

## ABSTRAK

**Latar Belakang :** LDL Cholesterol merupakan lipoprotein pengangkut kolesterol terbesar dalam darah. Gagal Ginjal mengganggu regulasi metabolisme lipid karena kurangnya aktivitas lipoprotein lipase. Serum diperoleh setelah dibekukan dan dilakukan centrifugasi. Penyimpanan sampel dilakukan karena dikhawatirkan akan ada tambahan pemeriksaan sehingga tidak memungkinkan untuk pengambilan darah kembali. Penyimpanan sampel darah sebaiknya dalam bentuk serum.

**Tujuan penelitian :** Mengetahui pengaruh, rata-rata dan persentase selisih lama penyimpanan serum pasien gagal ginjal kronik pada suhu 20-25°C terhadap kadar LDL Cholesterol.

**Metode Penelitian :** Jenis penelitian ini adalah pra eksperimen dengan menggunakan rancangan *one group pretest posttest*. Penelitian ini dilaksanakan pada bulan November 2023. Sampel diambil secara *purposive sampling* sebanyak 40 sampel. Sampel diperiksa kadar LDL Cholesterol di Laboratorium Patologi Klinik RSUD Sleman Yogyakarta menggunakan alat Cobas C311 Clinical Chemistry Analyzer dengan metode direk CHOD-PAP, dari 40 sampel kemudian dilakukan 3 perlakuan yaitu pemeriksaan segera, disimpan selama 4 jam dan 8 jam. Data kemudian diolah menggunakan uji *Repeated Measured Anova*.

**Hasil Penelitian :** Rata-rata kadar LDL Cholesterol pemeriksaan segera adalah 83,80 mg/dL rata-rata kadar LDL Cholesterol penyimpanan 4 jam adalah 82,55 mg/dL dan penyimpanan 8 jam adalah 83,48 mg/dL.

**Kesimpulan :** Tidak ada pengaruh signifikan lama penyimpanan serum pasien gagal ginjal kronik pada suhu 20–25 ° C terhadap kadar LDL Cholesterol ( $p>0,05$ ).

**Kata Kunci :** LDL Cholesterol, Penyimpanan sampel, Gagal Ginjal Kronis

## ABSTRACT

**Background :** LDL Cholesterol is the largest cholesterol-carrying lipoprotein in the blood. Renal failure disrupts the regulation of lipid metabolism due to lack of lipoprotein lipase activity. Serum was obtained after freezing and centrifugation. Storage of samples is done because there is a concern that there will be additional examinations that will not allow for blood collection again. Storage of blood samples should be in the form of serum.

**Objective :** To determine the effect of prolonged storage of serum of chronic renal failure patients at 20-25°C on LDL Cholesterol levels.

**Methods :** This type of research is pre-experimental using one group pretest posttest design. This research was conducted in November 2023. Samples were examined for LDL Cholesterol levels at the Clinical Pathology Laboratory of Sleman Yogyakarta Hospital using Clinical Chemistry Analyzer Cobas C311 with CHOD-PAP method, from 40 samples then carried out 3 treatments were namely immediate examination, stored for 4 hours and 8 hours so that the amount of data obtained was 120 data. The data were then processed using the Repeated Measured Anova test.

**Result :** The result showed that the average LDL Cholesterol level for immediate examination was 83.80 mg/dL, the average LDL Cholesterol level for 4-hours storage was 82.55 mg/dL and 8-hours storage was 83.48 mg/dL.

**Conclusion :** There is no significant effect of the length of storage of serum of chronic renal failure patients at a temperature of 20-25°C on LDL Cholesterol levels ( $p>0.05$ )

**Keyword :** LDL Cholesterol, Sample storage, Chronic Renal Failure