Corbicula fluminea gene expression modulated by CeO₂

nanomaterials and salinity

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Figure 1: PLS-DA performed with the whole dataset for both organs (digestive gland and gills) collected in control organisms exposed 28 days in mesocosms. Part A shows the correlation circle (top) with only genes that displayed a VIP > 0.8 and the factor plane (bottom) showing the exposure groups. Part B indicates the results from pairwise comparison made on the PLS-DA dataset. Significant differences appeared as bold letters using a threshold of 0.05 while non-tested differences are shown as "NT".



Figure 2: PLS-DA performed with data obtained from gills and digestive gland of organisms exposed 28 days to each contamination conditions. Part A represent the correlation circle (left side) showing only genes that displayed a VIP > 0.8 and the factor plane (right side) showing the exposure groups.



Figure 3: Relative gene expression (expressed in log 2) of HSP70, MnSOD, Se-GPx and Trxr genes after mRNA extraction from gills of *C. fluminea* exposed in mesocosm during 7, 14, 21 and 28 days. Control 1.5 psu was chosen as reference for relative expression. Groups that do not share the same letter are significantly different.



Figure 4: PLS-DA performed with data collected on organisms exposed during 7, 14, 21 and 28 days to each conditions at 1.5 psu.



Figure 5: PLS-DA performed with data collected on organisms exposed during 7, 14, 21 and 28 days to each conditions at 15 psu.



Figure 6: Cerium bioaccumulation (log transformed (mean and standard deviation)) in the digestive glands of *C. fluminea* (n=6) after 7, 14, 21 and 28 days of exposure in mesocosms to four experimental treatments (Control, Envirox[™], Combusted Envirox[™], NM-212) at 1.5 psu (A) and 15 psu (B). Significant differences between the exposure treatments were expressed with lowercase after exposure at 1.5 psu (A) and after exposure at 15 psu (B). Asterisk (*) indicated significant differences between salinities (1.5 psu (A) vs 15 psu (B)) for each exposure treatment.