Table S1. Characterization of ZVI and Fe3O4 NPs. *Z*-potential as measured by dynamic light scattering (DLS) in water. Hydrodynamic size and polydispersity index (Pdl) as measured by DLS in water and FETAX solution. Means ± SE of 3 replicates.

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| --- | --- | --- |
|  | **ZVI NPs** | **Fe3O4 NPs** |
| **ζ-potential (mV)** | -12.5± 0,4 | +9.4 ± 0,8 |
| **Hydrodynamic diameter (nm) ± SE (PdI)** |
| **water** | 3048,3 ± 298,5 ( 0,93) | 2373,3 ± 48,3 (0,90) |
| **FETAX solution** | 2701,7 ± 214,9 ( 0,96) | 1417,0 ± 27,8 (0,46) |

Figure S1. Time course of pH values of treatment solutions containing FeCl3 and FeSO4 at concentrations of 25 and 100 mg Fe/L over 24 h. Each point represents the mean ± SEM of three independent assays.



Figure S2. Time course of iron NP sedimentation in FETAX solution over 24 h. Each point represents the mean ± SEM of three independent assays.