

Supplementary material for

Degradation of Cyindrospermopsin Spiked in Natural Water (Paranoá Lake, Brasília, Brazil) by Fenton Process: A Bench-Scale Study

Supplementary material includes 6 pages and 5 figures.

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1. The effect of initial H_2O_2 and $Fe(II)$ concentration on CYN degradation at a fixed $H_2O_2/Fe(II)$ molar ratio

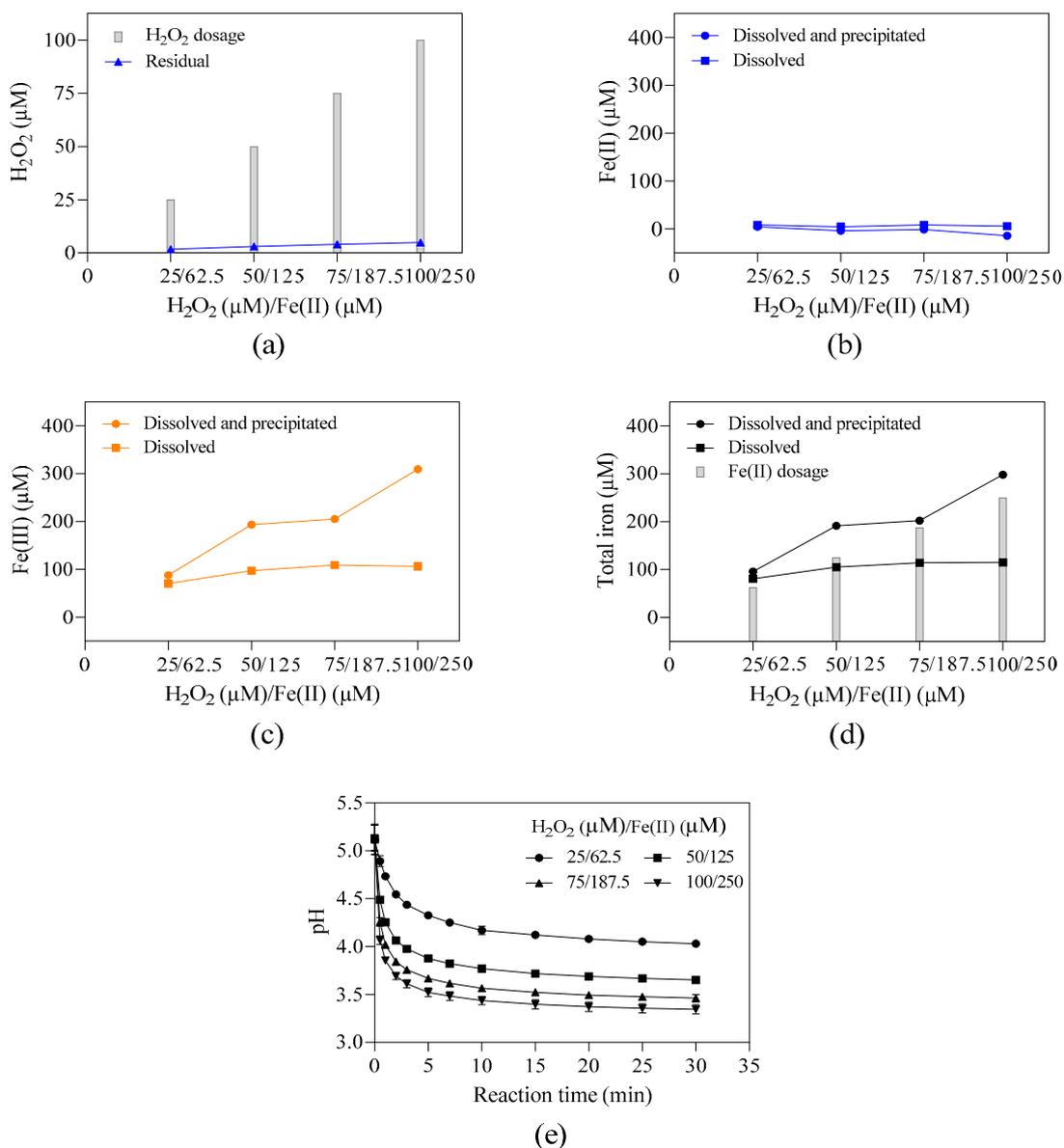


Figure S1. Residual concentrations of (a) H_2O_2 , (b) dissolved and total fractions of $Fe(II)$, (c) dissolved and total fractions of $Fe(III)$, (d) dissolved and total fractions of total iron, and (e) pH-time profile during Fenton oxidation for different H_2O_2 and $Fe(II)$ dosages. Error bars represent the standard deviation of the mean, based on three replicates.

2. The effect of initial CYN concentration on the Fenton's efficiency at a fixed $\text{H}_2\text{O}_2/\text{Fe(II)}$ molar ratio

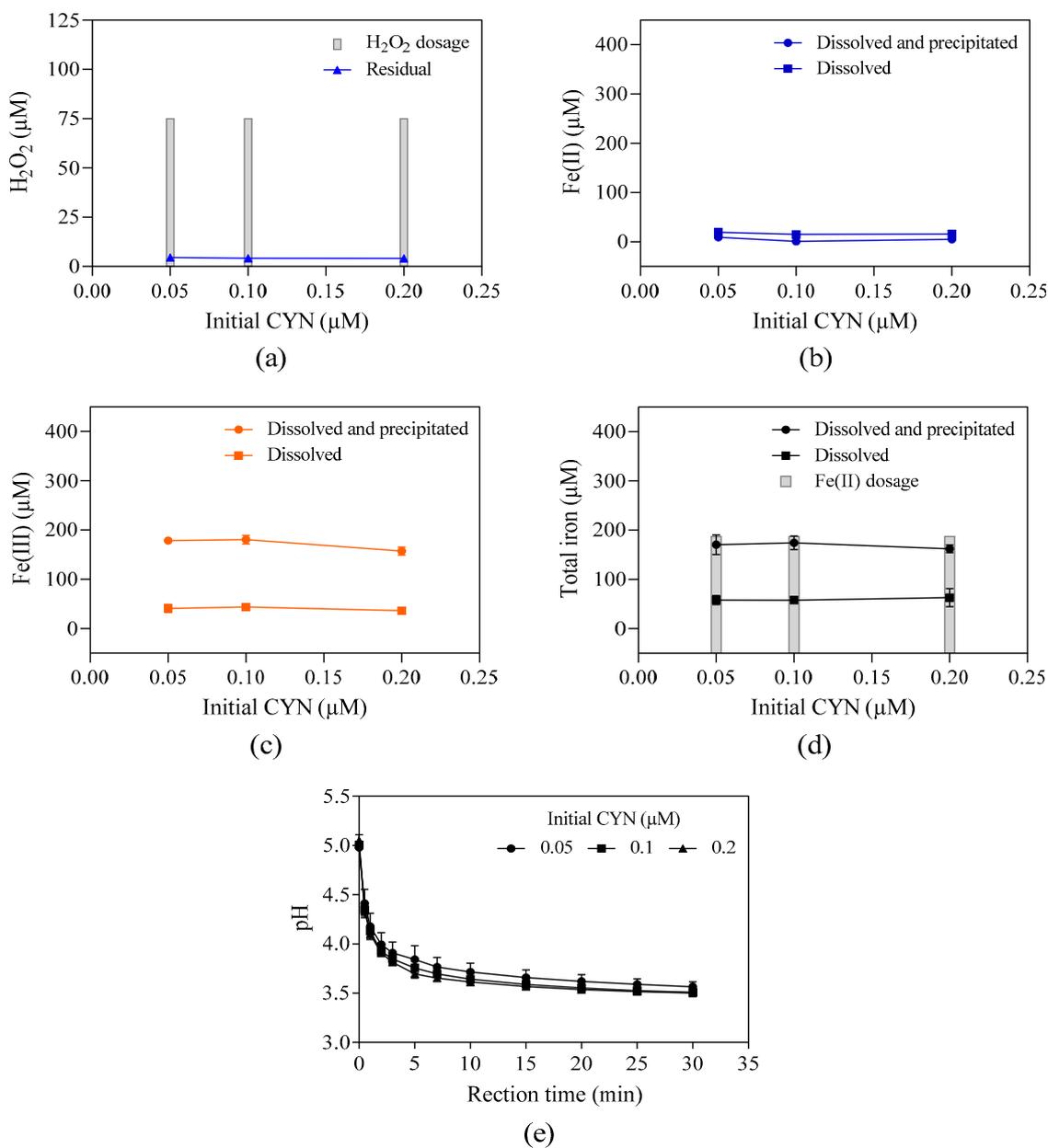


Figure S2. Residual concentrations of (a) H_2O_2 , (b) dissolved and total fractions of Fe(II) , (c) dissolved and total fractions of Fe(III) , (d) dissolved and total fractions of total iron, and (e) pH-time profile during Fenton oxidation for various initial CYN concentrations. Error bars represent the standard deviation of the mean, based on three replicates.

3. The effect of humic acid (HA) and algogenic organic matter (AOM) on CYN degradation at a fixed $H_2O_2/Fe(II)$ molar ratio

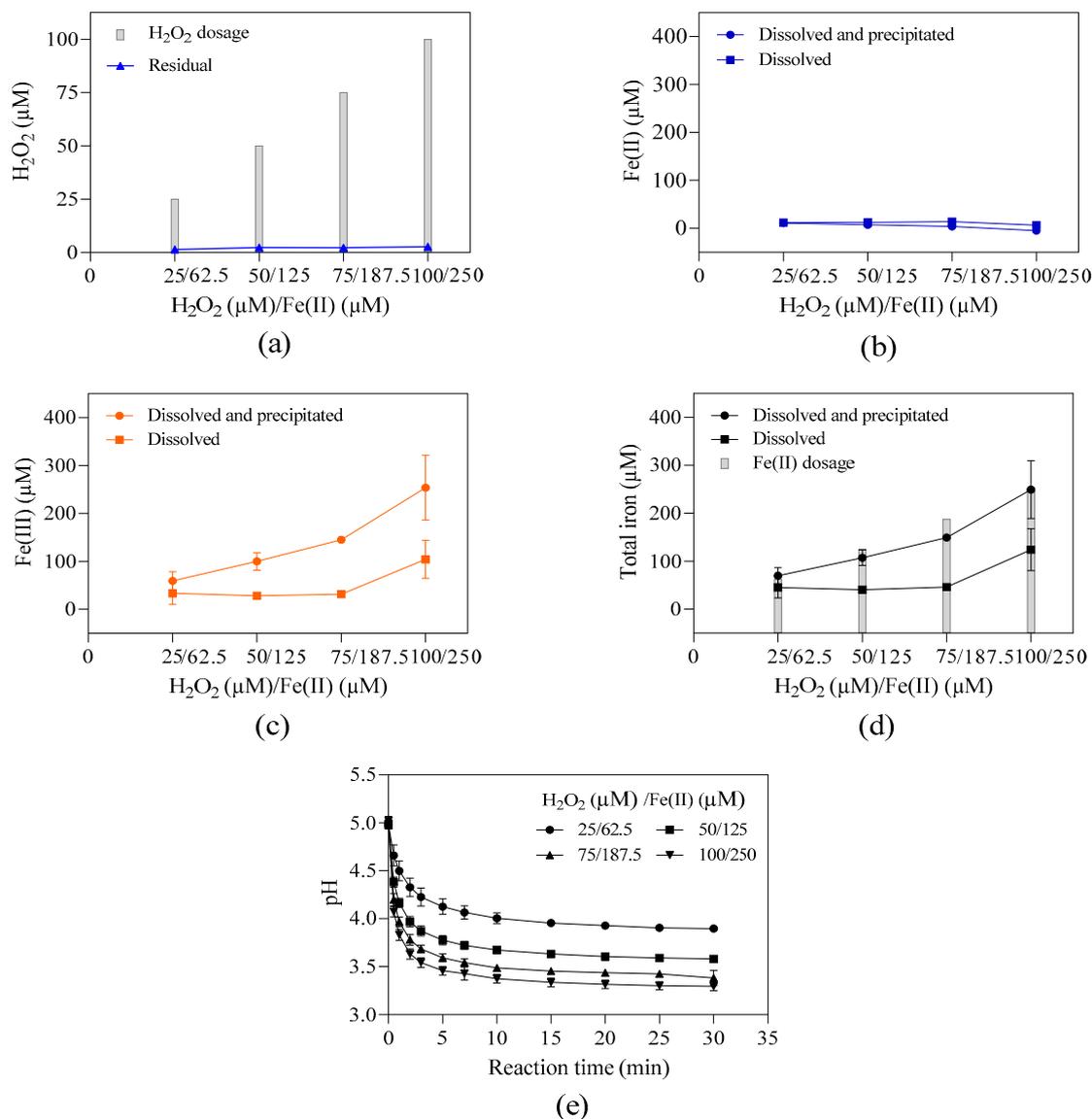


Figure S3. Residual concentrations of (a) H_2O_2 , (b) dissolved and total fractions of $Fe(II)$, (c) dissolved and total fractions of $Fe(III)$, (d) dissolved and total fractions of total iron, and (e) pH-time profile during Fenton oxidation in matrix ultrapure water containing about $0.05 \mu M$ of CYN and $513.3 \mu M$ of methanol for different H_2O_2 and $Fe(II)$ dosages. Error bars represent the standard deviation of the mean, based on three replicates.

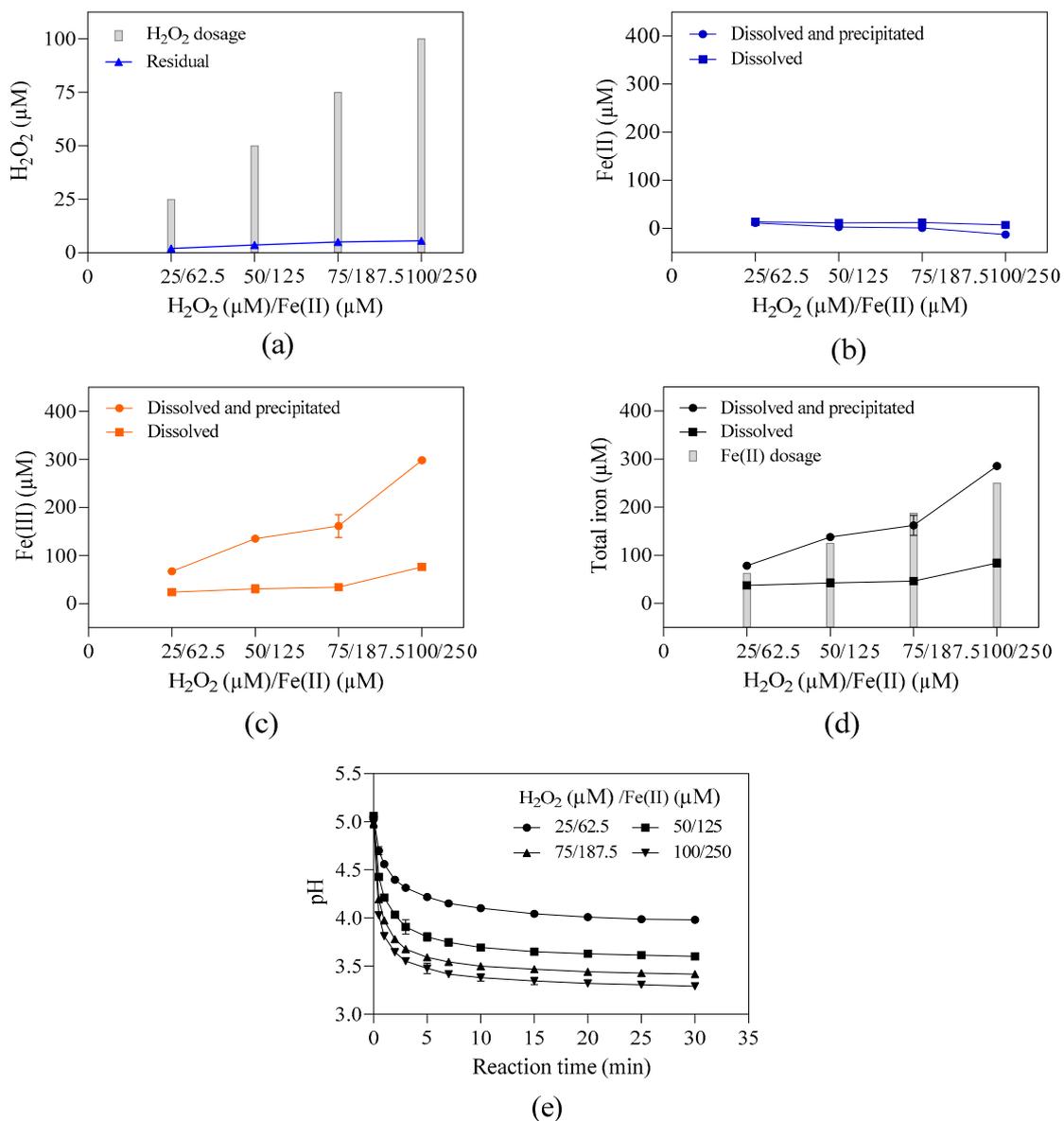


Figure S4. Residual concentrations of (a) H₂O₂, (b) dissolved and total fractions of Fe(II), (c) dissolved and total fractions of Fe(III), (d) dissolved and total fractions of total iron, and (e) pH–time profile during Fenton oxidation in matrix ultrapure water containing about 0.05 μM of CYN, 513.3 μM of methanol and 5.0 mg/L of AH for different H₂O₂ and Fe(II) dosages. Error bars represent the standard deviation of the mean, based on three replicates.

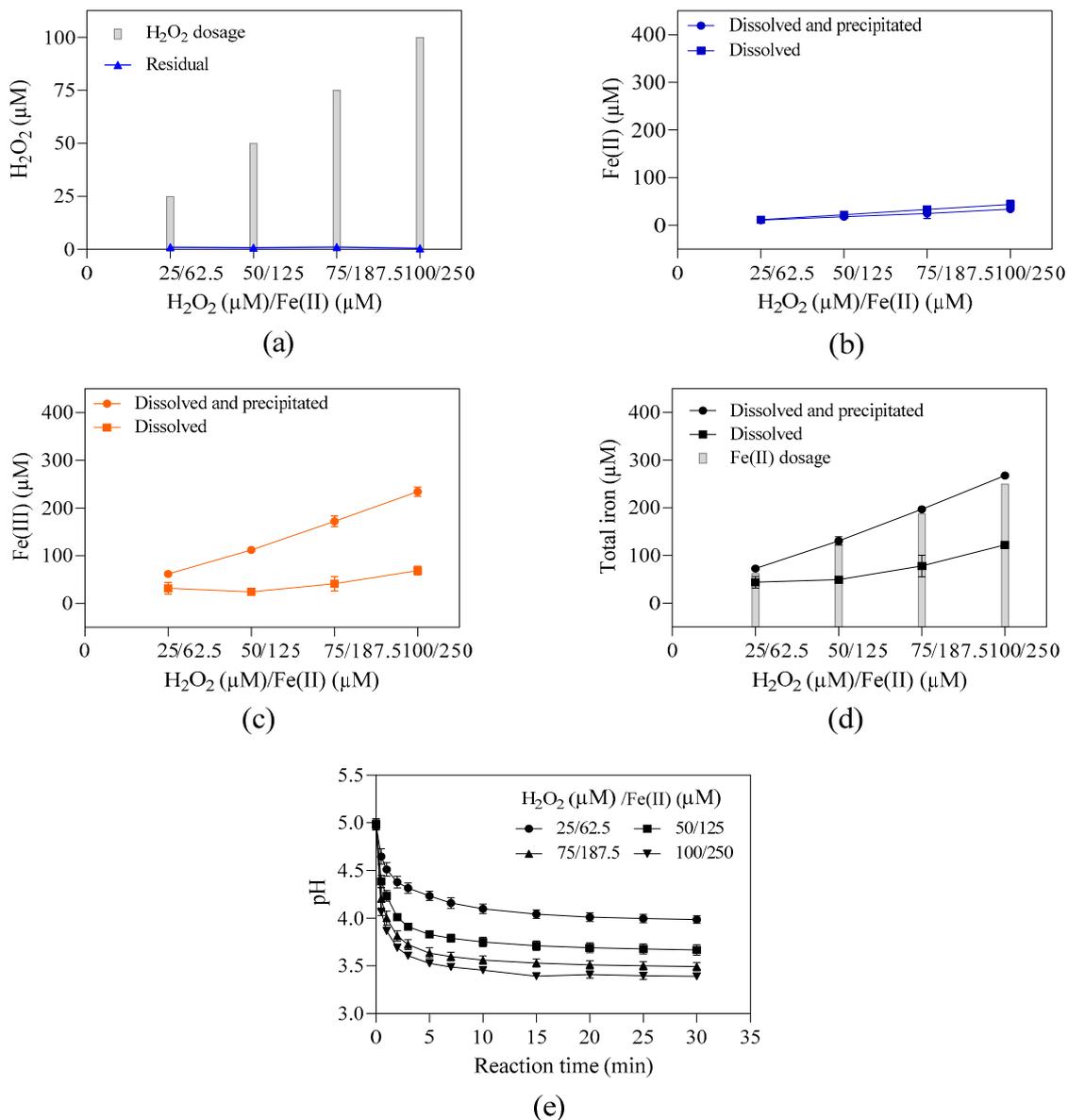


Figure S5. Residual concentrations of (a) H_2O_2 , (b) dissolved and total fractions of Fe(II), (c) dissolved and total fractions of Fe(III), (d) dissolved and total fractions of total iron, and (e) pH–time profile during Fenton oxidation in matrix ultrapure water containing about 0.05 μM and 124.3 μM of AOM for different H_2O_2 and Fe(II) dosages. Error bars represent the standard deviation of the mean, based on three replicates.