

## ASPECTS REGARDING THE ASSESSMENT OF OCTYLPHENOL EFFECT UPON ZEBRA FISH GROWTH AND DEVELOPMENT (*DANIO RERIO*)

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### SUMMARY

In this work, we studied the effect exerted by octylphenol, from the group of polyetoxylated alkylphenols, upon zebra fish growth and development, during an entire growth cycle. So, we created 3 batches, with two replications, namely: batch I–control, batch II–in water, we added octylphenol (OP) in a concentration of  $1.5 \mu\text{g L}^{-1}$  and batch III–we added a concentration of  $60 \mu\text{g L}^{-1}$  OP in water. In order to establish octylphenol effect on zebra fish growth and development during a full growth cycle, at the age of 115 days, we determined the following biometrical parameters: total length, standard length, head length, maximal height, minimal height and body weight. The biometric study shows the fact that, in the control batch, the average total length was 27.09 mm, with a variability coefficient of 12.04%, in the batch II it was 27.84 mm, with a variability coefficient of 11.25%, and in the batch III, the average total length was 27.75 mm, with a variability coefficient of 11.79%. The average standard length, in the control batch, was 20.00 mm, with a variability coefficient of 8.62%, in the batch II it was 20.59 mm, with a variability coefficient of 11.45%, and in the batch III, 21.10 mm, with a variability coefficient of 8.94%. The average head length in the control batch was 4.86 mm, with a variability coefficient of 10.98%, in the batch II it was 4.90 mm, with a variability coefficient of 10.14%, and in the batch III, 4.87 mm, with a variability coefficient of 7.44%. Regarding maximal and minimal height, the average values in the control batch were 5.04 mm, respectively 2.23 mm, with a variability coefficient of 12.45%, respectively 15.25%. In the batch II, the values were 5.30 mm, respectively 2.10 mm, with variability of 13.34%, respectively 14.72%, and in the experimental batch III, the values recorded were 5.35 mm, respectively 2.23 mm, with a variability coefficient of 11.96%, respectively 11.59%. The average body weight in the control batch was 0.170 g, with a variability of 28.14%, while in the batch II it was 0.160 g, with variability of 32.73%, and in the batch III it was 0.180 g, with a variability of 29.38%. The statistical data analysis leads to the conclusion that there are not significant differences between the three batches given by the biometrical parameters studied ( $p > 0.05$ ), suggesting that, in zebra fish, during a full growth cycle, octylphenol does not influence significantly growth and development.

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