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P34. HISTOLOGICAL EVALUATION OF THE EFFECTS OF THIOUREA DIOXIDE ON ZEBRAFISH *(Danio rerio)* GILLS

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Investigations the histogical effects of thiourea dioxide on gill tissue of zebrafish were aimed.

Thioureadioxide is an organosulfur compound which is a strong reducing agent. It is generally used as decolorisation agent, bleach in textile industry. In the other industrial fields such as leather processing, photographic, paper, pulp and board industry it has a wide range of use. Industrial waste products have been contaminated aquatic environment day after day.

After one week adaptation period zebrafish divided into three group (n=10) as one control and 2 experimental groups (3mM, 4.5mM). For investigating the effects of thiourea dioxide, intestine tissues were dissected after 5 day of the exposure. Tissues were fixed with 10% neutral buffered formalin and dehydration was carried out in an ascending series of ethanol. 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 gill histology has been observed. In 3 mM thiourea dioxide exposed group, total fusion, dysmorphism and vacuolization at secondary lamellae, hypertrophy at secretory cells, vacuolization and hyperplasia at primary lamellae structure were detected. In 4.5 mM thiourea dioxide exposed group, severe deterioration at secondary lamellae structure, hyperplasia and vacuolization at primary lamellae and degeneration at secretory cells were observed.

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