

EFFECT OF BLOOD SAMPLE TRANSFER TREATMENT WITHOUT  
REMOVING THE NEEDLE ON *ASPARTATE AMINOTRANSFERASE* (AST)  
EXAMINATION

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**ABSTRACT**

**Background :** Transfer of blood samples from the sput to the tube without removing the needle especially by spraying it can potentially result in hemolysis. This happens because the diameter of the needle that is too narrow causes erythrocytes to squeeze together so that the erythrocyte cell wall rubs against each other and has the potential to cause damage to the erythrocyte wall to hemolysis. Serum hemolysis is very influential on clinical chemical examination, one of which is *Aspartate Aminotransferase* (AST).

**Objective of the Study :** To find out the effect of blood sample transfer treatment without removing the needle to the *Aspartate Aminotransferase* (AST) examination.

**Research Methods :** This type of research is observational analytics using cross sectional design. Samples in the form of venous blood from 16 people. Each sample is divided into 2 tubes. The first tube is given the treatment of transferring blood samples by removing the needle and the second tube is given the treatment of transferring blood samples without removing the needle and spraying. Then the data was statistically analyzed with wilcoxon nonparametric tests using SPSS 25.0 for windows.

**Results :** Descriptive analysis showed the average difference in AST examination results between the treatment of blood sample transfer by removing the needle and without removing the needle was 11.50 U / L. The value of AST enzyme activity with the transfer of blood samples without removing the needle increased by an average of 71.84%. Wilcoxon's nonparametric test results were obtained by Asym Sig. (2-tailed) of 0.000 (<0.005) indicating the influence of blood sample transfer treatment without removing the needle against *Aspartate Aminotransferase* (AST) test.

**Conclusion :** There was an influence of increasing the activity value of the enzyme *Aspartate Aminotransferase* (AST) by 71.84%. in samples treated with the transfer of blood samples without removing the needle.

**Keywords :** Blood sample transfer, hemolysis, *Aspartate Aminotransferase* (AST)

PENGARUH PERLAKUAN PEMINDAHAN SAMPEL DARAH TANPA  
MELEPAS JARUM TERHADAP PEMERIKSAAN *ASPARTATE*  
*AMINOTRANSFERASE* (AST)

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**ABSTRAK**

**Latar Belakang :** Pindahkan sampel darah dari spuit ke tabung yang dilakukan tanpa melepas jarum apalagi dengan menyemprotkannya dapat berpotensi mengakibatkan hemolisis. Hal ini terjadi karena diameter jarum yang terlalu sempit menyebabkan eritrosit saling berhimpit sehingga dinding sel eritrosit bergesekan dan berpotensi mengakibatkan kerusakan dinding eritrosit hingga hemolisis. Serum hemolisis sangat berpengaruh pada pemeriksaan kimia klinik salah satunya yaitu *Aspartate Aminotransferase* (AST).

**Tujuan Penelitian :** Untuk mengetahui pengaruh perlakuan pemindahan sampel darah tanpa melepas jarum terhadap pemeriksaan *Aspartate Aminotransferase* (AST).

**Metode Penelitian :** Jenis penelitian ini adalah observasional analitik menggunakan desain *cross sectional*. Sampel berupa darah vena yang berasal dari 16 orang. Tiap sampel dibagi ke dalam 2 tabung. Tabung pertama diberi perlakuan pemindahan sampel darah dengan melepas jarum dan tabung kedua diberi perlakuan pemindahan sampel darah tanpa melepas jarum dan disemprotkan. Kemudian data dianalisis secara statistik dengan uji nonparametrik Wilcoxon menggunakan SPSS 25.0 *for windows*.

**Hasil Penelitian :** Analisis deskriptif menunjukkan rerata selisih hasil pemeriksaan AST antara perlakuan pemindahan sampel darah dengan melepas jarum dan tanpa melepas jarum adalah sebesar 11,50 U/L. Nilai aktivitas enzim AST dengan pemindahan sampel darah tanpa melepas jarum mengalami kenaikan rata-rata sebesar 71,84%. Hasil uji nonparametrik Wilcoxon diperoleh *Asym Sig. (2-tailed)* sebesar 0,000 (<0,005) yang menunjukkan adanya pengaruh perlakuan pemindahan sampel darah tanpa melepas jarum terhadap pemeriksaan *Aspartate Aminotransferase* (AST).

**Kesimpulan :** Ada pengaruh peningkatan nilai aktivitas enzim *Aspartate Aminotransferase* (AST) sebesar 71,84%. pada sampel yang diberi perlakuan pemindahan sampel darah tanpa melepas jarum.

**Kata Kunci :** Pindahkan sampel darah, hemolisis, *Aspartate Aminotransferase* (AST)