresi pada *Homemade Lyophilized Human Serum* terhadap kadar glukosa didapatkan persamaan  $y = -0,2124x + 64,635$  dengan  $R^2 = 0,7899$  yang artinya terdapat pengaruh lama penyimpanan sebesar 78,99% selama 8 minggu sedangkan pada kadar asam urat didapatkan persamaan  $y = -0,0013x + 4,0511$  dengan  $R^2 = 0,0009$  yang artinya terdapat pengaruh lama penyimpanan sebesar 0,09% selama 8 minggu. Dan berdasarkan grafik levey-jennings dapat disimpulkan bahwa kadar glukosa dan asam urat masih stabil selama penyimpanan 8 minggu.

**Kata Kunci :** *Homemade Lyophilized Human Serum, Glukosa, dan Asam Urat*

## ABSTRACT

Improving health laboratory services is closely related to strengthening the quality of health laboratories, one of which is serum control. Homemade Lyophilized Human Serum is a type of homemade lyophilicate control serum by collecting human serum and then the dry freezing process is carried out using a freeze-drying device at very low temperatures and pressures. This study aims to determine the stability of Homemade Lyophilized Human Serum during 8 weeks of storage against glucose and uric acid examinations.

This study was processed descriptively by measuring glucose and uric acid levels against Homemade Lyophilized Human Serum which was stored at a temperature of 2 – 8°C for 8 weeks. Stability was obtained using regression tests and levey-jenings charts from the results of glucose and uric acid tests conducted at the Pramita Laboratory and the Poltekkes Campus Laboratory Surabaya Department of Medical Laboratory Technology in March 2022 – May 2022.

The results of the regression test on Homemade Lyophilized Human Serum on glucose levels obtained equation  $y = -0.2124x + 64.635$  with  $R^2 = 0.7899$  which means that there is an influence on storage duration of 78.99% for 8 weeks while in uric acid levels, equation  $y = -0.0013x + 4.0511$  with  $R^2 = 0.0009$  which means there is an influence on storage length of 0.09% for 8 weeks. And based on the graph of levey-jennings it can be concluded that glucose and uric acid levels are still stable during 8 weeks of storage.

**Keywords :** *Homemade Lyophilized Human Serum, Glucose, and Uric Acid*