



	<b>Experiment title:</b> Etude de la réduction de l'arsenic (V) en arsenic(III) par le Fe (II) en présence de Schewanella Putrefaciens et hématite. Study of reductio...	<b>Experiment number:</b> 30-02-16
<b>Beamline:</b> BM30B	<b>Date of experiment:</b> from: 10-Nov-2002 to: 26-Nov-2002	<b>Date of report:</b> 26-Feb-2006
<b>Shifts:</b> 42	<b>Local contact(s):</b> Dr Xavier BIQUARD	<i>Received at ESRF:</i>
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## Report:

This experiment has been unsuccessful since the experimental equipment that we had available did not fit our requirements.

We started by analysing different standard materials in order to get good references for XANES analysis around the arsenic atoms adsorbed on Schewanella putrefaciens and Hematite. Due to the absence of a cryostat, redox reactions took place and the As-edge was shifted to the same edge.

Arsenic adsorption on minerals is one of the more important subjects of research of our group. It is worth to note that in spite of this unsuccessful experiment, we have continued to submit proposals and good results have been collected recently:

## Papers

- **Arsenic uptake by gypsum and calcite: modeling and probing by neutron and x-ray scattering.** A. Fernández-Martínez, G. Román-Ross, G.J. Cuello, X. Turrillas, L. Charlet, M.R. Johnson, F. Bardelli. Submitted to ICNS 2005 (Sidney). *Accepted in Physica B (June 2006)*

- *ILL Annual Report 2005.*

- **Arsenite sorption and coprecipitation with calcite.** G. Román-Ross, G.J. Cuello, X. Turrillas, A. Fernández-Martínez and L. Charlet. *Submitted to Chemical Geology (November 2005).*