

**“PERBEDAAN KADAR KREATININ YANG DIPERIKSA MENGGUNAKAN
REAGEN DENGAN PENDIAMAN SUHU RUANG DAN TANPA
PENDIAMAN SUHU RUANG”**

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ABSTRAK

Latar Belakang : Reagen, atau reaktan, penting dalam reaksi kimia. Suhu penggunaan reagen penting diperhatikan karena memengaruhi laju reaksi. Aktivitas enzim dalam reagen sangat sensitif terhadap suhu, pada suhu rendah reaksi kimia berlangsung lambat, sedangkan pada suhu yang tinggi reaksi kimia pada reagen berlangsung lebih cepat.

Tujuan : Mengetahui perbedaan penggunaan reagen yang dikeluarkan dari kulkas dan didiamkan pada suhu ruang terhadap hasil pemeriksaan kadar kreatinin dengan bahan kontrol.

Metode : Penelitian pra-eksperimental dengan desain *one group pretest-posttest* ini membandingkan hasil pemeriksaan kadar kreatinin menggunakan reagen yang disimpan pada suhu ruang dengan reagen yang langsung digunakan pada bahan kontrol normal.

Hasil : Rata-rata kadar kreatinin dengan reagen langsung digunakan tanpa pendiaman mendapatkan rata-rata 0,9mg/dL sedangkan reagen dengan suhu ruang mendapatkan hasil 1,5mg/dL. Hal ini menunjukkan kadar kreatinin mengalami penurunan jika menggunakan reagen dingin. Hasil pengujian statistic menggunakan uji *t-independen* didapatkan nilai Sig. 0,000 (<0,05) sehingga Dari hasil tersebut menunjukkan terdapat perbedaan signifikan terhadap hasil pemeriksaan.

Kesimpulan : Hasil pemeriksaan kadar kreatinin dengan menggunakan reagen langsung digunakan dan setelah didiamkan pada suhu ruang terdapat perbedaan yang signifikan

Kata Kunci : Kreatinin, Suhu Reagen, Optimalisasi suhu pemeriksaan, pengaruh suhu terhadap reagen

"DIFFERENCES IN CREATININE LEVELS WERE CHECKED USING REAGENTS AT ROOM TEMPERATURE AND WITHOUT ROOM TEMPERATURE"

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ABSTRACT

Background : Reagents, or reactants, are important in chemical reactions. The temperature at which the reagents are used is important because it affects the rate of reaction. The activity of enzymes in reagents is very sensitive to temperature, at low temperatures chemical reactions occur slowly, while at high temperatures chemical reactions in reagents occur faster.

Objective : To determine the difference in the use of reagents removed from the refrigerator and left at room temperature on the results of creatinine level examinations with control materials.

Reasearch Methods : This pre-experimental study with a one group pretest-posttest design compared the results of creatinine level examinations using reagents stored at room temperature with reagents used directly on normal control materials.

Reasearch Results : The average creatinine level with the reagent used directly without being left to stand was obtained an average of 0.9 mg/dL while the reagent at room temperature obtained a result of 1.5 mg/dL. This shows that creatinine levels decrease when using cold reagents. The results of statistical testing using the t-independent test obtained a Sig. value of 0.000 (<0.05) so that these results indicate that there is a significant difference in examination results.

Conclusion : The results of the creatinine level examination using the reagent were used immediately and after being left at room temperature there was a significant difference.

Keywords : Creatinine, Reagent Temperature, Optimization of examination temperature, effect of temperature on reagent.