

Inhibitory Potential of Dewandaru (*Eugenia Uniflora* L) Leaves Extracts on GST Activity of Rat Liver

Wahyu Utami*, Farida Yanuarti D.K., Supardi

Faculty of Pharmacy, Muhammadiyah University of Surakarta

ABSTRACT

In some tumor cases, the Glutathione S-Transferase (GST) have been known increased. It causes anticancer drugs would be metabolized faster. Natural phenolic compounds, including flavonoid, were known to inhibit GST activity. The medicinal plant Dewandaru (*Eugenia uniflora* L.) contains terpenoid, phenol compounds such as tannin, and flavonoid. This research aims are to determine the inhibitory potency of chloroform, ethyl acetate, and ethanol extract of Dewandaru leaves on GST activity of rat liver by in vitro using 1-chloro-2,4-dinitrobenzene (CDNB) and 1,2-dichloro-4-nitrobenzene (DCNB) as substrates. The research results showed all extracts have inhibitory effect on GST activity. IC_{50} values of chloroform, ethyl acetate, and ethanol extract using CDNB as a substrate are 316.75; 862.05; 306.47 $\mu\text{g/ml}$ respectively, and by DCNB substrate are 304.43; 487.56; 283.16 $\mu\text{g/ml}$ consecutively. Dewandaru leaves extracts were shown inhibitory effect on GST rat liver activity by in vitro using CDNB and DCNB as substrates.

Key words: Glutathione (GSH), Glutathione S-Transferase (GST), Dewandaru (*Eugenia uniflora* L.), 1-chloro-2,4-dinitrobenzene (CDNB), 1,2-dichloro-4-nitrobenzene (DCNB)