

ABSTRAK

Latar belakang : Teknologi laboratorium medis telah mengalami perkembangan signifikan dalam beberapa tahun terakhir, laboratorium klinik memainkan peran vital dalam sistem pelayanan Kesehatan, Salah satu pemeriksaan penting dalam laboratorium kimia klinik adalah kadar asam urat, penundaan pemeriksaan di laboratorium klinik puskesmas maupun laboratorium rumah sakit sering terjadi akibat beberapa faktor. Faktor tersebut antara lain tingginya jumlah sampel yang harus diproses.

Tujuan : Penelitian ini bertujuan untuk mengetahui perbedaan kadar asam urat pada sampel darah dalam tabung *Serum Separator Tube* (SST) yang segera disentrifugasi dan didiamkan selama 30 menit sebelum disentrifus.

Metode : Metode penelitian ini adalah studi pre-eksperimental dengan desain *pre-post test*. Sampel darah dari sejumlah responden dibagi menjadi dua kelompok perlakuan: (1) disentrifus segera, dan (2) didiamkan 30 menit sebelum disentrifus. Kadar asam urat diukur menggunakan metode enzimatik pada kedua perlakuan, kemudian dibandingkan secara statistik menggunakan uji t berpasangan.

Hasil : Terdapat perbedaan yang signifikan antara kadar asam urat pada sampel darah dalam tabung SST yang segera disentrifus dan yang didiamkan selama 30 menit.

Kesimpulan : Penundaan waktu sentrifugasi selama 30 menit pada tabung SST dapat memengaruhi kadar asam urat dalam sampel, sehingga waktu penanganan praanalitik perlu diperhatikan guna menjaga keakuratan hasil pemeriksaan laboratorium.

Kata kunci : Asam urat, *Serum Separator Tube* (SST), *Sentrifus*, *Penundaan*, *Stabilitas sampel*

ABSTRACT

Background: Medical laboratory technology has undergone significant advancements in recent years, and clinical laboratories play a vital role in healthcare systems. One of the essential tests in clinical chemistry laboratories is uric acid level. Delays in testing at public health center laboratories and hospital laboratories often occur due to several factors, including the high volume of samples that must be processed.

Objective: This study aims to determine the difference in uric acid levels in blood samples collected in Serum Separator Tubes (SST) that are centrifuged immediately compared to those left to stand for 30 minutes before centrifugation.

Methods: This study used a pre-experimental method with a pre-post test design. Blood samples from several respondents were divided into two treatment groups: (1) centrifuged immediately and (2) left to stand for 30 minutes before centrifugation. Uric acid levels were measured using the enzymatic method in both treatments and statistically analyzed using a paired t-test.

Results: There was a significant difference in uric acid levels between the blood samples in SST tubes that were centrifuged immediately and those left to stand for 30 minutes.

Conclusion: A 30-minute delay in centrifugation in SST tubes can affect the uric acid level in the sample, indicating that pre-analytical handling time needs to be considered to maintain the accuracy of laboratory test results.

Keywords: Uric acid, Serum Separator Tube (SST), Centrifugation, Delay, Sample stability