

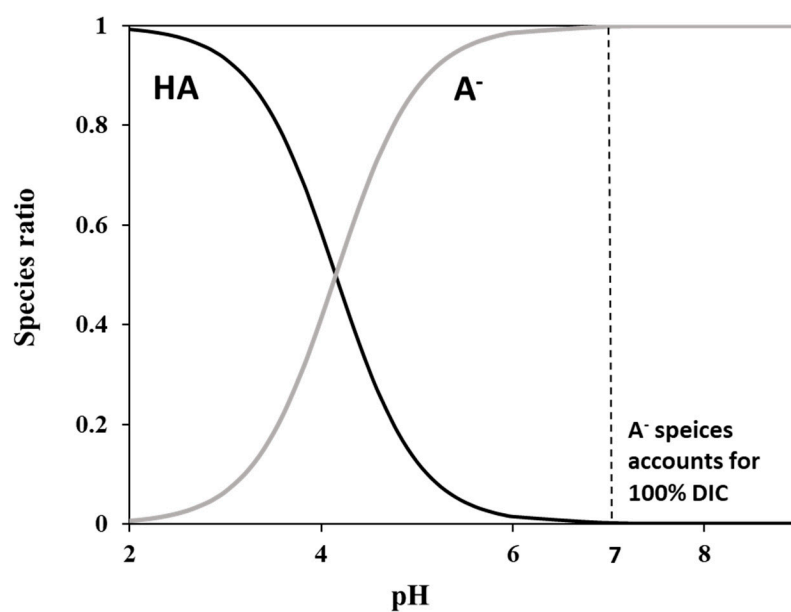


Figure S1. DIC species distribution versus solution pH. HA and A⁻ represent the acid and ionized form of DIC, respectively. The black and gray lines were calculated based on pK_a = 4.15 of DIC [44]. When pH was higher than 7, the ionized species (A⁻) account for 100% of DIC in solution.

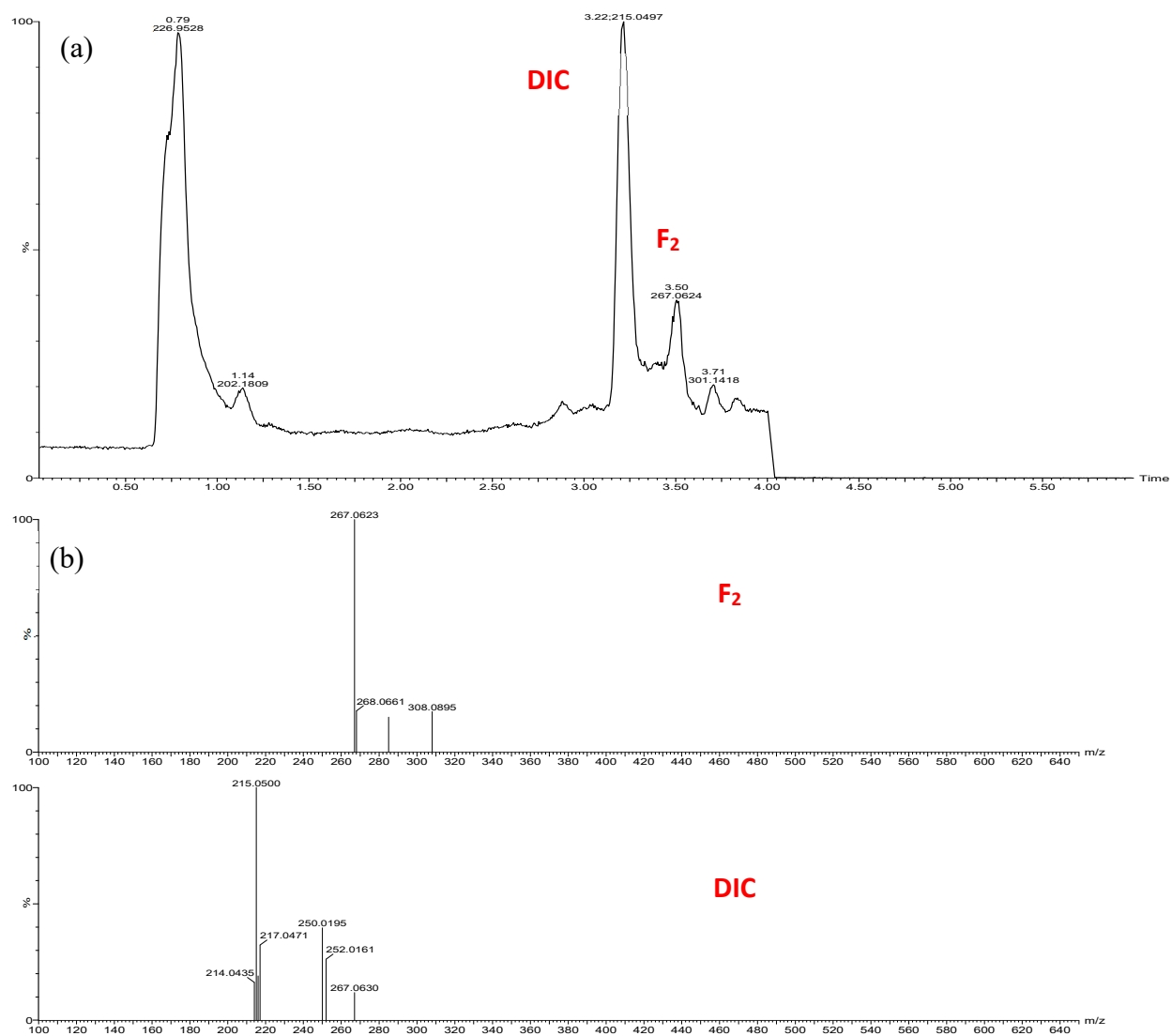


Figure S2. High-performance Liquid chromatography (HPLC)– mass spectroscopy (MS) chromatographic patterns of degradation intermediates (a) TIC in ESI+ mode (b) MS patterns in ESI+ mode under pH 7.0 for reaction time = 24 h with initial MnO₂ loading 200 mg.