

## ABSTRACT

### **CHITOSAN PROTECTIVE EFFECT TO MICE (*Mus musculus L*) RENAL HISTOPATOLOGY INDUCED BY PLUMBUM ACETATE**

By

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Plumbum is a heavy metal that is harmful to health. Plumbum poisoning incidence rate in Indonesia is still relatively high. Plumbum poisoning can cause health problems such as encephalopathy, anemia, epilepsy, cerebellum damage, hallucinations and even kidney damage. Kidney disorders can be seen from the description of the histopathological finding of chronic interstitial fibrosis picture. Plumbum excretion in the kidneys may affect kidney function, considering kidney is an organ that is very important to set the function to maintain the volume, composition and distribution of body fluids as well as issuing the metabolism of the body that are not used and medicines. Damage to the kidneys will have an impact on metabolic waste that can not be removed and poison the body. The main source of pulverizing the chitosan is chitin is the main component of *Crustacea* group structure of the animal body, *Arthropods*, *Annelid* and *Molluscs*. Chitosan as absorbent of heavy metals that can bind plumbum. So it is important to see the effectiveness of chitosan against induced renal histopathologic picture plumbum. This research method is a purely experimental, with the design of this reserach is post test control group design. Samples were mice (*Mus musculus L*) as many as 25 animals were selected randomly divided into 5 groups of renal histopathology.

The results of the observations obtained negative control group result is normal, positive control group showed two degrees of damage, the frist treatment group showed the most damage degree one and two, two and three treatment groups showed a degree of damage. There is the effect of giving an overview of plumbum on kidney histopathology and there is the effect of chitosan on kidney induced histopathological picture of plumbum acetate.

**Keywords :** *Plumbum, Kidney, Chitosan*