

Table 1

Redox potentials of various redox couples relevant to iron metabolism at pH 7.0 and 25°C^a

| System | E_0' (mV) | Reference |
|--|--------------|--|
| $[\text{Fe}(\text{CN})_6]^{3+}/[\text{Fe}(\text{CN})_6]^{4+}$ | +430 | [39] |
| Fe(III) NTA/Fe(II) NTA ^b | +385 | [3] |
| Fe(III) citrate/Fe(II) citrate | +372 | [3] |
| Fe(III) EDTA/Fe(II) EDTA | +96 | [40] |
| Ferrihydrite/Fe ²⁺ | -100 to +100 | [3,12,41] |
| γ -FeOOH (lepidocrocite)/Fe ²⁺ | -88 | [3] |
| AQDS/AHQDS ^c | -184 | [42] |
| Humic substances ^d | -200 to +300 | A. Kappler, personal communication |
| α -FeOOH (goethite)/Fe ²⁺ | -274 | [3] |
| α -Fe ₂ O ₃ (hematite)/Fe ²⁺ | -287 | [3] |
| Fe ₃ O ₄ (magnetite)/Fe ²⁺ | -314 | [3] |

^aRedox potentials depend strongly on pH value, temperature, concentration of reactants, and thermodynamic data chosen for calculations. For details see related references.

^bNitritotriacetate.

^c2,6-Anthraquinone disulfonate, 2,6-anthrahydroquinone disulfonate.

^dHumic substances are complex organic polymers with redox-active moieties (esp. quinones) reduced or oxidized in the given range.