

## ABSTRAK

**Latar Belakang :** Hemolisis merupakan salah satu penyebab kesalahan terbesar pada tahap praanalitik. Sampel hemolisis berpengaruh pada pemeriksaan laboratorium karena adanya hemoglobin dalam serum mengganggu proses reaksi pemeriksaan asam urat. Peneliti ingin meneliti pengaruh kadar hemoglobin dalam serum terhadap hasil pemeriksaan kadar asam urat.

**Tujuan Penelitian :** Mengetahui pengaruh kadar hemoglobin dalam serum terhadap hasil pemeriksaan kadar asam urat.

**Metode Penelitian :** Penelitian ini termasuk eksperimen murni menggunakan *pre and post test with control*. Sampel berupa serum yang dibagi menjadi 6 kelompok, yang masing-masing ditambah 0  $\mu$ l, 335  $\mu$ l, 665  $\mu$ l, 1000  $\mu$ l, 1335  $\mu$ l, dan 1665  $\mu$ l hemolisis dengan kadar hemoglobin 840 mg/dl sehingga didapatkan kadar hemoglobin dalam campuran 0 mg/dl, 85,2 mg/dl, 170,4 mg/dl, 231 mg/dl, 340,8 mg/dl, dan 426,1 mg/dl. Serum yang sudah ditambah hemoglobin diukur kadar asam urat dengan metode enzimatik fotometri. Data hasil pemeriksaan kadar asam urat diperoleh sebanyak 42 data yang dianalisis secara deskriptif dan statistik.

**Hasil Penelitian :** Analisis deskriptif menunjukkan penurunan kadar asam urat pada serum yang mengandung hemoglobin. Uji *One-Way ANOVA* menunjukkan adanya perbedaan kadar hemoglobin dalam serum 0 mg/dl, 85,2 mg/dl, 170,4 mg/dl, 231 mg/dl, 340,8 mg/dl, dan 426,1 mg/dl terhadap hasil pemeriksaan kadar asam urat. Uji lanjut menunjukkan taraf signifikan dengan  $p < 0,05$ . Uji korelasi menunjukkan hubungan yang sangat kuat antara kadar hemoglobin dalam serum dengan hasil pemeriksaan kadar asam urat. Persentase penurunan hasil pemeriksaan kadar asam urat karena kadar hemoglobin dalam serum sebesar 99,3 % dan 0,7 % karena faktor lain.

**Kesimpulan :** Ada pengaruh kadar hemoglobin dalam serum terhadap hasil pemeriksaan kadar asam urat. Semakin tinggi kadar hemoglobin dalam serum, hasil pemeriksaan kadar asam urat semakin menurun.

**Kata Kunci :** Kadar hemoglobin, penambahan hemolisis dalam serum, kadar asam urat.

## ABSTRACT

**Background :** Hemolysis is one of the biggest causes of mistake at the preanalytic stage. Hemolysis samples have an effect on laboratory tests because the presence of hemoglobin in the serum interferes with the uric acid examination reaction process. Researcher wanted to reserch the effect of hemoglobin levels in serum on the results of uric acid examination.

**Research Objective :** To determine the effect of hemoglobin levels in serum on the results of uric acid examination.

**Research Method :** This study included true experiments using pre and post test with control. The sample used was serum which divided into 6 groups, each added 0 µl, 335 µl, 665 µl, 1000 µl, 1335 µl, and 1665 µl hemolysat with a hemoglobin level of 840 mg / dl so that it is obtained hemoglobin levels in a mixture of 0 mg/dl, 85,2 mg/dl, 170,4 mg/dl, 231 mg/dl, 340,8 mg/dl, and 426,1 mg/dl. Serum that has been added by hemoglobin is measured by uric acid levels by photometric enzymatic method. Data result of uric acid examination levels were 42 data analyzed descriptively and statistically.

**Result :** Descriptive analysis showed there was a decrease uric acid levels in serum containing hemoglobin. *One-Way ANOVA* test showed there was a difference in serum hemoglobin levels 0 mg/dl, 85,2 mg/dl, 170,4 mg/dl, 231 mg/dl, 340,8 mg/dl, dan 426,1 mg/dl to the results of uric acid examination. Post Hoc test showed a significant level with  $p < 0,05$ . Correlation test showed a very strong relationship between hemoglobin levels in serum with the results of uric acid examination. The percentage decrease in the results of examination uric acid due to hemoglobin levels in serum amount 99.3% and 0.7% due to other factors.

**Conclusion :** There is an effect of hemoglobin levels in serum to the results of uric acid examination. The higher hemoglobin level in serum, the lower results of uric acid examination.

**Keywords :** Hemoglobin levels, additions of hemolysat in serum, uric acid levels.