



Research Article

**EFFECT OF RED BETEL (*Piper crocatum* Ruiz and Pav.)
ETHANOL EXTRACT AGAINST CARBON TETRACHLORIDE
INDUCE HEPATIC INJURY IN RATS**

Loura Novilia*, Urip Harahap, Poppy Anjelisa Z Hsb

Faculty of Pharmacy, University of Sumatera Utara, Medan, 20155, Indonesia

ABSTRACT:

Hepatic disorder is one of a big problem in health system especially cirrhosis. Based on WHO, the prevalence of cirrhosis is 1,3% and 18th caused death about 800.000 cases. Herbal medicines are widely used in treatment and prevention of liver diseases. One of the plants used is red betel. The purpose of this study is to determine the hepatoprotective activity of ethanol extract of red betel, the reduced levels of ALT, AST, and ALP, and the description of changes in hepatocytes. The ethanol extract of red betel was founded by maceration. The hepatoprotective test was divided into two groups: the curative and preventive test. In the curative test, a rat that had been induced with CCl₄ given ethanol extract 600 mg/kg bw each day for 15 days. In the preventive test, rats were given ethanol extract 600 mg/kg bw each day and CCl₄ each 4 hours for 45 days. During giving the extract, ALT, AST, and ALP were measured and the hepatocytes were observed and calculated at five visual fields. Phytochemical screening showed that bioactive compounds contained in red betel leaves are alkaloids, flavonoids, saponin, tannins, glycosides, steroid/triterpenoid. Results indicate that red betel ethanol extract has a hepatoprotective effect on CCl₄ induced hepatotoxicity in rats.

Keywords: CCl₄, Hepatoprotective, Rats, Red betel.