

# PEMERIKSAAN KADAR KALIUM PADA SERUM PENDERITA GAGAL GINJAL KRONIK

*(The Examination of Potassium Level in the Serum of Patients with  
Chronic Renal Failure (CRF))*

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## INTISARI

**Ivana,P,N. 2017. Pemeriksaan Kadar Kalium pada serum Penderita Gagal Ginjal Kronik. Program Studi D-III Analisis Kesehatan, Fakultas Ilmu Kesehatan Universitas Setia Budi Surakarta.**

Gagal Ginjal Kronik merupakan destruksi struktur ginjal yang progresif dan terus-menerus, dimana fungsi ginjal mengalami penurunan untuk mempertahankan keseimbangan metabolik dan cairan elektrolit yang dapat menyebabkan uremia. Pada gagal ginjal kronik, kalium sering meningkat dan menyebabkan hiperkalemia, hiperkalemia terjadi karena menurunnya kemampuan laju filtrasi glomerulus (LFG) untuk melakukan transpor kalium berupa ekskresi ke dalam tubulus distal yang dapat memicu terjadinya peningkatan kadar kalium dalam serum. Tujuan penelitian ini adalah mengetahui adanya peningkatan kadar kalium pada penderita gagal ginjal kronik.

Pemeriksaan kadar kalium dilakukan di Laboratorium Klinik Universitas Setia Budi Surakarta terhadap 25 sampel serum penderita gagal ginjal kronik dari RSUD Dr. Moewardi Surakarta. Pemeriksaan kadar kalium menggunakan metode Tetraphenylboron dan menggunakan monoreagen Kalium, standart Kalium, kemudian dibaca kadarnya dengan alat fotometer Stardust FC.

Hasil penelitian dari 25 sampel serum pada gagal ginjal kronik menunjukkan bahwa 64% sampel mengalami peningkatan kadar kalium yang disebabkan oleh penurunan laju filtrasi glomerulus (LFG) yang menyertai gagal ginjal kronik. Sedangkan 36% tidak mengalami peningkatan karena penderita mengkonsumsi obat yang dapat mengurangi kadar kalium.

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**Kata kunci:** *Gagal Ginjal Kronik, Kalium.*

## ABSTRACT

**Ivana, P.N. 2017. *The Examination of Potassium Level in the Serum of Patients with Chronic Renal Failure (CRF)*. The Study Program of Three-Year Diploma (D-III) in Medical Laboratory Technology. The Faculty of Health Sciences. Universitas Setia Budi. Surakarta**

Chronic renal failure (CRF) is a progressive and prolonged destruction of kidney structure, in which the function of kidney drops, particularly its function to maintain metabolic balance and electrolyte which may lead to uremia. In chronic renal failure, potassium often increases and this condition causes hyperkalemia to happen. This is so due to the decrease of glomerular filtration rate (GFR) level to transport potassium through excretion to distal tubules which can trigger an increase of potassium level in the serum. This study aims at investigating the increase of potassium level of patients with chronic renal failure.

Examination on potassium levels were carried out in the Clinical Laboratory of Universitas Setia Budi in Surakarta to 25 serum samples of patients with chronic renal failure in Public Regional Hospital (RSUD) of Dr. Moewardi, Surakarta. The determination of potassium level was done using Tetraphenylboron method and potassium mono-reagent and potassium, and the level was later read using photometer Stardust FC.

The results of research on 25 serum samples of patients with chronic renal failure demonstrate that the potassium level of 64% samples appear to have increased caused by the decrease of glomerular filtrate rate (GFR) accompanying chronic renal failure. Meanwhile, the potassium level of 36% samples do not increase since the patients have taken medicine to reduce the potassium level.

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**Keywords:** *chronic renal failure, potassium.*