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P45. HISTOLOGICAL EFFECTS OF TRIBENURON METHYL SPLEEN TISSUE OF ZEBRAFISH *(Danio rerio)*

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Examination the histopathological effects of tribenuron methyl on spleen tissue of zebrafish were aimed.

Tribenuron methyl is an herbicide that used to control dicots in cereals and fallow land. It inhibits the synthesis of aminoacids, specifically valine and isoleucine, which prevents cell division and cell growth. It is generally applied as spray and it access to soil directly and transferred to the roots. Pesticides access aquatic ecosystems via ground waters and affect water quality and aquatic life. In our study, examination the histopathological effects of tribenuron methyl on spleen tissue of zebrafish were aimed.

Zebrafish were raised in a computer-controlled incubation chamber, and received 14 hours of daylight and 10 hours of darkness everyday. After one-week adaptation period zebrafish divided into four group (n=10) as one control and 3 experimental groups (40mg/L, 80mg/L, 120mg/L). For investigating the effects of tribenuron methyl, spleen tissues were dissected after 5 day of the exposure. Tissues were fixed with 10% neutral buffered formalin and dehydration were carried out in an ascending series of ethanol. After tissues were cleared in xylene, embedded in paraffin wax and cut into 5 µm sections on a microtome. The sections were stained with hematoxylin(H&E). Results were evaluated with light microscope.

In control group normal spleen histology was observed. Normal splenic lymphoid tissue was monitored. Melanin pigments and melanomacrophage cells were monitored clearly.

In 40 mg/L exposure group, spleen sections have revealed that magnitude of tissue alterations have sharply declined from severe degrees. Vacuolization were observed milder forms. Disintegration of milder form were monitored. Vacuolation without necrosis were detected.

In 80 mg/L exposure group, increased amount of vacuolization and hyperplasia in the melanomacrophage cells were observed at splenic tissue. Vacuolization were observed melanin pigments. In 120 mg/L exposure group, necrosis was observed at melanomacrophage center. Vacuolization was detected at melanomacrophage. Histopathological lesions were observed in the splenic tissues and the spleens appeared showing an increase in melanin pigments.

As a result, with this study, it is proved that tribenuron methyl cause deterioration in fish spleen tissues.

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