## **A13.29** DOES CU/CD/ZN METAL MIXTURE AFFECT PHYSIOLOGICAL PERFORMANCES OF COMMON CARP (*CYPRINUS CARPIO*)?

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The metal contamination of the aquatic environment is problematic due to the bioaccumulative, non-biodegradable and toxic proprieties of these elements. Some metals are essential but ultimately they may become inhibitory or toxic at high concentrations, while other (non-essential) have deleterious effects even at low concentrations. Previous studies have proven for example that metals can alter metabolic pathways (such as the Krebs cycle and the electron transport chain), impact respiratory functions, increase ROS production or reduces ATP production. The objective of our study is to investigate the impacts of Cu/Zn/Cd mixture on the swimming performances and aerobic scope in a fish model species, the common carp *Cyprinus carpio*. Fish are subjected to Cu/Zn/Cd mixture exposure at concentrations representing 10% of their 96 h $LC_{50}$ (Cu= 4.8 µg/L, Cd=2.9 µg/L and Zn=206.8 µg/L) for 12 h, 1 day, 3 days and 1 week. Their standard metabolic rate (SMR) and maximum metabolic rate (MMR) are measured and aerobic scope (AS) is calculated. The results will help us to have a better understanding of the mechanisms of toxicity impacting physiological performances during chronic and acute exposure to metal mixture.