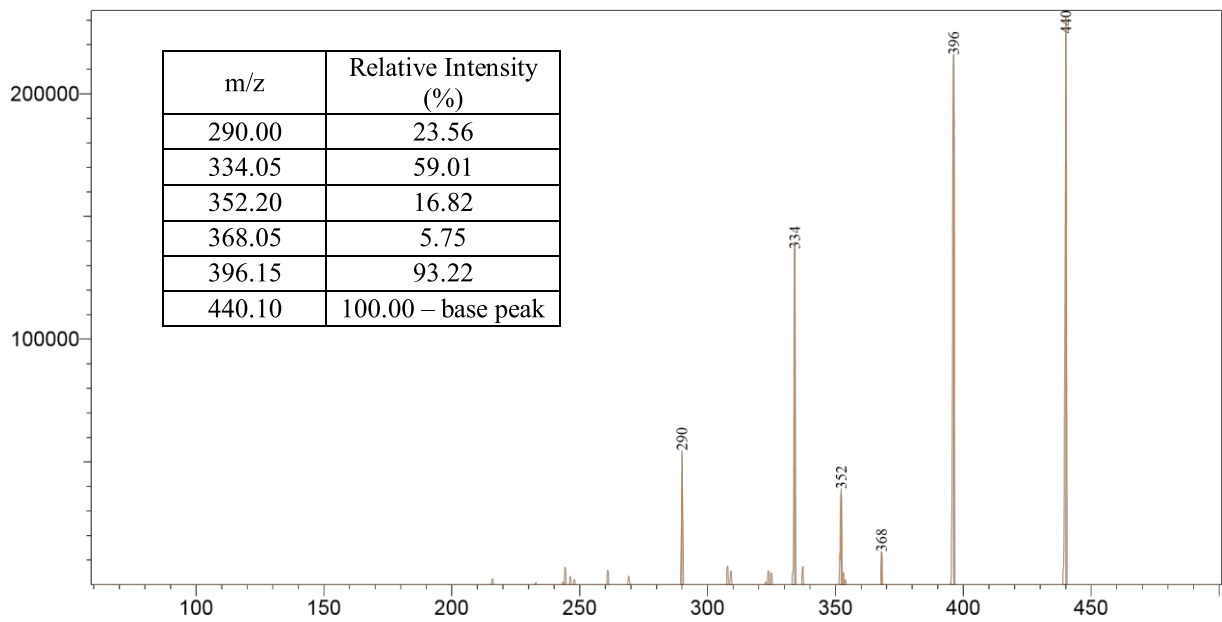
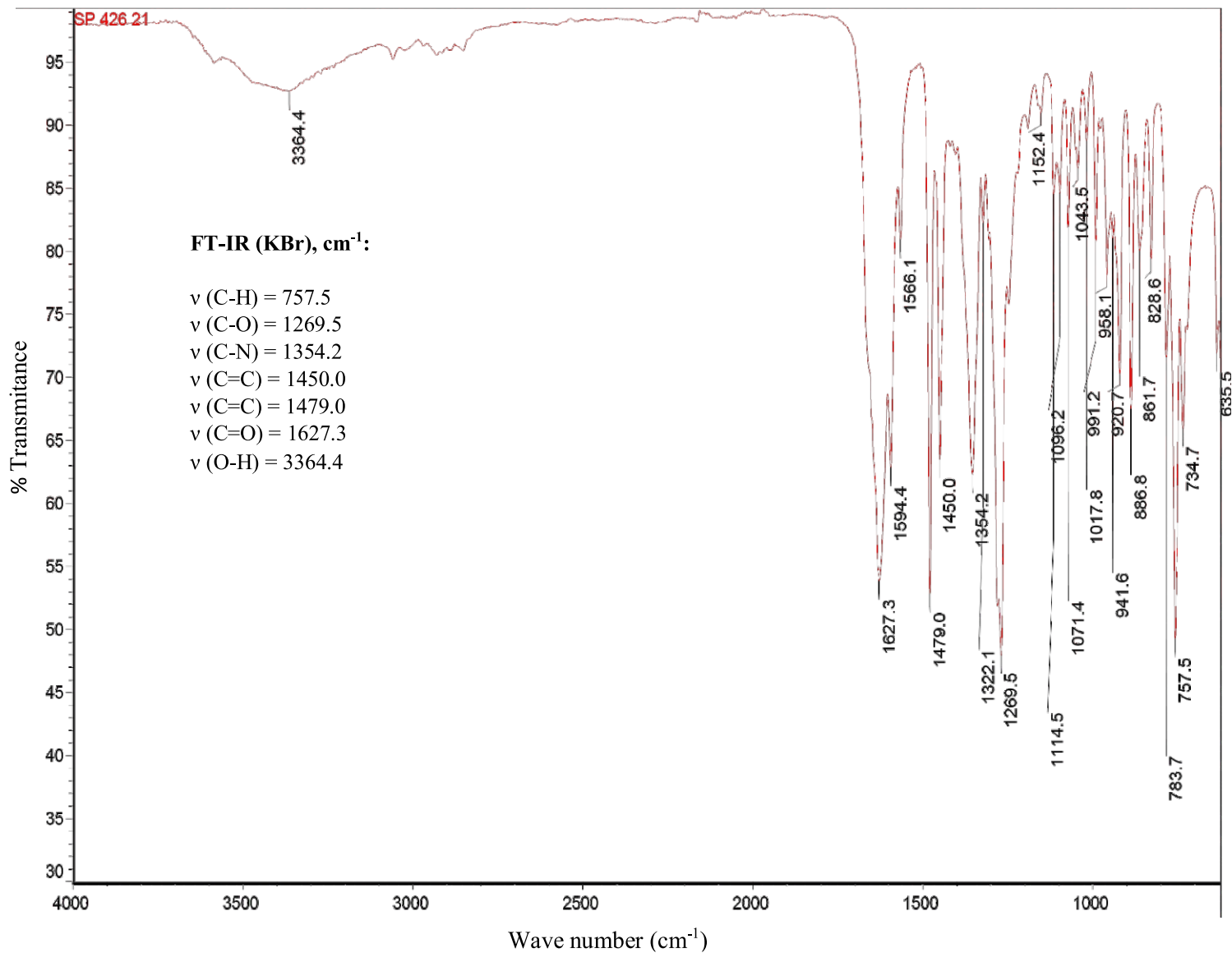


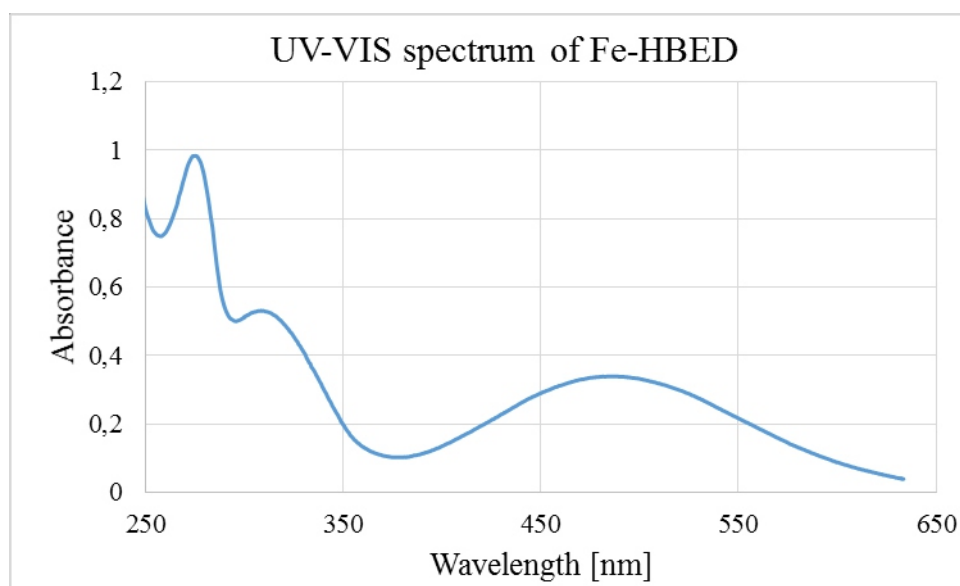
A. LC-MS/MS spectrum (ES-) of *N,N'*-di(2-hydroxybenzyl)ethylenediamine-*N,N'*-diacetic acid iron(III) sodium salt, Fe-HBED.



B. LC-MS/MS spectrum (ES-) of *N,N'*-di(2-hydroxybenzyl)ethylenediamine-*N,N'*-diacetic acid iron(III) sodium salt, Fe-HBED – base peak (m/z 440.10) fragmentation spectrum.



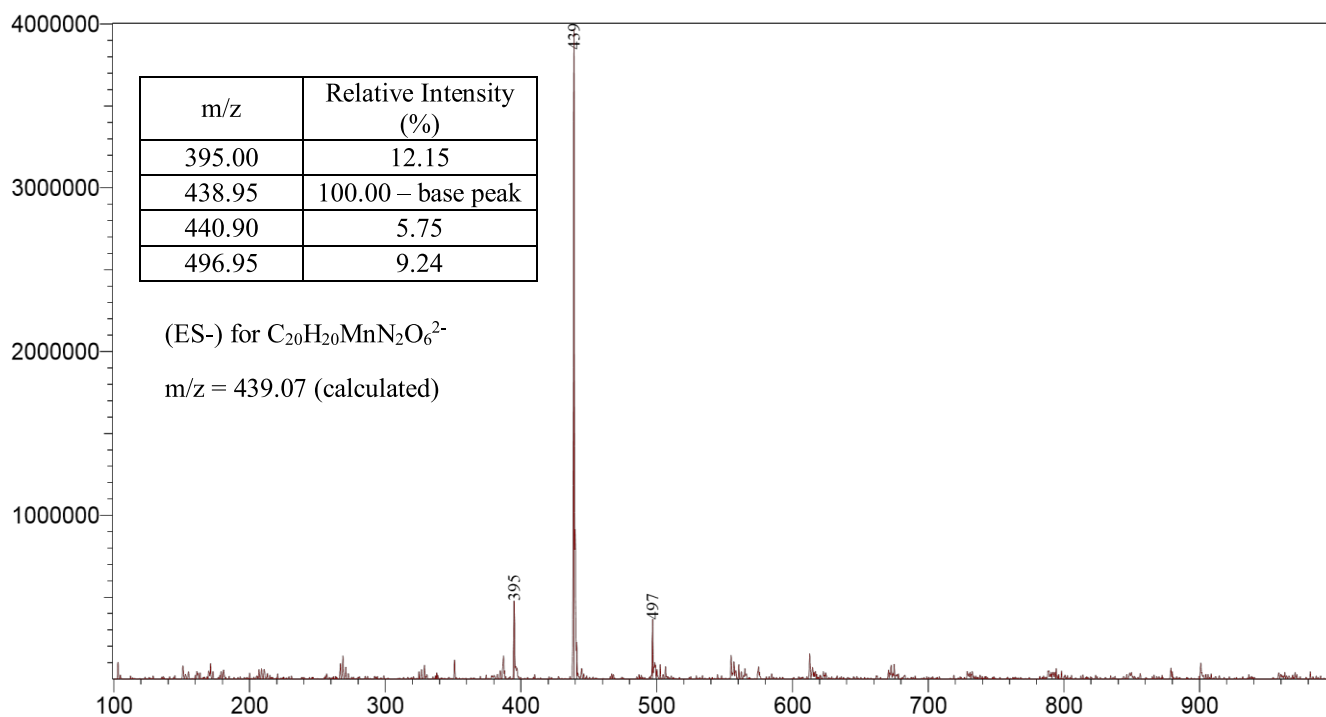
C. FT-IR spectrum of *N,N'*-di(2-hydroxybenzyl)ethylenediamine-*N,N'*-diacetic acid iron(III) sodium salt, Fe-HBED.



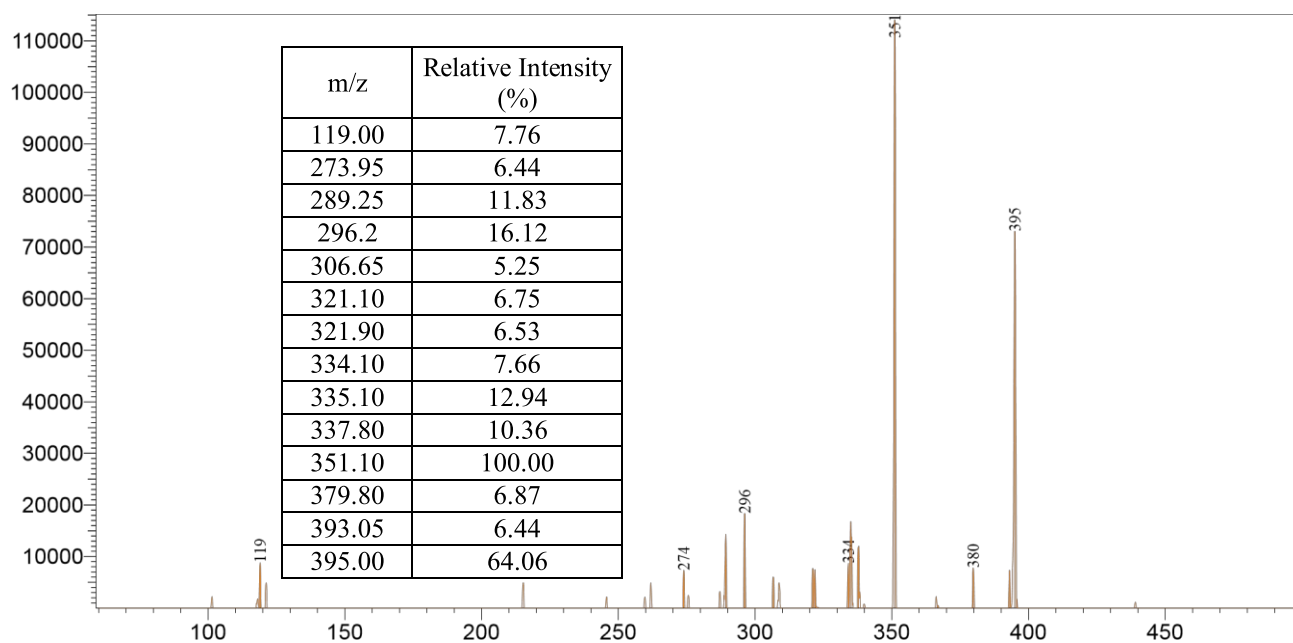
$$\lambda_{\max 1} = 274.0 \text{ nm}; \lambda_{\max 2} = 309.0 \text{ nm}; \lambda_{\max 3} = 491.5 \text{ nm};$$

$$\epsilon = 357.48 \text{ dm}^3 \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$$

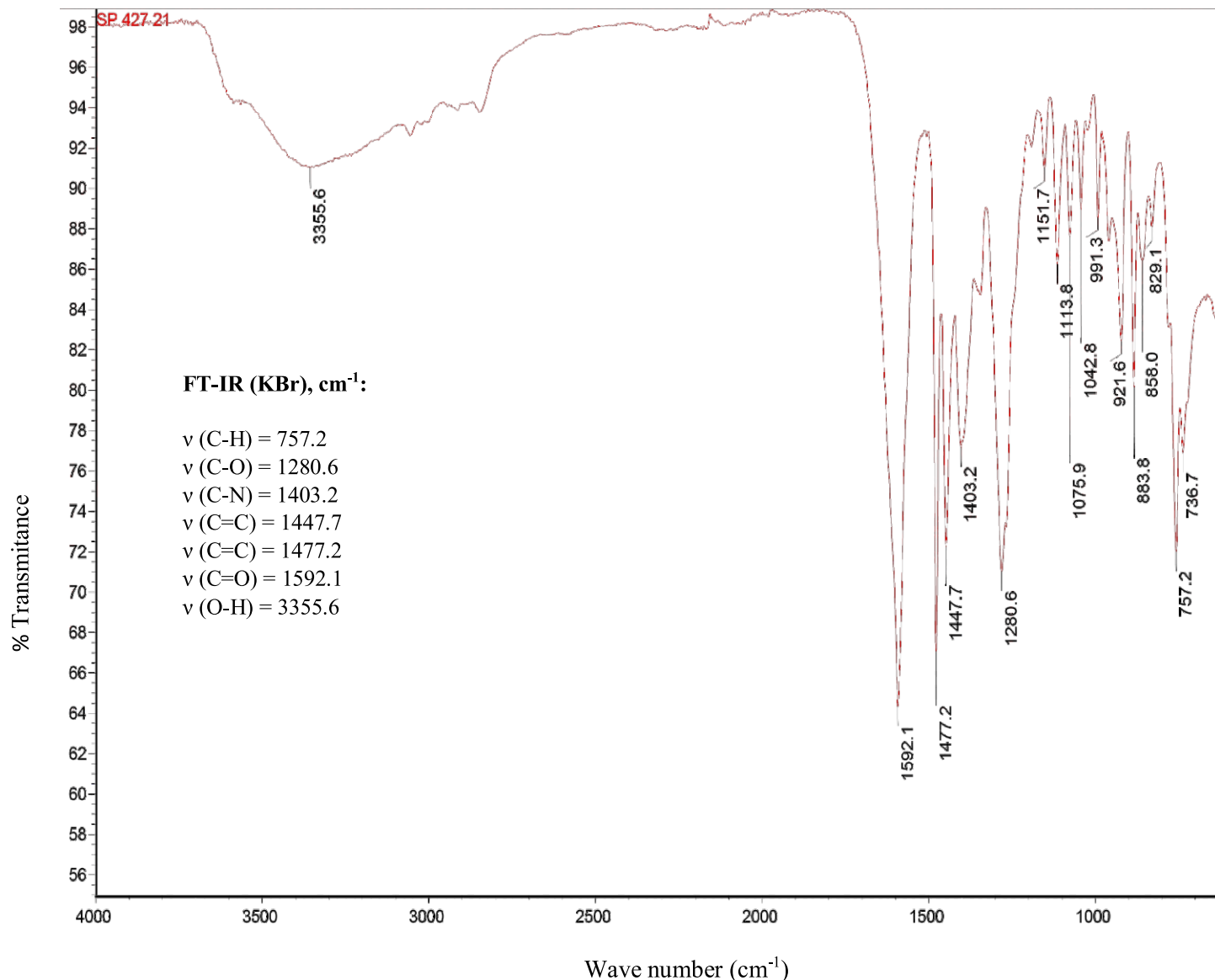
D. UV-VIS spectrum of *N,N'*-di(2-hydroxybenzyl)ethylenediamine-*N,N'*-diacetic acid iron(III) sodium salt, Fe-HBED.



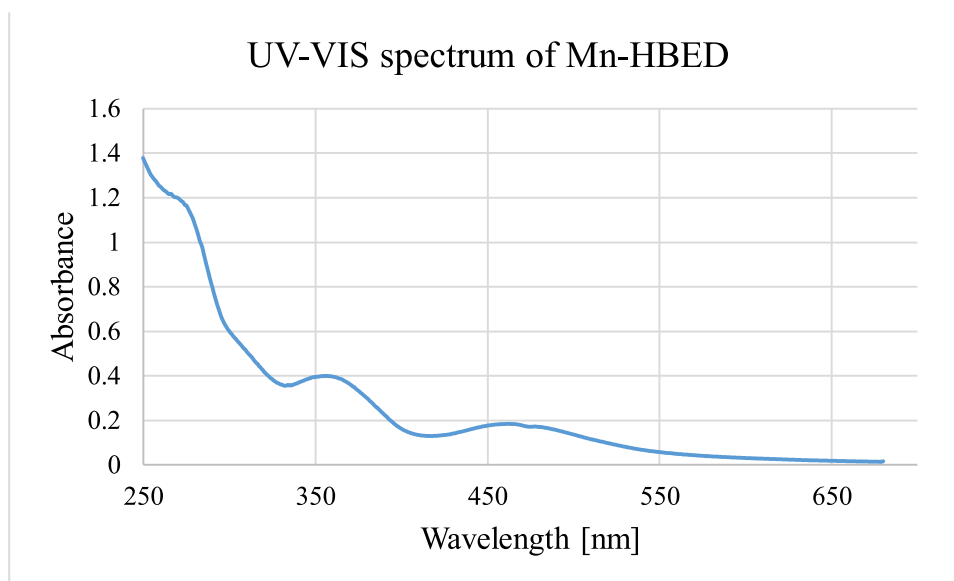
E. LC-MS/MS spectrum (ES-) of *N,N'*-di(2-hydroxybenzyl)ethylenediamine-*N,N'*-diacetic acid manganese(II) sodium salt, Mn-HBED.



F. LC-MS/MS spectrum (ES-) of *N,N'*-di(2-hydroxybenzyl)ethylenediamine-*N,N'*-diacetic acid manganese(II) sodium salt, Mn-HBED – base peak (m/z 438.95) fragmentation spectrum.



G. FT-IR spectrum of *N,N'*-di(2-hydroxybenzyl)ethylenediamine-*N,N'*-diacetic acid manganese(II) sodium salt, Mn-HBED.



$$\lambda_{\text{max}1} = 269.0 \text{ nm}; \lambda_{\text{max}2} = 355.0 \text{ nm}; \lambda_{\text{max}3} = 463.5 \text{ nm};$$

$$\varepsilon = 675.01 \text{ dm}^3 \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$$

H. UV-VIS spectrum of *N,N'*-di(2-hydroxybenzyl)ethylenediamine-*N,N'*-diacetic acid manganese(II) sodium salt, Mn-HBED.

Supplementary Figure S1. LC-MS/MS spectra (A, B, E, F), FTIR spectra (C, G) and UV-VIS spectra (D, H) of Fe-HBED and Mn-HBED.