

**SODIUM LEVELS IN SERUM OF HYPERTENSION PATIENTS
EXAMINED IMMEDIATELY, AFTER 4 AND 8 HOURS STORAGE
AT ROOM TEMPERATURE (20-25)°C**

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ABSTRACT

Background: One of the non-communicable diseases that is a priority in the health world is hypertension. One of the causes of hypertension is excessive sodium intake. Samples for electrolyte measurements should be analysed as soon as they are received within 1-2 hours to avoid false elevated results. In the laboratory, there is often a request for additional examination using the previous serum.

Objectives: This study aims to determine the difference in sodium levels in the serum of hypertensive patients examined immediately, after 4 and 8 hours of storage at room temperature (20-25)°C.

Research Methods: This study is a pre-experiment type study with a one group pretest posttest design and purposive sampling technique. The research sample used the serum of hypertensive patients of prolans Puskesmas Gondokusuman 2 as many as 40 samples. The research was conducted in October 2023. Serum samples were carried out 3 treatments, namely examined immediately, stored after 4 and 8 hours and then measured sodium levels in each treatment. Sodium levels in the samples were measured with the AVL 9180 Electrolyte Analyser Ion Selective Electrode (ISE) method. The data were statistically analysed with Repeated Measured Anova test using SPSS 25.0 for windows.

Results: The results showed a difference in the mean results of sodium levels. Statistical analysis showed $p(0.000) < 0.05$ which means there is a difference in sodium levels in the serum of hypertensive patients examined immediately, after being stored 4 and 8 hours at room temperature (20-25)°C.

Conclusion: This study shows that there are significant differences in sodium levels in the serum of hypertensive patients examined immediately, after being stored 4 and 8 hours at room temperature (20-25)°C.

Key words: Sodium, delayed examination, room temperature

**KADAR NATRIUM PADA SERUM PASIEN HIPERTENSI YANG
DIPERIKSA SEGERA, SETELAH DISIMPAN 4 DAN 8 JAM
PADA SUHU RUANG (20-25)°C**

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ABSTRAK

Latar Belakang: Salah satu penyakit tidak menular yang menjadi prioritas dalam dunia kesehatan adalah hipertensi. Penyebab hipertensi salah satunya karena asupan natrium yang berlebih. Sampel untuk pengukuran elektrolit harus dianalisis segera setelah diterima dalam 1-2 jam untuk menghindari hasil yang meningkat palsu. Di laboratorium sering adanya permintaan pemeriksaan tambahan menggunakan serum yang sebelumnya.

Tujuan Penelitian: Penelitian ini bertujuan untuk mengetahui perbedaan kadar natrium pada serum pasien hipertensi yang diperiksa segera, setelah disimpan 4 dan 8 jam pada suhu ruang (20-25)°C.

Metode Penelitian: Penelitian ini merupakan penelitian jenis pra-eksperimen dengan desain penelitian one group pretest posttest design dan teknik pengambilan sampel dengan *purposive sampling*. Sampel penelitian menggunakan serum pasien hipertensi prolans Puskesmas Gondokusuman 2 sebanyak 40 sampel. Penelitian dilaksanakan pada bulan Oktober 2023. Sampel serum dilakukan 3 perlakuan yaitu diperiksa segera, disimpan setelah 4 dan 8 jam kemudian dilakukan pengukuran kadar natrium pada masing-masing perlakuan. Kadar natrium pada sampel diukur dengan alat AVL 9180 Electrolyte Analyzer metode Ion Selective Electroda (ISE). Data hasil penelitian dianalisis statistik dengan uji *Repeated Measured Anova* menggunakan *SPSS 25.0 for windows*.

Hasil: Hasil penelitian menunjukkan adanya perbedaan rerata hasil pemeriksaan kadar natrium. Analisis statistik menunjukkan $p(0,000) < 0,05$ yang artinya ada perbedaan kadar natrium pada serum pasien hipertensi yang diperiksa segera, setelah disimpan 4 dan 8 jam pada suhu ruang (20-25)°C.

Kesimpulan: Penelitian ini menunjukkan bahwa terdapat perbedaan kadar Natrium yang signifikan pada serum pasien hipertensi yang diperiksa segera, setelah disimpan 4 dan 8 jam pada suhu ruang (20-25)°C.

Kata kunci: Natrium, penundaan pemeriksaan, suhu ruang