

# PENGARUH PEMBERIAN SARI MARKISA UNGU (*Passiflora edulis var edulis*) BERBAGAI DOSIS TERHADAP KADAR SGOT DAN SGPT

Studi Uji Toksisitas Subkronis pada Tikus (*Rattus norvegicus*) Galur Wistar

## ABSTRAK

**Latar Belakang:** Sari markisa ungu telah diketahui memiliki manfaat bagi kesehatan. Penelitian uji toksisitas subkronis digunakan untuk melihat kemungkinan adanya efek toksik, informasi dosis yang tidak menimbulkan efek toksik, serta sebagai pedoman perkiraan risiko pajanan sari markisa ungu pada manusia.

**Tujuan:** Mengetahui pengaruh pemberian sari markisa ungu (*Passiflora edulis var edulis*) berbagai dosis dalam jangka waktu 28 hari terhadap kadar SGOT dan SGPT tikus (*Rattus norvegicus*) galur Wistar pada uji toksisitas subkronis.

**Metode:** Penelitian eksperimental dengan *posttest only with control group design*. Sejumlah 50 ekor tikus jantan dibagi menjadi 5 kelompok. Kelompok I: kontrol normal, II: sari markisa ungu dosis 4,2 mL/200gBB/hari, III: 8,4 mL/200gBB/hari, IV: 12,6 mL/200gBB/hari, V: 16,8 mL/200gBB/hari dalam satu kali pemberian yang dipekatkan dengan teknik *freeze drying*. Pemeriksaan kadar SGOT dan SGPT menggunakan metode Kinetik.

**Hasil:** Rerata kadar SGOT kelompok I=  $179,80 \pm 17,66$  U/L, II=  $162,56 \pm 20,59$  U/L, III=  $166,30 \pm 20,72$  U/L, IV=  $196,22 \pm 24,96$  U/L, V=  $183,67 \pm 22,77$  U/L. Uji *Kruskal-Wallis* dan *Post Hoc Mann-Whitney* ( $p > 0,05$ ) pada kelompok kontrol dengan kelompok perlakuan. Rerata kadar SGPT kelompok I=  $98,6 \pm 19,01$  U/L, II=  $93 \pm 21,09$  U/L, III=  $102,6 \pm 27,07$  U/L, IV=  $85,3 \pm 13,74$  U/L, V=  $89,8 \pm 16,88$  U/L. Uji *One Way ANOVA* menunjukkan  $p = 0,403$  ( $p > 0,05$ ).

**Kesimpulan:** Pemberian sari markisa ungu berbagai dosis tidak berpengaruh secara signifikan terhadap kadar SGOT dan SGPT tikus galur Wistar pada uji toksisitas subkronis.

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**Kata Kunci:** Sari Markisa Ungu, SGOT, SGPT, Uji Toksisitas Subkronis

**THE EFFECT OF VARIOUS DOSES OF PURPLE PASSION FRUIT  
(*Passiflora edulis var edulis*) JUICE ON AST AND ALT LEVELS**

**Subchronic Toxicity Test of Rats (*Rattus norvegicus*) Wistar**

**ABSTRACT**

**Background:** Purple passion fruit juice has been known for its benefits for health. This sub-chronic toxicity test is used to examine the possibility of a toxic effect, the dosage that doesn't cause a toxic effect, and as a guidance for risk estimation on the human consumption.

**Objective:** To understand the effect of the administration of purple passion fruit juice (*Passiflora edulis var edulis*) in various doses for 28 days on AST dan ALT levels of rats (*Rattus norvegicus*) of the Wistar strain in a sub-chronic toxicity test.

**Methods:** True experimental with posttest-only control-group design. A total 50 male rats were randomly assigned to 5 groups. Group I: control healthy group, II: juice-administered group with a dose of 4,2 mL/200gBB/day, III: 8,4 mL/200gBB/day, IV: 12,6 mL/200gBB/day, V: 16,8 mL/200gBB/day in one administration that had been concentrated with freeze-drying technique. AST and ALT levels were analyzed with Kinetic method.

**Results:** The mean AST level of Group I= 179,80 ± 17,66 U/L, II= 162,56 ± 20,59 U/L, III= 166,30 ± 20,72 U/L, IV= 196,22 ± 24,96 U/L, V= 183,67 ± 22,77 U/L. Kruskal-Wallis and Post Hoc Mann-Whitney test shows ( $p > 0,05$ ) between control group and treated group. The mean ALT level of Group I= 98,6 ± 19,01 U/L, II= 93 ± 21,09 U/L, III= 102,6 ± 27,07 U/L, IV= 85,3 ± 13,74 U/L, V= 89,8 ± 16,88 U/L. One Way ANOVA test shows  $p = 0,403$  ( $p > 0,05$ ).

**Conclusion:** The administration of purple passion fruit juice in various doses doesn't significantly affect the AST and ALT levels of rats of Wistar strain in sub-chronic toxicity test.

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**Keywords:** ALT, AST, Purple Passion Fruit Juice, Sub-chronic Toxicity Test