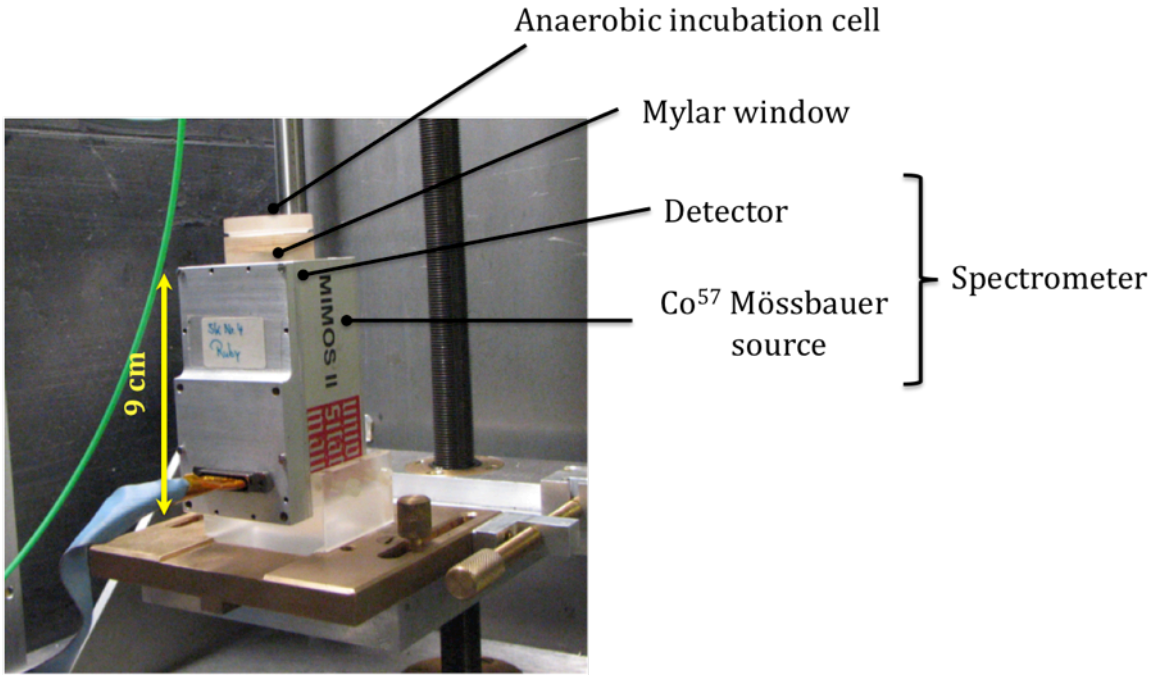
Table 1. Mössbauer hyperfine parameters of microbially formed magnetite during lepidocrocite reduction for different times of incubation. Errors on center shift and (CS) quadrupole splitting (Δ) were estimated at ± 0.02mm/s. The error on the internal magnetic filled was ± 5kOe (H) and 2% for the relative abundance (RA). ε corresponds to the quadrupole shift.

Days	Magnetite								Lepidocrocite		
	S_A				S_B				D		
	CS (mm/s)	ε (mm/s)	H (kOe)	RA (%)	CS (mm/s)	ε (mm/s)	H (kOe)	RA (%)	CS (mm/s)	△ (mm/s)	RA (%)
0									0.36	0.57	100
1	0.27	0	481	19	0.67	0	448	31	0.37	0.54	50
2	0.29	0	481	21	0.63	0	447	38	0.37	0.54	41
5	0.29	0	481	22.7	0.63	0	448	48.8	0.38	0.54	28.5
7	0.29	0	480	23.9	0.63	0	447	56.3	0.38	0.54	19.8
9	0.29	0	480	26.2	0.63	0	448	57.2	0.38	0.54	16.6
23	0.29	0	480	30	0.63	0	448	63	0.38	0.54	7
26	0.29	0	480	30.8	0.64	0	448	62.9	0.39	0.54	6.3

Table 2. d_{hkl} parameters of magnetite calculated from selected area electron diffraction (SAED) analysis from the present study and compared to literature data

D (mm)	Measured d_{hkl} (Å)	Tabulated d_{hkl} (Å)*	hkl
10.25	4.83	4.85	111
16.5	3.00	2.97	220
19.5	2.54	2.53	311
23	2.15	2.10	400
28.5	1.74	1.71	422
30.25	1.64	1.61	511
33.0	1.50	1.48	440

* Cornell and Schwertmann 1996.



Supplementary FIGURE 1. Experimental setup: The MIMOS is a miniaturized Mössbauer spectrometer and the anaerobic incubation cell sample is in contact with the instrument. MIMOS instrument operate in back scattering geometry. A Co^{57} source irradiates a sample area 10 mm from the detector surface. The Resonant emission and absorption of -rays coming from the sample crosses a mylar window placed on the incubation cell.