

Abstract: This research aims to determine the effect of the acute toxicity test of white turmeric extract (*Curcuma zedoaria*) on the brain organ. This research is experimental research with a Post Test Only Control Group Design. This research was conducted at the Pharmacy and Histology Laboratory, Faculty of Medicine, University of North Sumatra. The research was carried out from January to March 2023. The population in this research involved male white rats (*Rattus norvegicus*). The results of the acute toxicity test of white turmeric extract for 14 days showed no signs of toxicity or death in rats given the smallest to largest doses, resulting in an apparent LD50 value of white turmeric extract is >2 g/kgBW, and is classified in the practically non-toxic category. Rats that received white turmeric extract showed movement or activity, appearing more energetic by the end of the second week with increasing doses. Histopathological examination of the brain in the acute toxicity test revealed minimal changes, such as edema and congestion in line with increasing doses.

Keywords: Cerebral Hostopathology, Toxicity Test, *Curcuma Zedoria*