

Warapon Poonsri 2014: Toxicity and Its Possible Mechanism of *Bauhinia scandens* Extract on *Plutella xylostella* (Lepidoptera: Plutellidae). Master of Science (Biology), Major Field: Biology, Department of Zoology. Thesis Advisor: Assistant Professor Vasakorn Bullangpoti, Ph.D. 77 pages.

The insecticidal activity of materials derived from the *Bauhinia scandens* extracts against *Plutella xylostella* were examined via topical application method. The biologically active constituent was characterised as the long chain alkane, among various extracts dichloromethane based extract was the best with an LD50 of  $3,778 \pm 135.48$  ppm and  $2,426.55 \pm 5.77$  ppm at 24 and 48 hours after exposed. This extract after sequented fractionation gave Tetradecane 0.33%, Hexadecane 0.87%, Octadecane 1.26%, Nonadecane 0.28%, Eicosane 1.39%, Heneicosane 0.91%, Docasane 2.51%, Tricosane 3.52%, Tetracosane 8.28%, Pentacosane 19.01%, Hexacosane 25.88% and Heptacosane 34.67%. This alkanes mixture which caused LD50 2,925.25 ppm. Detoxification enzyme for mode of action were studied. These results indicated that *B. scandens* may be a promising naturally occurring agent for *P. xylostella* larval control.

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