Assessment of acute toxicity of *Averrhoa carambola* (starfruit) juice in Wistar rats

[1]Chandrasena USD, [1] Abeykoon, AMHK, [2] Ratnayake, WMKM, [3] Kumari, KDKP, [4] Suresh TS,
[1]Department Medical Laboratory Sciences, Faculty of Allied Health Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka.
[2]Department of Pharmaceutical and Cosmetic Sciences, Faculty of Health Sciences, CINEC Campus,
. [3]Department of Basic Sciences, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka
[4]Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka.

Introduction

- ***Averrhoa carambola*** L. (**starfruit**) is a commonly consumed fruit with a high nutrition value.
- It is popular as a fruit juice.
- However, it has been reported that the fruit contains the neurotoxin, caramboxin and a large concentration of oxalic acid, which may exert harmful effects on kidneys.

Methodology

Male wistar rats (n=12)

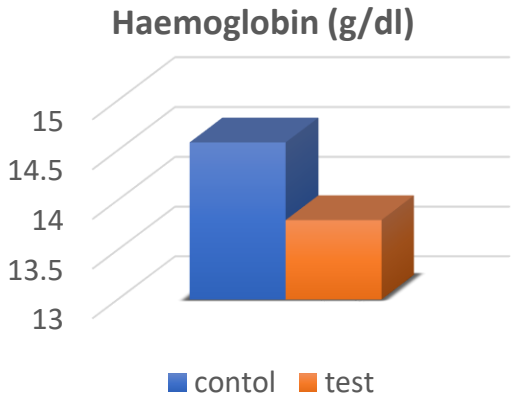
Control group (n=6) — **Fed with distilled water**

Test group (n=6) — **Fed with juice of star fruit**

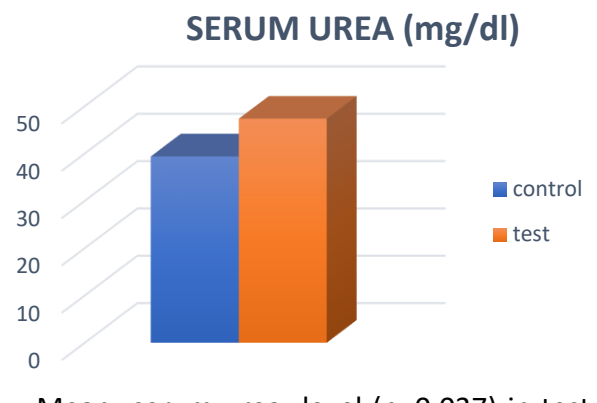
After 24 hours

Urine and blood were collected and subjected to **serum biochemical, haematological and urine analysis**

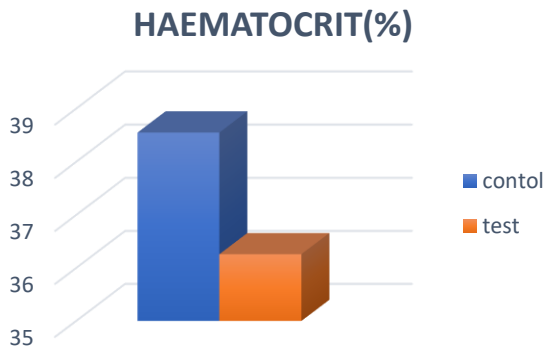
Results



Mean haemoglobin level (p=0.022) in test group compare with control group .



Mean serum urea level (p=0.037) in test group compare with control group .



Mean Haematoctit level (p=0.019) in test group compare with control group .

Serum AST levels (p=0.001) showed a significant difference while ALT level did not show significant difference (p>0.05) compared to the control group.

Conclusions

The results suggest that the consumption of starfruits in high doses leads to development of an acute anaemic condition and a degree of acute renal impairment.