

## Insecticide induced changes in haemolymph protein profiles of *Spodoptera frugiperda* (F) (Lepidoptera:Noctuidae)

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**ABSTRACT:**

Nine insecticides were evaluated for their toxicity (LC<sub>50</sub>) and 50% lethal times (LT<sub>50</sub>) against 3<sup>rd</sup> instar *Spodoptera frugiperda* larvae. Two groups of insecticides were identified based on LC<sub>50</sub> and LT<sub>50</sub> values. Bright<sup>®</sup> 30EC was the most toxic (LC<sub>50</sub> = 0.0006 µg/g) while Fastac<sup>®</sup> 5EC was the least toxic (LC<sub>50</sub> = 0.6046µg/g) among all the insecticides tested. Haemolymph protein changes from insecticide treated larvae were also determined. The total haemolymph protein content in insecticide treated larvae was generally lower than the control. Additionally, the number of protein bands present in electrophoresis gels of insecticide treated larvae was also lower than that of untreated larvae. The implications of these results are discussed.

**Keywords:**

*Spodoptera frugiperda*, Insecticides, Haemolymph proteins, Induced changes.