

**POLITEKNIK KESEHATAN KEMENKES TANJUNGPURUNING  
PROGRAM SARJANA TERAPAN**

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**PERBEDAAN KADAR GLUKOSA DARAH PUASA DALAM SERUM,  
PLASMA EDTA, DAN PLASMA NaF PADA PASIEN PROLANIS DI  
PUSKESMAS BUMIRATU KABUPATEN PRINGSEWU**

xvi + 29 halaman, 7 tabel, 3 gambar, 13 lampiran

**ABSTRAK**

Glukosa darah merupakan tingkat konsentrasi glukosa dalam sirkulasi darah yang berfungsi sebagai sumber energi bagi sel tubuh. Glukosa dapat diukur menggunakan serum, plasma, atau darah utuh. Antikoagulan yang dapat digunakan seperti EDTA, NaF, Natrium Sitrat, dan Lithium Heparin. Penelitian ini bertujuan mengetahui perbedaan kadar glukosa darah puasa dalam serum, plasma EDTA, dan plasma NaF di Puskesmas Bumiratu Kabupaten Pringsewu yang dilakukan bulan Maret s.d. Mei 2024. Jenis penelitian analitik menggunakan Uji *One-Way Anova*. Total populasi terdapat 67 pasien dengan sampel penelitian 3 orang yang diperiksa 10 kali pengulangan menggunakan metode enzimatis heksoninase. Hasil distribusi frekuensi penelitian ini memiliki rata-rata kadar glukosa darah puasa pada serum yaitu 152 mg/dL dengan rentang nilai 142 mg/dL hingga 164 mg/dL. Hasil pemeriksaan kadar glukosa darah puasa pada plasma EDTA memiliki rata-rata 150 mg/dL dengan rentang nilai 140 mg/dL hingga 163 mg/dL. Sedangkan rata-rata kadar glukosa darah puasa pada plasma NaF yaitu 154 mg/dL dengan rentang nilai 142 mg/dL hingga 168 mg/dL. Hasil penelitian menunjukkan bahwa tidak terdapat perbedaan signifikan pada kadar glukosa darah puasa pada serum dan plasma EDTA. Kadar glukosa pada serum dan plasma NaF juga tidak terdapat perbedaan signifikan. Sedangkan kadar glukosa darah pada plasma EDTA dan plasma NaF terdapat perbedaan signifikan.

Kata Kunci: Glukosa Darah, Plasma, Serum, Antikoagulan

Daftar Bacaan: 31 (2001 – 2023)

**HEALTH POLYTECHNIC OF THE MINISTRY OF HEALTH  
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**DIFFERENCES IN FASTING BLOOD GLUCOSE LEVELS IN SERUM,  
EDTA PLASMA, AND NaF PLASMA IN PROLANIS PATIENTS AT THE  
BUMIRATU HEALTH CENTER, PRINGSEWU REGENCY**

xvi + 29 pages, 7 tables, 3 images, 13 appendices

**ABSTRACT**

Blood glucose is the level of glucose concentration in the blood circulation that functions as a source of energy for the body's cells. Glucose can be measured using serum, plasma, or whole blood. Anticoagulants that can be used are EDTA, NaF, Sodium Citrate, and Lithium Heparin. This study aims to determine the difference in fasting blood glucose levels in serum, EDTA plasma, and NaF plasma at the Bumiratu Health Center, Pringsewu Regency, which was carried out from March to May 2024. This type of analytical research uses the Anova One-Way Test. The total population was 67 patients with a study sample of 3 people who were examined 10 times using the enzymatic method of hexonose. The results of the frequency distribution of this study had an average fasting blood glucose level in serum of 152 mg/dL with a value range of 142 mg/dL to 164 mg/dL. The results of the examination of fasting blood glucose levels in EDTA plasma had an average of 150 mg/dL with a value range of 140 mg/dL to 163 mg/dL. Meanwhile, the average fasting blood glucose level in NaF plasma was 154 mg/dL with a value range of 142 mg/dL to 168 mg/dL. The results of the study showed that there was no significant difference in fasting blood glucose levels in serum and EDTA plasma. There was also no significant difference in glucose levels in serum and NaF plasma. Meanwhile, there was a significant difference in blood glucose levels in EDTA plasma and NaF plasma.

Keywords: Blood Glucose, Plasma, Serum, Anticoagulant  
Reading List: 31 (2001 – 2023)