

## ABSTRAK

**Latar Belakang** : Proses pemeriksaan di laboratorium meliputi tahap pra analitik, analitik dan pasca analitik. Tahap pra analitik merupakan kesalahan yang paling sering terjadi dan sampel hemolisis menjadi penyumbang kesalahan dengan presentase terbesar pada tahap tersebut. Sampel hemolisis mempengaruhi hampir seluruh pemeriksaan kimia darah termasuk pada pemeriksaan kadar natrium.

**Tujuan Penelitian** : Mengetahui pengaruh kadar hemoglobin dalam serum terhadap hasil pemeriksaan kadar natrium dan mengetahui batas minimal kadar hemoglobin dalam serum yang dapat mempengaruhi hasil pemeriksaan natrium.

**Metode Penelitian** : Jenis penelitian ini adalah eksperimen semu dengan rancangan penelitian *post test only control group design*. Sampel berupa serum yang dibagi menjadi 6 kelompok. Setiap kelompok dibuat 500  $\mu$ L campuran yang masing-masing ditambah hemolizat (kadar 2782 mg/dL) sebanyak 0  $\mu$ L; 11  $\mu$ L; 18  $\mu$ L; 32  $\mu$ L; 53  $\mu$ L dan 82  $\mu$ L sehingga kadar hemoglobin dalam campuran yaitu 0 mg/dl; 61,2 mg/dL; 100,2 mg/dL; 178,1 mg/dL; 294,9 mg/dL; dan 456,3 mg/dL. Hasil pemeriksaan kadar natrium diperoleh 30 data, kemudian data dianalisis menggunakan SPSS 16.0 *for windows*.

**Hasil Penelitian** : Gangguan hemolisis tidak menunjukkan hasil yang signifikan meskipun terdapat 456,3 mg/dL hemoglobin di dalam serum. Hasil uji One Way ANOVA dengan tingkat kepercayaan 95% memiliki nilai signifikan sebesar 0,641 ( $p \geq 0,05$ ).

**Kesimpulan** : Tidak ada pengaruh kadar hemoglobin dalam serum terhadap hasil pemeriksaan kadar natrium.

**Kata Kunci** : hemolisis, kadar hemoglobin, kadar natrium

## ABSTRACT

**Background:** The examination process in the laboratory includes the pre-analytic, analytic, and post-analytic stages. The pre-analytic stage is the most common error and the hemolysis sample contributes to the error with the largest percentage at that stage. Hemolysis samples affect almost all blood chemistry tests including examination of sodium levels.

**Research Objectives:** To determine the effect of hemoglobin levels in serum on the results of the examination of sodium levels and determine the minimum limit of hemoglobin levels in serum that can affect the results of sodium examination.

**Research Method:** This type of research is a quasi-experimental research design with a post-test only control group design. Samples in the form of serum were divided into 6 groups. Each group was made 500  $\mu$ L mixture, each added hemolysate (2782 mg / dL levels) as much as 0  $\mu$ L; 11  $\mu$ L; 18  $\mu$ L; 32  $\mu$ L; 53  $\mu$ L and 82  $\mu$ L so that the hemoglobin level in the mixture was 0 mg/dl; 61.2 mg/dL; 100.2 mg/dL; 178.1 mg/dL; 294.9 mg/dL and 456.3 mg/dL. The results of the examination of sodium levels obtained 30 data, then data were analyzed using SPSS 16.0 for windows.

**Research Results:** Hemolysis interference did not show significant results although there are 456,3 mg/dL of hemoglobin in the serum. The results of the One-Way ANOVA test with a 95% confidence level has a significant value of 0,641 ( $p \geq 0,05$ ).

**Conclusion:** No effect of hemoglobin levels in serum on the results of the examination of sodium levels.

**Keywords:** hemolysis, hemoglobin levels, sodium levels