

HAEMATOLOGICAL RESPONSES UNDER MULTIPLE STRESS EXPOSURE IN PERCH (*Perca fluviatilis*)

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The aim of the present study was to evaluate haematological responses induced by multiple stress (parasitic infestation and metal mixture exposure) in European perch (*Perca fluviatilis*). In order to represent multiple stress, fish were exposed to two parasites: ectocommensal protozoan parasite (*Trichodina* sp. (naturally infected) and pathogenic oomycete *Saprolegnia parasitica* (experimentally infected)), and metal mixture (MIX: Zn, Cu, Ni, Cr, Pb and Cd). Uninfected and infected fish were exposed for 14 days period to MIX at a concentration corresponding to Maximum-Permissible-Concentrations (MPC) accepted for the inland waters in EU. Haematological parameters such as hemoglobin concentration (Hb, g/l), hematocrit level (Ht, %), erythrocytes ($RBC \times 10^6/\mu L$), leukocytes ($WBC \times 10^3/\mu L$) and thrombocytes (TC/500 leucocytes) count were determined [1]. Additionally, differential leucocyte count, mean cell volume (MCV), mean cell hemoglobin (MCH), and mean cell hemoglobin concentration (MCHC) were calculated [2, 3]. Multiple stressors (parasitic infestation + MIX) elicited significant decrease in WBC, RBC, TC and Ht, except Hb, in comparison to single stressor (uninfected MIX). No significant differences of differential leucocytes count, MCV, MCH and MCHC between multiple stressors exposed and control *P. fluviatilis* were observed.

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