

Effect of Vinclozolin on Some Biochemical Parameters of *Galleria mellonella* (Lepidoptera: Pyralidae)

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Abstract : This study aimed to determine the effect of vinclozolin on some biochemical characteristics of *Galleria mellonella* (Lepidoptera: Pyralidae) which is an economically harmful species damaging the honeycomb in beekeeping. For experimental groups, the eggs obtained from stock were dropped into the mixed feed of vinclozolin at different doses (20, 40 and 60 ppm) and had the larvae fed with this feed. As result of the addition of vinclozolin at concentrations of 20, 40 and 60 ppm, glycogen contents of *G. mellonella* were determined and a significant reduction in the amount of glycogen was observed with increasing concentration of vinclozolin. In this study, activity of catalase enzyme, particularly effective in defense mechanism, activity of xanthine oxidase involved in nucleotide metabolism and activity of glucose oxidase in the metabolism of carbohydrates were measured. When compared with the results from control groups, the enzyme activities of the larvae fed with the feed including 20, 40 and 60 ppm of vinclozolin were observed to vary or remain constant. Accordingly, glucose oxidase and catalase activities increased with the increase in amount of vinclozolin in the feed and the activity of xanthine oxidase remained stable.

Keywords : Catalase, *Galleria mellonella*, glucose oxidase, vinclozolin, xanthine oxidase.

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