SUPPORTING INFORMATION

Role of sulfur species as redox partners and electron shuttles for ferrihydrite reduction by *Sulfurospirillum deleyianum*

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Running Head: Sulfur electron shuttling to ferrihydrite

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Table SI-1 Production of S_6^{2-} and S^0 from thiosulfate in incubations of *Sulfurospirillum deleyianum* supplied with 2 mM cysteine as sulfur source and reductant, 5 mM acetate as carbon source, and 10 mM formate as electron donor. The LOD (limit of detection) was derived from the smallest integrable peak and came to 0.1 µM for S_6^{2-} and 0.5 µM for S^0.

	2 mM thiosulfate, 1 % inoculum unfiltered		0.1 mM thiosulfate, 1 % inoculum unfiltered		2 mM thiosulfate, 1 % inoculum filtered		0.1 mM thiosulfate, 1 % inoculum filtered	
[d]	S_6^{2-} [mM]	S^0 [mM]	S_6^{2-} [mM]	S^0 [mM]	S_6^{2-} [mM]	S^0 [mM]	S_6^{2-} [mM]	S^0 [mM]
0	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD
2	0.002	0.009	< LOD	< LOD	< LOD	0.018	< LOD	< LOD
5	0.001	0.002	< LOD	< LOD	< LOD	0.012	< LOD	< LOD
7	0.012	< LOD	0.017	< LOD	< LOD	0.006	< LOD	< LOD
9	0.009	< LOD	0.009	< LOD	< LOD	< LOD	< LOD	< LOD
12	0.008	< LOD	0.007	< LOD	< LOD	< LOD	< LOD	< LOD
15	0.009	< LOD	0.016	< LOD	< LOD	< LOD	< LOD	< LOD

Table SI-2 Fe(II) total production from ferrihydrite in incubations of *Sulfurospirillum deleyianum* supplied with 5 mM acetate as carbon source, and 10 mM formate as electron donor. Standard deviations are based on three replicates; n.d. means not determined.

	[d]	0	3	6	9	12	15
Fe(II) total [mM]	cysteine 0.1 mM, thiosulfate 0.1 mM	0.02 ± 0.00	0.91 ± 0.05	1.12 ± 0.06	1.26 ± 0.02	1.79 ± 0.43	1.85 ± 0.31
	cysteine 0.1 mM, cystine 0.1 mM	0.02 ± 0.00	0.19 ± 0.25	n.d.	0.28 ± 0.32	n.d.	0.30 ± 0.23

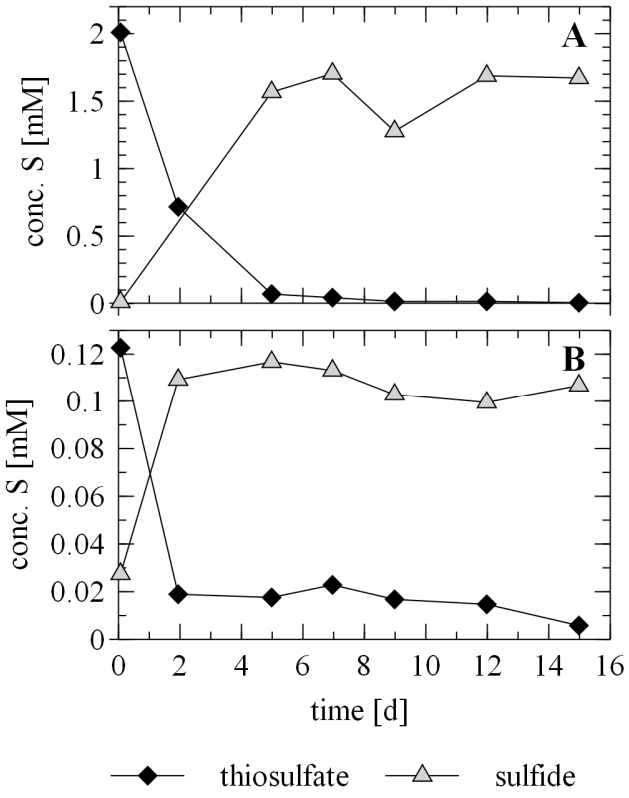

Fig. SI-1 Production of sulfide from thiosulfate (A: 2.0 mM, B: 0.1 mM) in incubations of *Sulfurospirillum deleyianum* supplied with 2 mM cysteine as sulfur source and reductant, 5 mM acetate as carbon source, and 10 mM formate as electron donor.