

## **PERBEDAAN GLUKOSA DARAH MENGGUNAKAN SAMPEL SERUM DAN PLASMA EDTA**

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### **ABSTRAK**

Pemeriksaan laboratorium sangat diperlukan untuk membantu menegakkan diagnose suatu penyakit. Pemeriksaan kadar glukosa darah biasanya menggunakan sampel serum dan plasma EDTA. Serum adalah Plasma tanpa fibrinogen sedangkan plasma masih mengandung fibrinogen dan rentan tercampur eritrosit. Kadar glukosa darah menggunakan sampel plasma EDTA kadarnya lebih rendah dibanding sampel serum dikarenakan plasma rentan tercampur eritrosit kemudian eritrosit akan memakan energi yang ada didalam plasma sehingga kadar glukosa rendah. Tujuan penelitian adalah mengetahui adanya perbedaan kadar glukosa darah sewaktu dalam sampel serum dan plasma EDTA. Jenis Penelitian ini analitik dengan desain *crossectional*. Sampel adalah darah vena dari 29 orang staff dan karyawan Puskesmas Wonosalam I, Kabupaten Demak yang dimasukkan dalam 2 tabung yang berbeda, serum dan EDTA. Kadar glukosa sampel diperiksa dengan metode glukosa oksidase (GOD). Analisis uji statistik menggunakan Uji *Paired T-Test* untuk membedakan kadar glukosa darah menggunakan sampel serum dan plasma EDTA. Hasil penelitian didapatkan rerata kadar glukosa darah sampel serum 92,4 mg/dl dan rerata kadar glukosa darah sampel plasma EDTA 91,9 mg/dl. Uji *Paired T-Test* menunjukkan hasil kadar glukosa darah menggunakan sampel serum dan plasma EDTA tidak terdapat perbedaan yang bermakna ( $p$  Value  $> 0,05$ ) yaitu  $0,080 > 0,05$ .

Kata Kunci : Glukosa darah , Serum, Plasma EDTA

## BLOOD GLUCOSE DIFFERENCE SAMPLES SERUM AND PLASMA EDTA

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### ABSTRACT

Laboratory tests are necessary to help establish a disease diagnosis. Examination of blood glucose levels usually use serum and plasma EDTA samples. Serum is Plasma without fibrinogen while plasma still contains fibrinogen and susceptible mixed erythrocytes. Blood glucose levels using EDTA plasma samples were lower than serum samples because of the susceptible plasma mixed with erythrocytes and the erythrocytes would consume the energy present in the plasma resulting in low glucose levels. The objective of the study was to determine the differences in blood glucose levels in serum and plasma EDTA samples. This research type is analytic with crossectional design. The sample was the venous blood of 29 staff and employees of Wonosalam I Public Health Center, Demak District which was included in 2 different tubes, serum and EDTA. Sample glucose levels were examined by glucose oxidase (GOD) method. Statistical analysis using Paired T-Test to differentiate blood glucose levels using serum and plasma EDTA samples. The result showed that blood glucose level of serum sample 92,4 mg / dl and mean of blood glucose level of EDTA sample 91,9 mg / dl. Paired T-Test test showed the results of blood glucose levels using serum and plasma EDTA samples there was no significant difference ( $p$  Value $>$  0.05) that is  $0.080 > 0.05$ .

*Key words :* Blood glucose, Serum, EDTA Plasma