

## Lipoxygenase Inhibitory Assay of *Averrhoacarambola* L. Leaves Extract

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**Abstract:**Lipoxygenase(LOX) is one of the enzymes involved in the mechanism of inflammation. Flavonoid compounds have been studied to inhibit the inflammatory pathway. Apigenin is a member of flavonoids that act as anti-inflammatory compounds. The leaves of plants *Averrhoacarambola* L. (sweet star fruit) has been known to contain apigenin. This study was conducted to test the ability of *A. carambola* L. leaves as a natural ingredient that plays a role in inhibiting inflammation. The research using in vitro LOXs enzyme inhibition method. *A. carambola* L. Leaves extracted using 70% ethanol, and fractioned with hexane, ethyl acetate, and water. Each test, sample testing LOXs enzyme inhibition with linoleate acid as the substrate. The product was measured using spectrophotometer at wavelength 234 nm and the control comparison using apigenin. The results showed that ethyl acetate fraction of *A. carambola* leaves may inhibit LOXs best with the IC<sub>50</sub> value of  $7.84 \pm 0.03$  ppm compared to other samples, 70% Ethanol Extract, water fraction, and Hexane fraction with IC<sub>50</sub> values in a row  $37.00 \pm 0.58$ ,  $64.09 \pm 1.97$  and  $107.71 \pm 2.02$  ppm. IC<sub>50</sub> values of apigenin as a positive control showed IC<sub>50</sub>  $2.03 \pm 0.831$  ppm.

**Keywords:**Apigenin, *Averrhoacarambola*L., Lipoxygenase, inhibitor.

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