

**Table 2. Riboflavin binding to Fe and Mn oxide minerals**

Sample	% Riboflavin bound to metal surface
Control (no addition)	0
105 mM Fe(III)	77
210 mM Fe(III)	89
524 mM Fe(III)	92
71 mM Mn(IV)	97
142 mM Mn(IV)	99.5

Riboflavin (1.33  $\mu\text{M}$ ) was used for all experiments. Samples were incubated overnight at ambient temperature with rocking agitation while protected from light. Fluorescence was measured (440-nm excitation, 525-nm emission) after centrifugation to remove metal oxides.