

# PENGARUH PEMBERIAN EKSTRAK DAUN PEPAYA TERHADAP KADAR ALANIN TRANSAMINASE

*Studi Eksperimental Tikus Jantan Galur Wistar yang Dipapar Asap Rokok Kretek*

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## ABSTRAK

Kandungan flavonoid, vitamin C, dan vitamin E pada daun pepaya dapat mencegah terbentuknya radikal bebas dengan mekanisme donor elektron. Penelitian ini bertujuan untuk mengetahui pengaruh ekstrak daun pepaya terhadap kadar Alanin Transaminase (ALT) pada tikus jantan galur Wistar yang diberi paparan asap rokok kretek.

Penelitian eksperimental dengan rancangan "*post-test only controlled group design*", menggunakan subjek uji 18 ekor tikus jantan galur Wistar, dibagi dalam kelompok kontrol negatif, kelompok EDP 40mg, dan kelompok EDP 80mg. Perlakuan diberikan selama 14 hari, dengan paparan asap rokok kretek 5 batang per hari. Hari ke-14 setelah perlakuan terakhir tikus kemudian dipuasakan selama 12 jam, hari ke-15 diambil darah melalui vena orbita untuk pengukuran Alanin Transaminase (ALT). Data ALT dianalisis dengan uji *One Way Anova* dilanjutkan uji *Post-Hoc LSD*.

Rerata kadar ALT kelompok kontrol negatif, kelompok EDP 40mg, kelompok EDP 80mg, masing-masing adalah  $172.26 \text{ IU/L} \pm 15.23$ ,  $70.736 \text{ IU/L} \pm 8.26$ , dan  $61.34 \text{ IU/L} \pm 7.15$ . Hasil uji *One Way Anova* menunjukkan bahwa terdapat perbedaan bermakna terhadap kadar ALT pada ketiga kelompok dengan nilai p sebesar 0,000 ( $p < 0,05$ ). Uji *Post Hoc LSD* menunjukkan bahwa terdapat perbedaan bermakna ( $p < 0,05$ ) antara kelompok kontrol negatif dengan EDP 40mg dan EDP 80mg.

Kesimpulan penelitian ini adalah ekstrak daun pepaya dapat menurunkan kadar alanin transaminase pada tikus jantan galur Wistar yang dipapar asap rokok kretek.

**Kata Kunci** : Ekstrak daun pepaya, Alanin Transaminase (ALT), Rokok kretek

**EFFECT OF PAPAYA LEAF EXTRACT ON ALANIN TRANSAMINASE LEVEL IN  
MALE WISTAR RATS EXPOSED TO CLOVE CIGARETTE SMOKE**

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**ABSTRACT**

**Background :** *The flavonoid, vitamin C, and vitamin E in papaya leaf has been show to prevent free radical formation by electron donor mechanism. The aim of this research was to determine the effect of papaya leaf extract on Alanin Transaminase (ALT) level in male wistar rats exposed to clove cigarette smoke.*

**Method :** *This was an experimental study with a post-test only controlled group design, eight male wistar rats were randomly divided into 3 groups: negative control group was exposed to clove cigarette smoke, EDP 40 and EDP 80mg were pretreatment with papaya leaf extract 40mg and 80mg respectively, followed by a clove cigarette smoke for 14 days. The 14th day after the last treatment, the rats was fasted for 12 hours. Blood samples were taken from the opthalmicus vein and subjected to ALT level evaluation day 15. Data were analyzed using One Way ANOVA test followed by Post-Hoc LSD test.*

**Result :** *Mean ALT level in negative control group, EDP 40mg group, and EDP 80mg group 172.26 IU / L  $\pm$  15.23; 70,736 IU / L  $\pm$  8.26; and 61.34 IU / L  $\pm$  7.15, respectively. There was a significant effect in each group ( $p < 0.05$ ).*

**Conclusion :** *The conclusion of this research is papaya leaf extract can decrease alanine transaminase level in in male wistar rats exposed to clove cigarette smoke.*

**Keywords :** *Papaya Leaf Extract, Alanin Transaminase. Clove cigarette.*