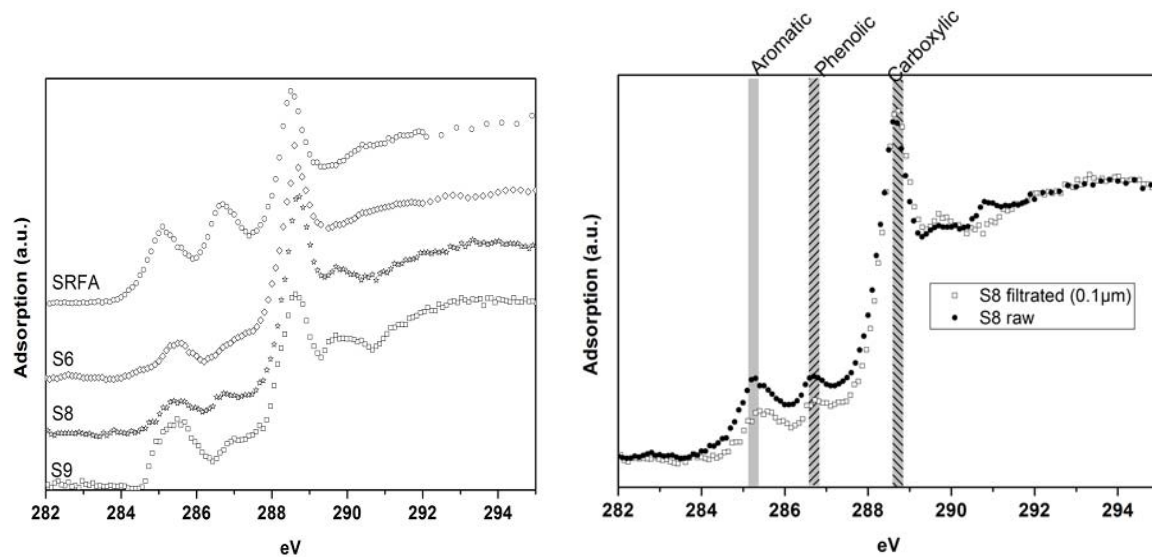
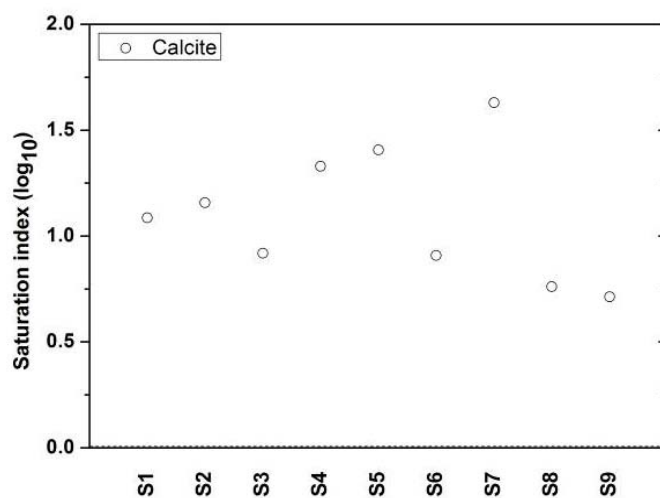


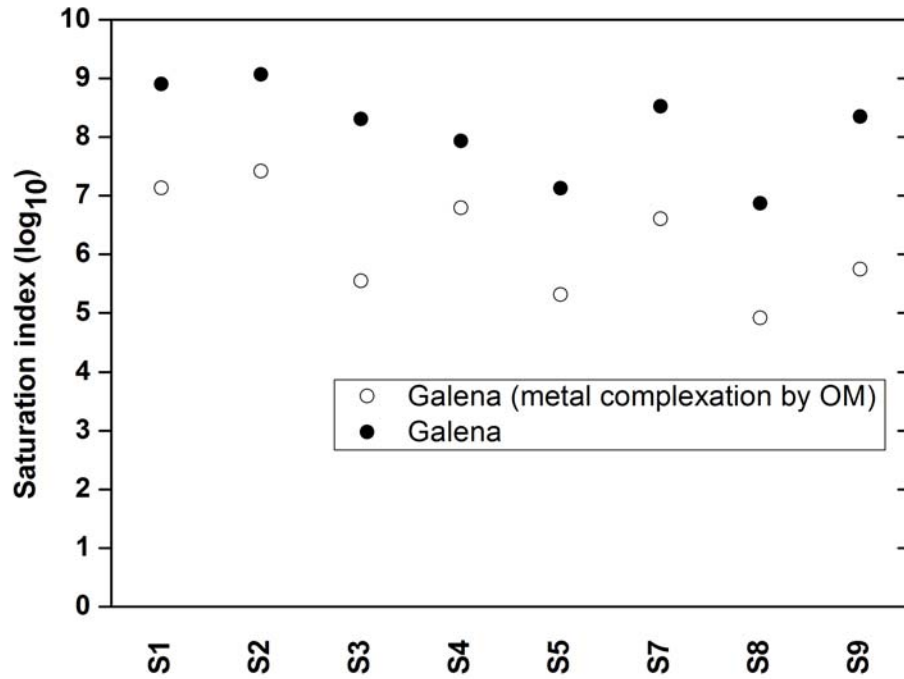
**Fig. 1.** Proportion of the different metals as a function of filter cut off.



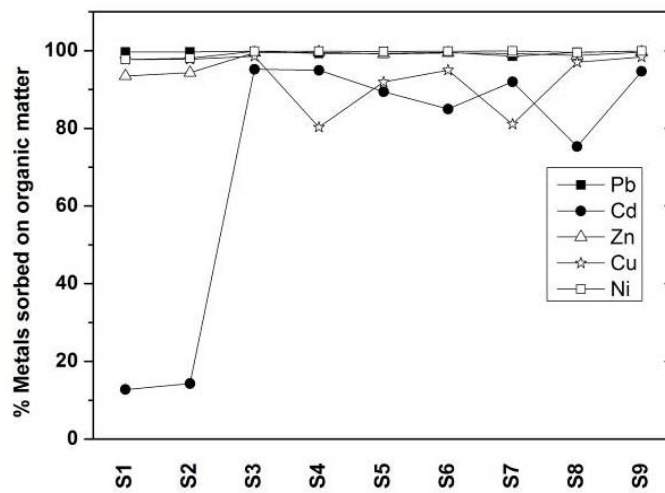
**Fig. 2.** On the left, a comparison between XANES spectra for the S6, S8 and S9 leachates (0.1  $\mu\text{m}$  filter material) and for Suwannee river fulvic acid (left). On the right, the effect of the filtration on the recorded XANES spectra has been checked on the sample S8 by measuring both the non-filtered and the below 0.1  $\mu\text{m}$  fractions.



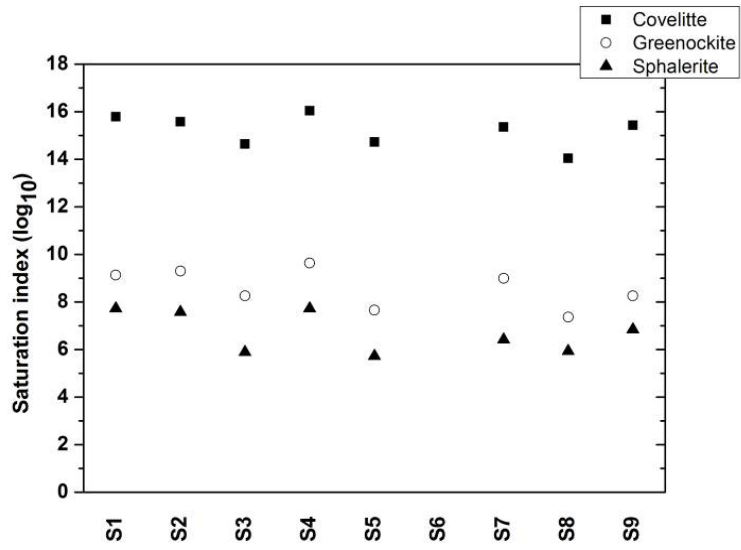
**Fig. 3.** Leachate saturation indices for calcite



**Fig. 4.** Leachate saturation indices for galena (PbS) with (empty circles) and without (black circles) taking into account lead complexation with organic matter (OM). S6 is not considered here because sulphur was not detected in the solution.



**Fig. 5.** Percentage of the different metals complexed with OM in the leachates. The calculations were performed considering the DOC of the less than 30KDa fraction.



**Fig. 6.** Leachate saturation indices for sulphide minerals: covellite (Cu), greenockite (Cd) and sphalerite (Zn). Ni sulphide minerals are over-saturated but not shown here due to strong uncertainty on the solubility constant (Thoenen, 1999).