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### Preventive Action of Ascorbic Acid and $\beta$ -Carotene from Beta-Cyfluthrin Insecticide Toxicity on Rats

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**Abstract:** The present study investigated the protective potential of ascorbic acid and  $\beta$ -carotene supplementation in intoxication rats by pyrethroid betacyfluthrin insecticide. Salivation and diarrhea was observed in betacyfluthrin treated-rats. Significant increase in the level of total protein, albumin, bilirubin, urea, creatinine, cholesterol and triglycerides in treated rats with insecticides associated toxicity as compared to untreated animals. Co-administration of  $\beta$ -carotene and ascorbic acid significant improvement in the concentrations of all parameters was seen. In the recovery period, most of the vital parameters amounts reached normal level pointing towards degradations of betacyfluthrin in the treated –rats. Generally, results revealed the highest total residues of betacyfluthrin were found in stomach followed by liver (4.53 and 3.7 ppm, respectively), while the lowest were detected in spleen (0.392 ppm). The total amounts of this insecticide detected in kidney and fats were 1.47 and 1.37 ppm. On the other hand, our results revealed that ascorbic acid and  $\beta$ -carotene didn't effect on betacyfluthrin residues in different organs. Consequently, it seems that an antioxidant agents may be useful in decreasing the adverse effects of exposure to different toxicants compounds or pollutants.

**Key words:** Betacyfluthrin,  $\beta$  carotene, Ascorbic acid, Antioxidant.

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