Electronic Supplementary information for:

"Elemental distribution in green micro-algae using combined synchrotron radiation nano X-ray fluorescence (SR-nXRF) and electron microscopy techniques – Subcellular localization and quantitative imaging of silver and cobalt uptake by *Coccomyxa actinabiotis*."

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Figure S1. Elemental distribution and abundance determined using SR-nXRF in a control micro-alga. Micro-alga originating from Control 1. Experimental conditions and figure legend as in Figure 2.



Figure S2. Elemental distribution and abundance determined using SR-nXRF in a control micro-alga. Micro-alga originating from Control 2B. Experimental conditions and figure legend as in Figure 2.



Figure S3. Comparison of the mean Zn and Mo content in the different samples. Statistical treatment of the results presented in Figure 4. The mean content in each element displayed on Figure 4 was compared for the different samples. For each element, the homogeneity of the samples' variance was assessed using four different tests (Barlett, Levene, Brown-Forsythe and O'Brien). The means of the samples were then compared using a one-way analysis of variance (ANOVA) for samples with homogeneous variances and using a Welch's test otherwise. The significance level of all the tests was set to 5%.

For the examples of Zn and Mo presented in this figure, the Welch's test yielded no statistical difference in the mean Zn content between all the samples (p-value = 0.076) whereas the mean Zn content was statistically different (p-value < 0.0001). Mean values were then compared by pairs using Student's t test.