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P36. ACUTE TOXICITY OF SYNTHETIC PYRETROID PESTICIDE ESBIOTHRIN ON GUPPY (*Poecilia reticulata*)

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The acute toxic effects of esbiothrin, a synthetic piretroid pesticide contaminating aquatic ecosystems was investigated on fish in the present study. Guppy (Poecilia reticulata), standart species for bioassays according to OECD, was selected as a test animal for determination of the acute toxicity of esbiothrin. Experiments were conducted in two stages as range finding test and main test. In each experiment, six different esbiothrin concentrations and two control groups have been used. The experiment has been carried out with static bioassay method on three series during 96 h. Datas were evaluated using the U.S. E.P.A. LC50 computer program based on Finney's Probit Analysis Method. According to bioassay results 24, 48, 72 and 96 h LC50 (95% confidence limits) values for guppy exposed to esbiothrin [(RS)-3-allyl-2-methyl-4-oxocyclopent-2-enyl (1R, 3R)-2,2 dimethyl -3-(2-methylprop-1-enyl)cyclopropanecarboxylate] were 173.57 (137.10-229.86) µg/L, 129.83 (98.33-162.27) µg/L, 106.71 (79.59-132.76) µg/L, 91.55 (67.19-115.78) µg/L, respectively.

It has been observed that, contrary to control group, guppy exposed to different concentrations of esbiothrin were swimmed upside down, crowded at the water surface of the aquarium, some of them moved rapidly or slowly before death, and showed abnormal swimming. After death, some fish had swollen abdomen and hemorrhage at the base of the fins.

Esbiothrin is found extremely toxic to guppy, a standard bioassay organism.

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