Supporting information

Cephalosporin Antibiotics: Electrochemical Fingerprints and Core Structure Reactions Investigated by LC-MSMS

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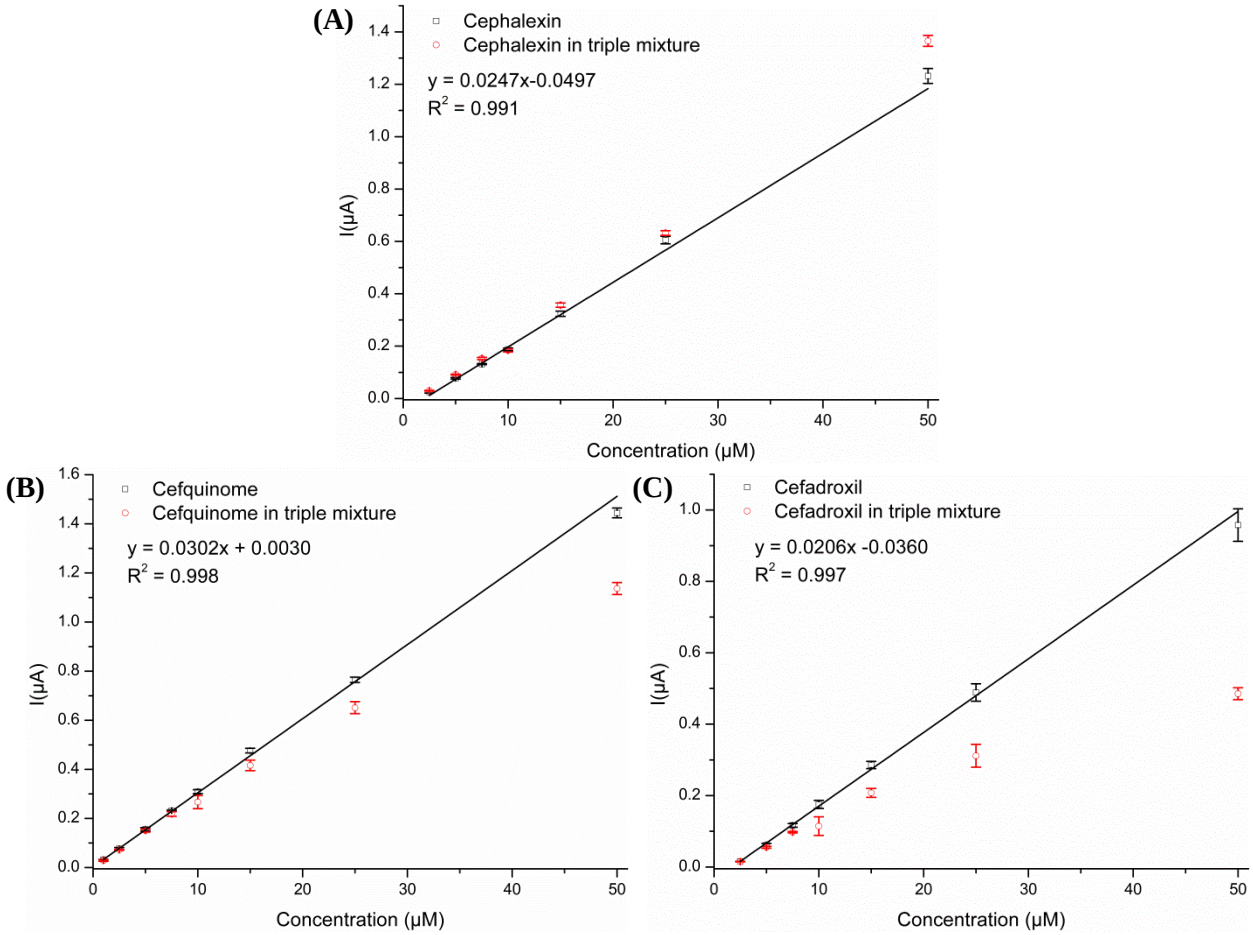
Figure S1. The concentration profile of the square-wave voltammetric responses of (A) Cephalexin (2.5-50 μM), (B) Cefquinome (1-50 μM) and (C) Cefadroxil (2.5-50 μM) in black and the corresponding responses of the triple mixture in red at bare carbon screen-printed electrodes in 0.1 M phosphate buffer pH 2.

Figure S2. Total ion chromatogram of 20 ng/μL 1h electrolysis sample of cephalexin at 1.1 V (black) and 1.25 V (orange).

Figure S3. MS/MS spectra of (A) cephalexin at 4.34 min (m/z 348.1035, $C_{16}H_{17}N_3O_4S$), (B) oxidation product P1 at 4.55 min (m/z 318.0925, $C_{15}H_{16}N_3O_3S$) and (C) product P2 at 3.65 min (m/z 336.1033, $C_{15}H_{18}N_3O_4S$).

Figure S4. MS/MS spectra of (A) cefacetrile ammonium adduct at 4.16 min (m/z 357.0861, $C_{13}H_{17}N_4O_6S$) (B) oxidation product P1' at 4.75 min (m/z 310.0492, $C_{12}H_{12}N_3O_5S$) and (C) product P2' at 3.61 min (m/z 328.0598, $C_{12}H_{14}N_3O_6S$).



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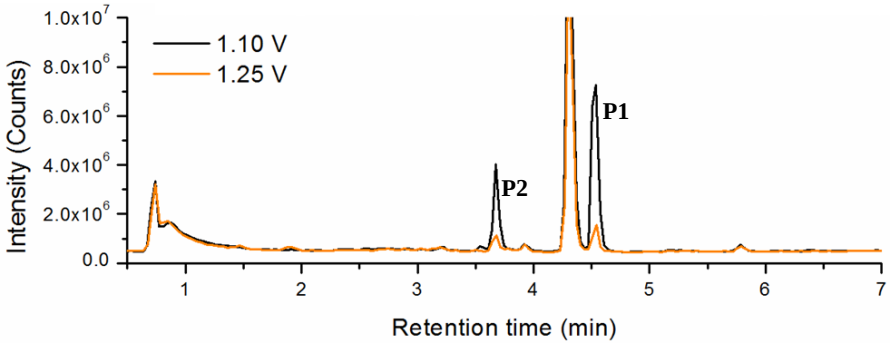

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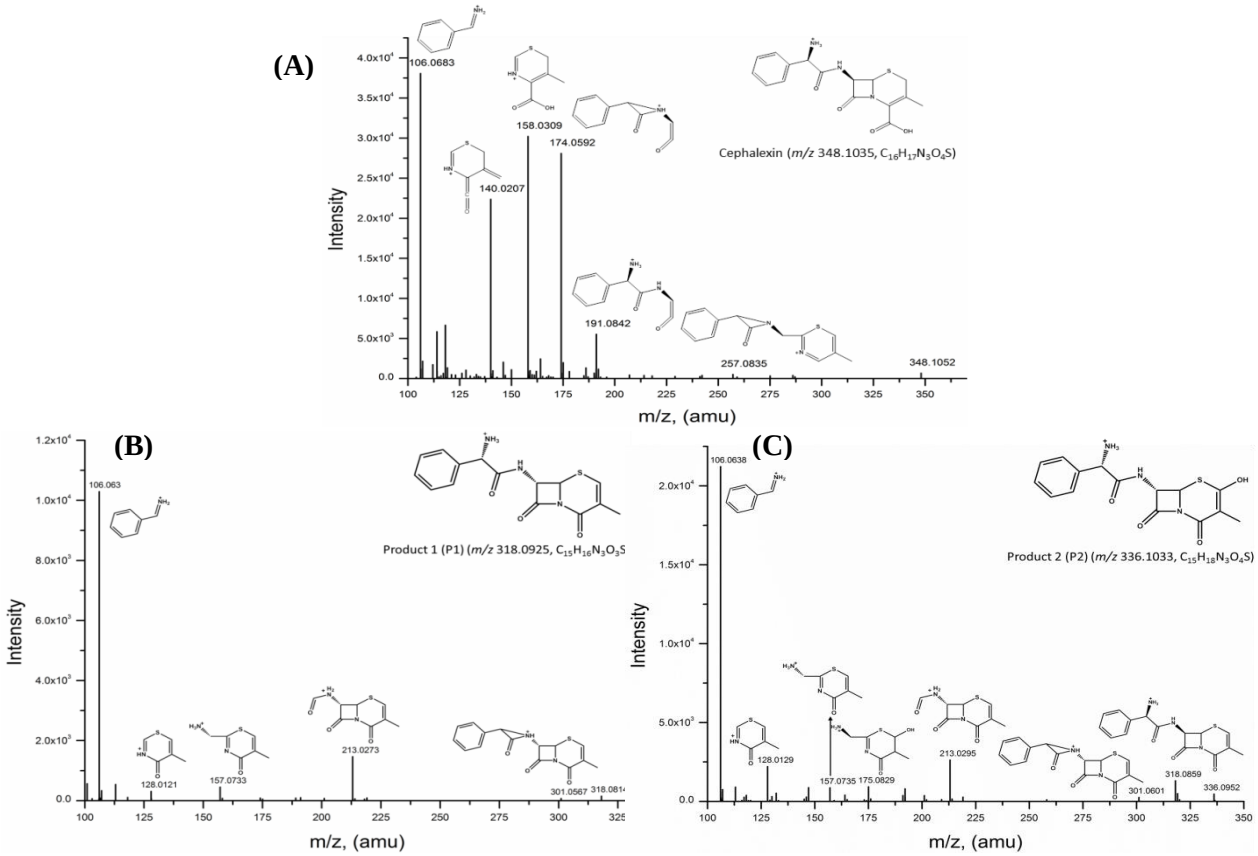

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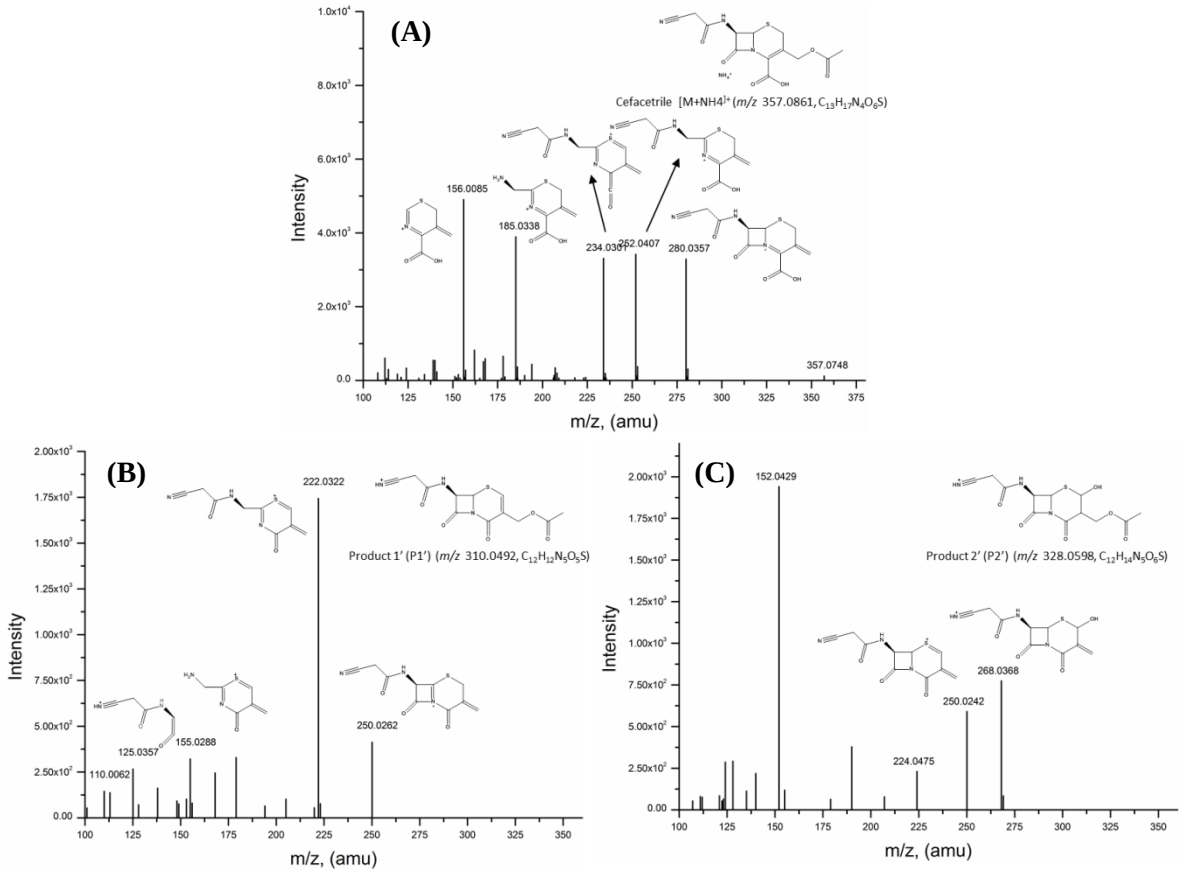

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