

and the persistence of CdS in hydromorphic conditions. No Zn was detected in the sulfide, although in the initial sediment Cd is present in a Zn sulfide. The result obtained for the sediment after 6 years in drained conditions is surprising, and might suggest the persistence of some Cd-rich sulfides grains, which may be not representative of the sample.

Table 2: Structural parameters for Cd in the sediment samples

Sample	Atom	N	R (Å)	σ (Å ²)	R factor
Initial sediment	S	4.0	2.51	0.0034	0.00240
	Zn	5.7	3.89	0.0090	
	Cd	2.3	4.18	0.0090	
Drained sediment, 6 years	S	4.0	2.51	0.0045	0.00480
	Zn	1.0	4.03	0.0088	
	Cd	12.0	4.12	0.0088	
Sediment, hydromorphic, 6 years	O	0.6	2.17	0.0038	0.00590
	S	3.6	2.51	0.0038	
	Zn	3.0	3.88	0.0090	
	Cd	1.7	4.16	0.0090	
Sediment, hydromorphic, 12 years	O	0.8	2.22	0.0036	0.02800
	S	3.0	2.51	0.0036	
	Cd	2.6	4.13	0.0090	
Drained sediment, 12 years	O	5.1	2.29	0.0072	0.06200
	C	6.8	3.22	0.0080	
	O	5.1	3.41	0.0080	
Sediment with plants, 6 months	O	5.9	2.29	0.0090	0.021
	C	1.2	3.20	0.0080	

Justification and comments about the use of beam time (5 lines max.):

The experiment went smoothly, the local staff were very helpful, we had no problem of hardware or software during data acquisition, no beam failure.

References

Isaure M. P., Laboudigue A., Manceau A., Sarret G., Tiffreau C., Trocellier P., Lambelle G., Hazemann J. L., and Chateigner D. (2002) Quantitative Zn speciation in a contaminated dredged sediment by μ -PIXE, μ -SXRF, EXAFS spectroscopy and principal component analysis. *Geochim. Cosmochim. Acta* 66(9), 1549-1567.

Panfili F., Manceau A., Sarret G., Spadini L., Kirpichtchikova T., Bert V., Laboudigue A., Marcus M.A., Ahamdach N., Libert M., 2005, The effect of phytostabilization on Zn speciation in a dredged contaminated sediment using scanning electron microscopy, X-ray fluorescence, EXAFS spectroscopy and principal components analysis, *Geochim. Cosmochim. Acta*, 69, 2265-2284.

Publication(s):

2 Manuscript in preparation (one on zinc, one on cadmium).