# ABSTRACT

Lipemic serum is a serum condition that is milky and cloudy due to high levels of triglycerides. Such serum conditions may interfere with some tests in the clinical laboratory. One of the tests in the clinical laboratory for monitoring the risk of liver and kidney disease is the examination of total protein levels. Chitosan can be used as an alterative in handling lipemic serum so that the lipemic serum becomes clearer. The purpose of this study was to find out if there was a difference in total protein levels with and without the addition of chitosan to lipemic serum. This type of research is quasi experiment with prettest-posttest only control group design. The study was conducted in March 2021 at the clinical chemistry laboratory of The Health Analyst Departement of The Health Politechnic of The Ministry of Health, Yogyakarta. Serum used in this study as many as 22 lipemic serums obtained from Panembahan Senopati Hospital. Examination of total protein levels with and without the addition of chitosan to lipemic serum using biuret method. There is a noticeable difference between total protein levels with and without the addition of chitosan, the average difference in total protein content with and without the addition of chitosan by 1.03 g / dl (14.37 %). The highest average total protein content was lipemic serum without chitosan, so chitosan was able to reduce lipid levels in lipemic serum.

***Keywords*** *: Lipemik serum, Chitosan, Total Protein*

# ABSTRAK

Serum lipemik merupakan kondisi serum yang berwarna seperti susu dan keruh disebabkan oleh kadar trigliserida yang tinggi. Kondisi serum demikian dapat mengganggu beberapa pemeriksaan di laboratorium klinik. Salah satu pemeriksaan di laboratorium klinik untuk pemantauan resiko penyakit hati dan ginjal adalah pemeriksaan kadar protein total. Kitosan dapat digunakan sebagai alteratif dalam menangani serum lipemik sehingga serum lipemik menjadi lebih jernih. Tujuan dari penelitian ini adalah untuk mengetahui apakah ada perbedaan kadar protein total dengan dan tanpa penambahan kitosan pada serum lipemik. Jenis penelitian ini adalah quasi eksperimen dengan desain penelitian *Prettest-Posttest Only Control Group Design*. Penelitian ini dilaksanakan pada bulan Maret 2021 di laboratoium kimia klinik Jurusan Analis Kesehatan Poltekkes Kemenkes Yogyakarta. Serum yang digunakan dalam penelitian ini sebanyak 22 serum lipemik yang diperoleh dari Rumah Sakit Panembahan Senopati. Pemeriksaan kadar protein total dengan dan tanpa penambahan kitosan pada serum lipemik menggunakan metode biuret. Terdapat perbedaan yang nyata antara kadar protein total dengan dan tanpa penambahan kitosan, rata-rata selisih kadar protein total dengan dan tanpa penambahan kitosan sebesar 1,03 g/dl (14,37 %). Rata-rata kadar protein total tertinggi yaitu serum lipemik yang tidak diberikan kitosan, sehingga kitosan mampu menurunkan kadar lipid dalam serum lipemik.

***Kata Kunci*** *: Serum lipemik, Kitosan, Protein Total*