

ABSTRAK

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PENGARUH VARIASI WAKTU PENUNDAAN SENTRIFUGASI SERUM DAN PLASMA EDTA TERHADAP KADAR ASAM URAT

xvii + 73 Halaman + 12 Tabel + 11 Lampiran

Kesalahan pra-analitik seperti penundaan sentrifugasi dapat memengaruhi stabilitas spesimen dan hasil pemeriksaan laboratorium, termasuk kadar asam urat. Serum dan plasma EDTA merupakan bahan uji yang sering digunakan, namun keduanya memiliki perbedaan dalam menjaga kestabilan zat kimia saat terjadi keterlambatan pemeriksaan. Penelitian ini bertujuan menganalisis pengaruh penundaan sentrifugasi terhadap kadar asam urat pada serum dan plasma EDTA. Penelitian *quasi-eksperimental* dengan pendekatan *cross-sectional* ini dilakukan di Laboratorium RS Emma Mojokerto pada November 2024–Mei 2025 menggunakan sampel darah vena yang diproses menjadi serum dan plasma EDTA dengan penundaan sentrifugasi 30, 60, 90, dan 120 menit. Pemeriksaan kadar asam urat dilakukan dengan metode *Uricase-PAP* secara kolorimetri enzimatik menggunakan *Automatic Analyzer BA200*, kemudian dianalisis dengan uji *Anova one-way*. Hasil menunjukkan penurunan signifikan kadar asam urat pada serum ($p < 0,05$), sedangkan plasma EDTA tetap stabil. Kesimpulannya, plasma EDTA lebih stabil dalam dibandingkan serum dalam mempertahankan kadar asam urat meskipun terjadi penundaan sentrifugasi hingga 120 menit

Kata kunci: Asam Urat, Serum, Plasma EDTA, Penundaan Sentrifugasi
Daftar Bacaan: 5 buku (2017 – 2022)

ABSTRACT

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*EFFECT OF VARIATION OF DELAY TIME OF SERUM AND PLASMA EDTA
SENTRIFUGATION ON URATIC ACID RATES*

xvii + 73 Pages + 12 Tables + 11 Appendices

Pre-analytical errors such as delayed centrifugation can affect specimen stability and laboratory test results, including uric acid levels. Serum and EDTA plasma are commonly used test materials, but they differ in their ability to maintain chemical stability when testing is delayed. This study aims to analyze the effect of centrifugation delays on uric acid levels in serum and EDTA plasma. This quasi-experimental study with a cross-sectional approach was conducted at the Emma Mojokerto Hospital Laboratory from November 2024 to May 2025 using venous blood samples that were processed into serum and EDTA plasma with centrifugation delays of 30, 60, 90, and 120 minutes. Uric acid levels were examined using the Uricase-PAP method by enzymatic colorimetry using an Automatic Analyzer BA200, then analyzed using a one-way ANOVA test. The results showed a significant decrease in uric acid levels in serum ($p < 0.05$), while EDTA plasma remained stable. In conclusion, EDTA plasma is more stable than serum in maintaining uric acid levels even with centrifugation delays of up to 120 minutes

Keywords: *Uric Acid, Serum, EDTA Plasma, Delayed Centrifugation*
Reading List: *5 books (2017 – 2022)*