

# Kinetics and Mechanism of the Oxidation of Coomassie Brilliant Blue-R dye by Hypochlorite and Role of Acid there in.

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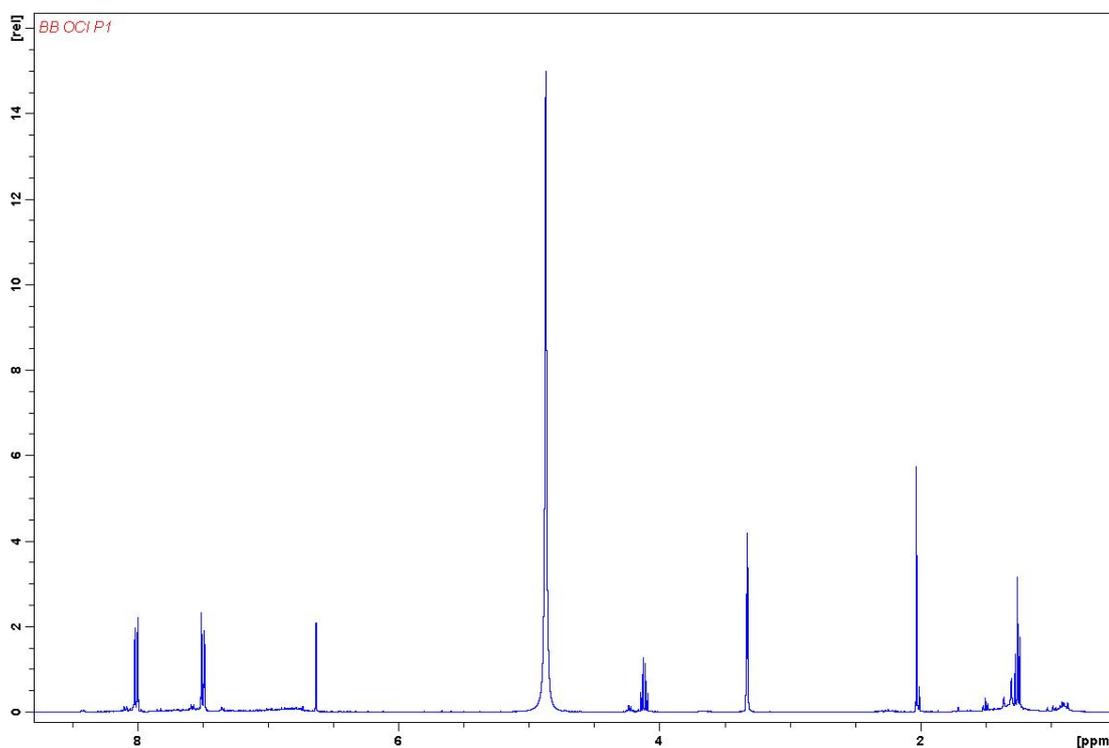


Figure S1. <sup>1</sup>H NMR spectrum for brilliant blue-R major oxidation product P<sub>1</sub> (4-(4-ethoxyphenylamino)-benzoic acid ) with hypochlorite.

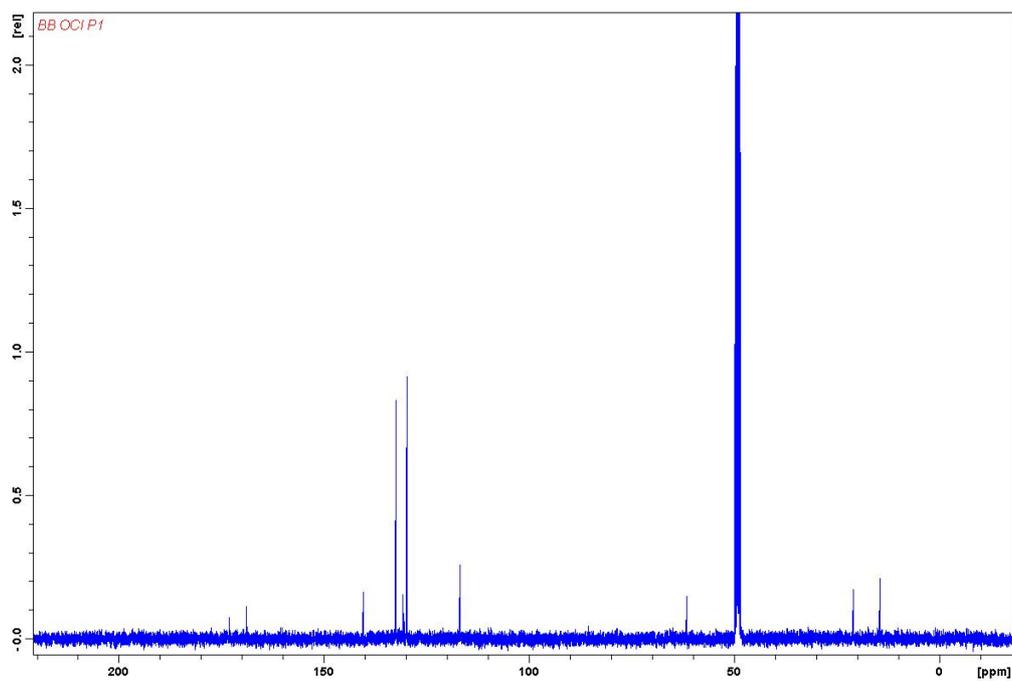


Figure S2.  $^{13}\text{C}$  NMR spectrum for brilliant blue-R major oxidation product P<sub>1</sub> (4-(4-ethoxyphenylamino)-benzoic acid) with hypochlorite.

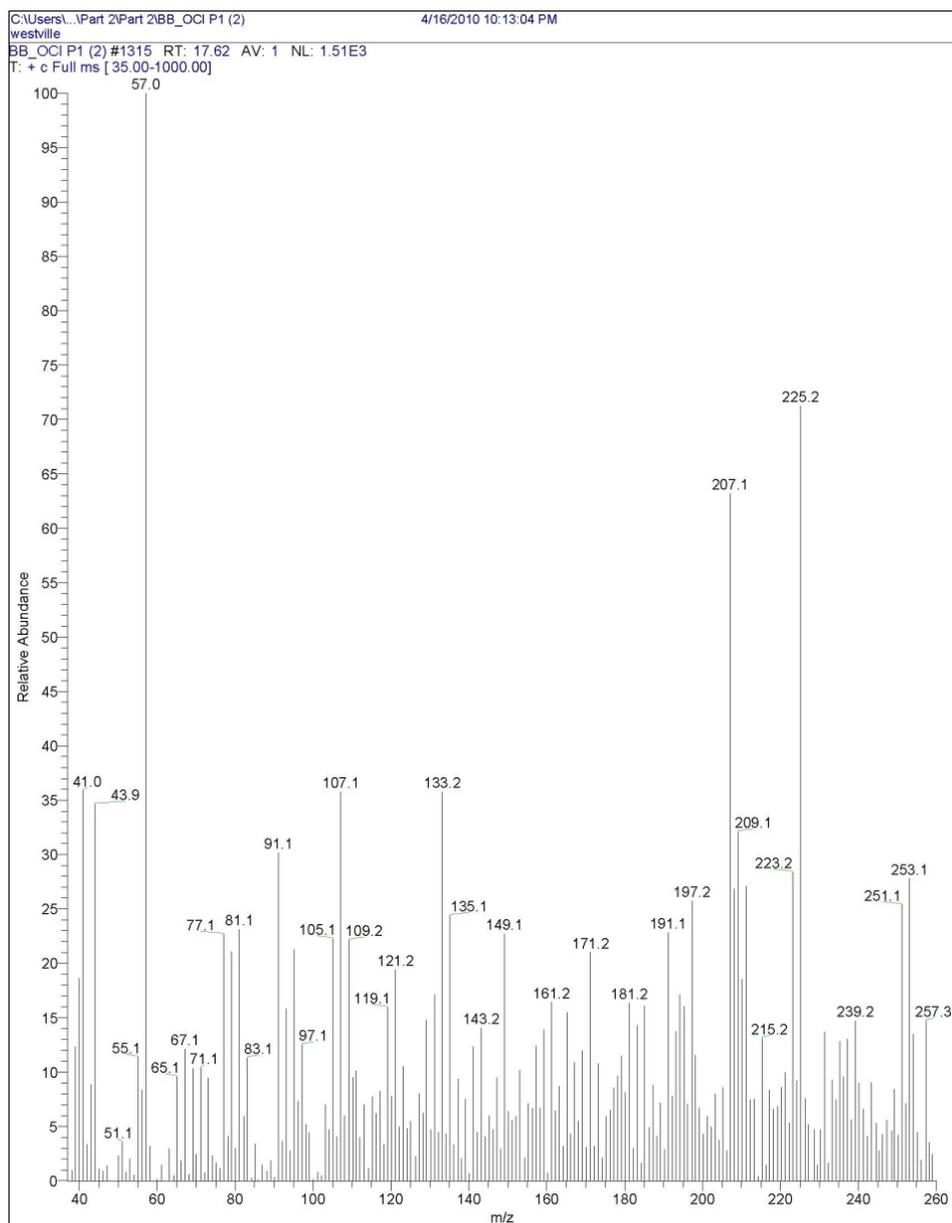


Figure S3. GC-MS spectrum for brilliant blue-R major oxidation product (P<sub>1</sub> (4-(4-ethoxyphenylamino)-benzoic acid) with hypochlorite.

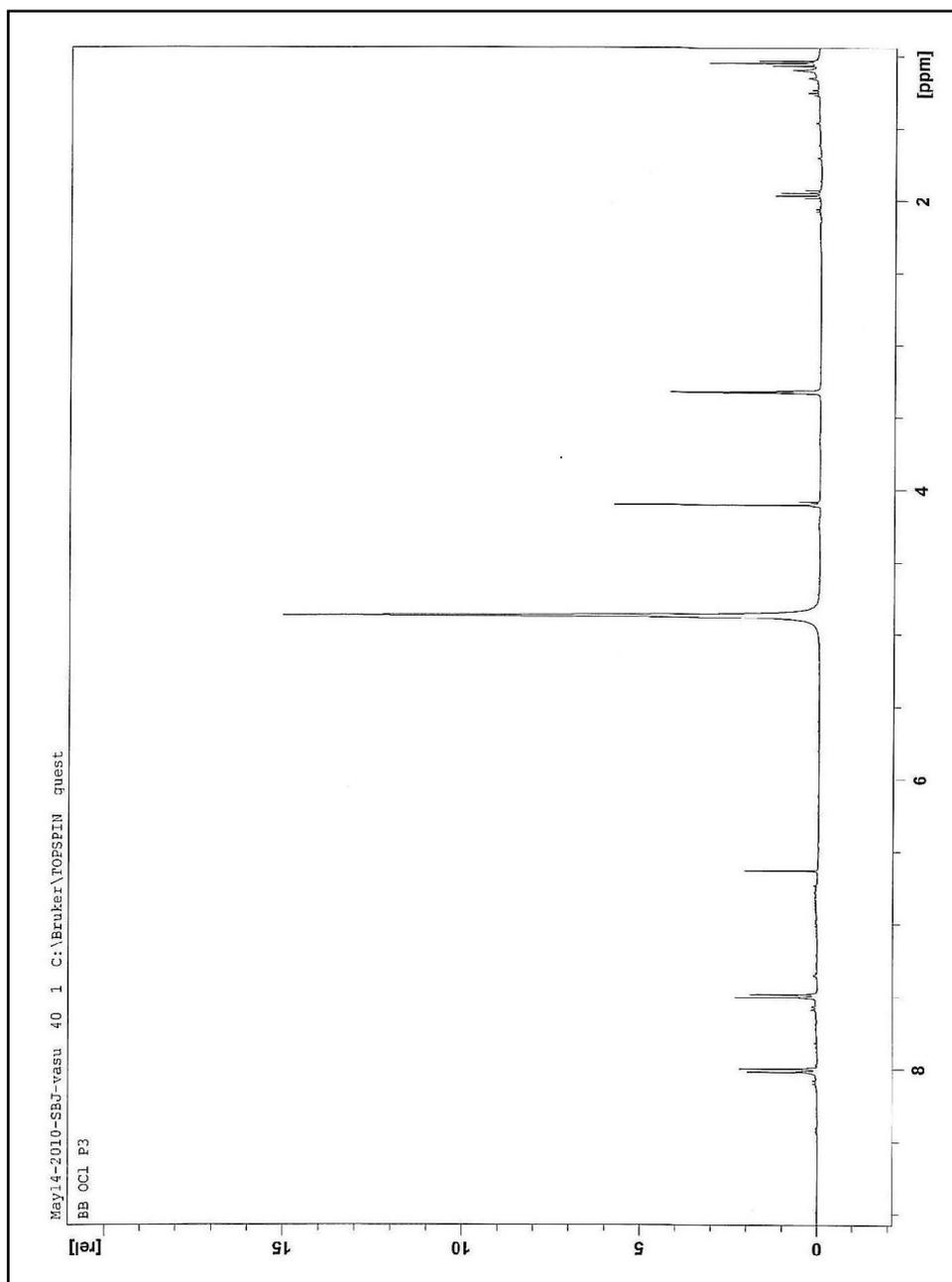


Figure S4.  $^1\text{H}$  NMR spectrum for brilliant blue-R major oxidation product  $\text{P}_2$  (3-ethylaminomethylbenzenesulphonic acid) with hypochlorite.

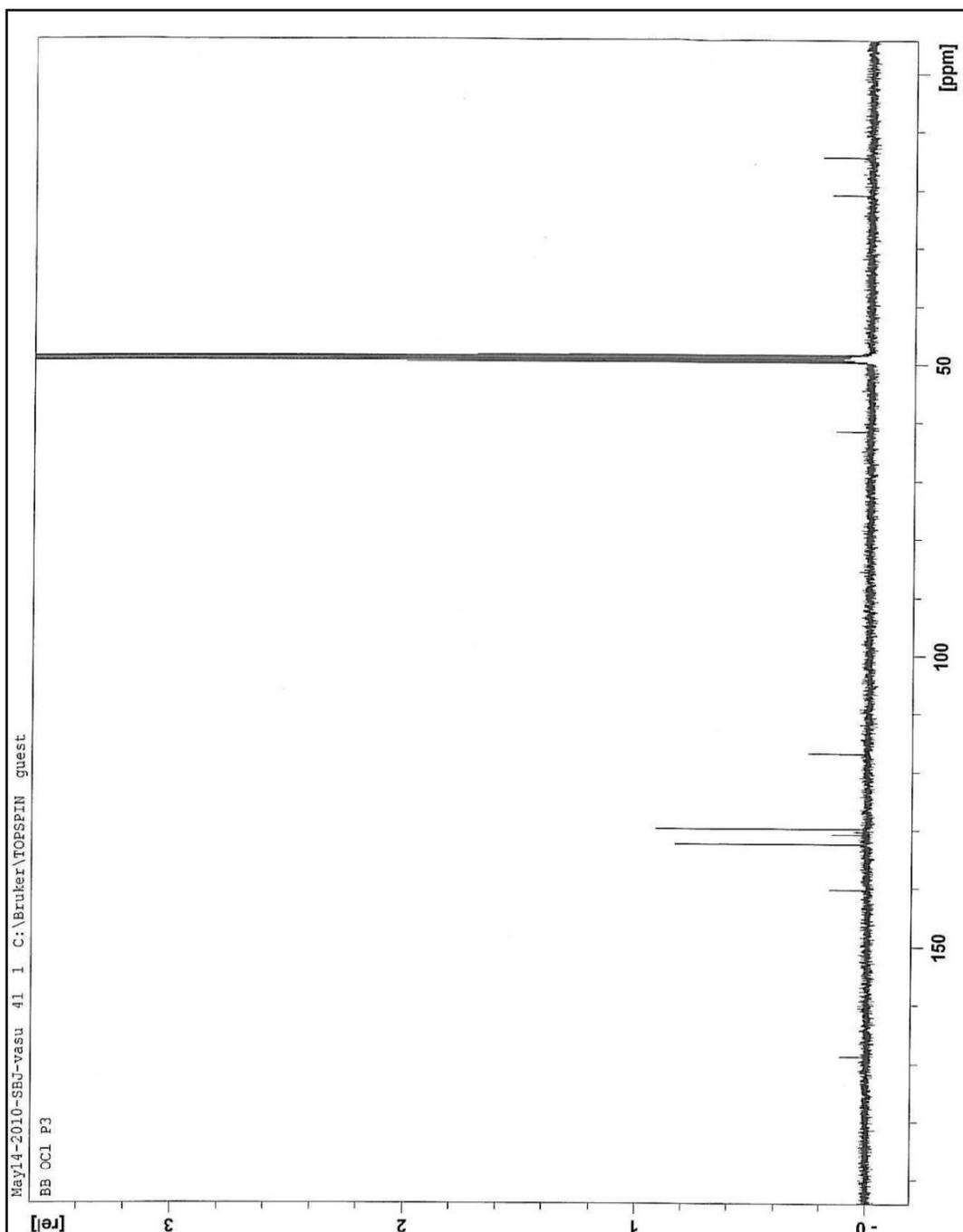


Figure S5.  $^{13}\text{C}$  NMR spectrum for brilliant blue-R major oxidation product  $\text{P}_2(3\text{-ethylamino methyl benzenesulphonic acid})$  with hypochlorite.

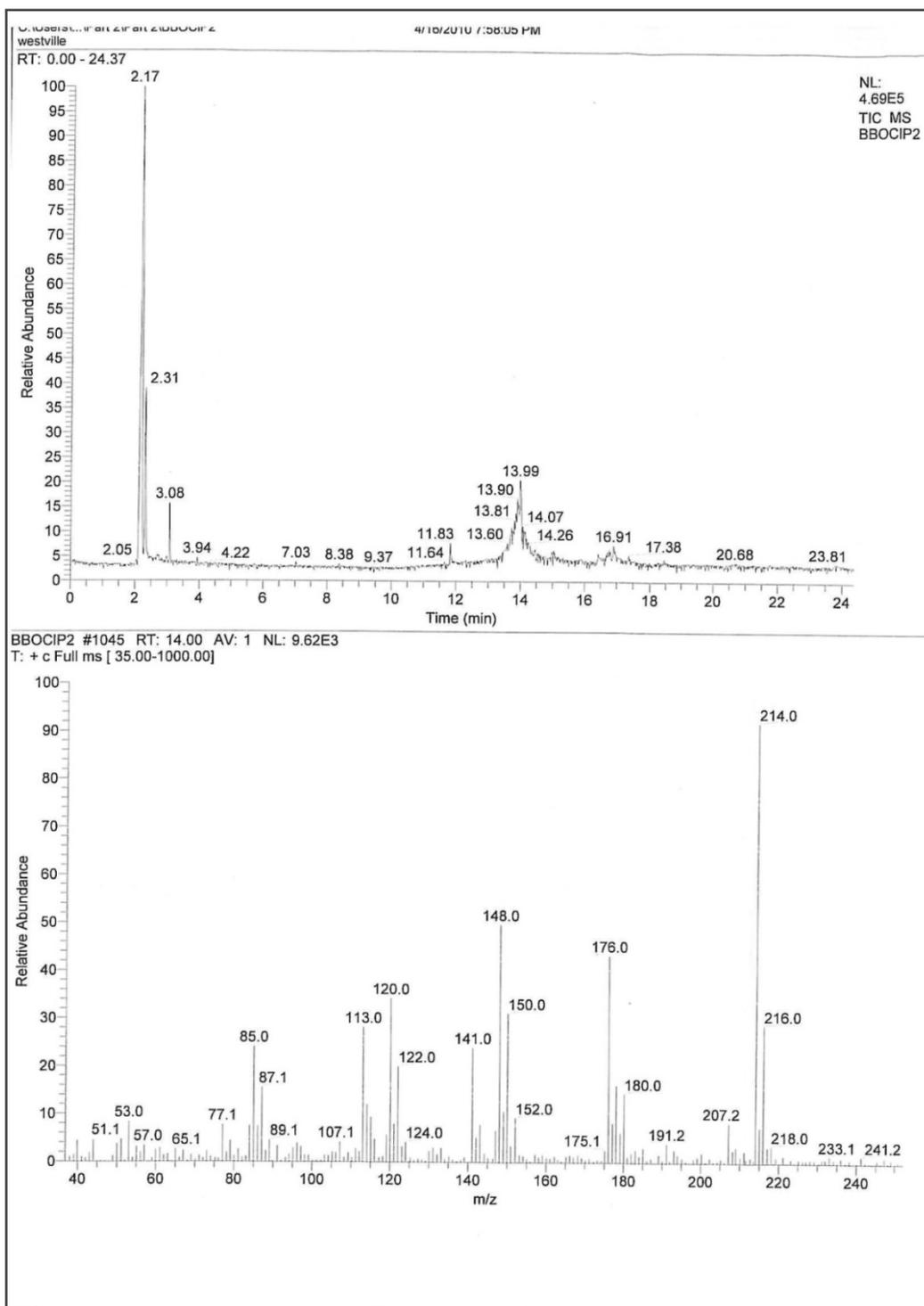


Figure S6. GC-MS spectrum for brilliant blue-R major oxidation product $P_2$ (3-ethylaminomethylbenzenesulphonic acid) with hypochlorite.

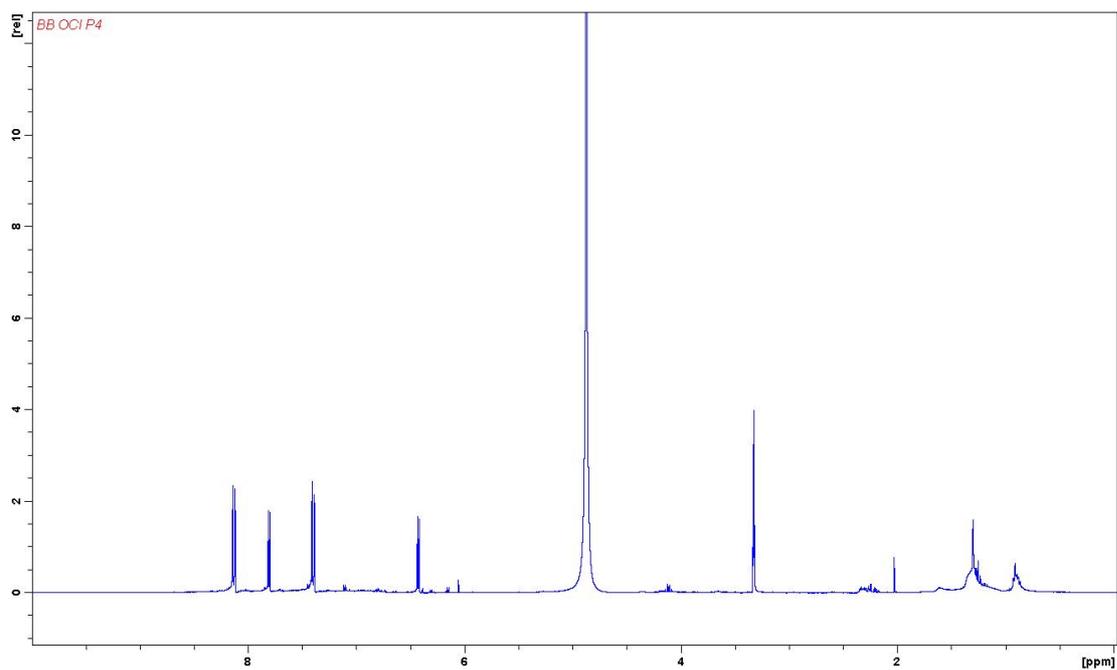


Figure S7. <sup>1</sup>H NMR spectrum of brilliant blue-R major oxidation product P<sub>4</sub> (6'-chloro-5'-hydroxy-bicyclohexylidene-2,5,2'-triene-4,4'-dione) with hypochlorite.

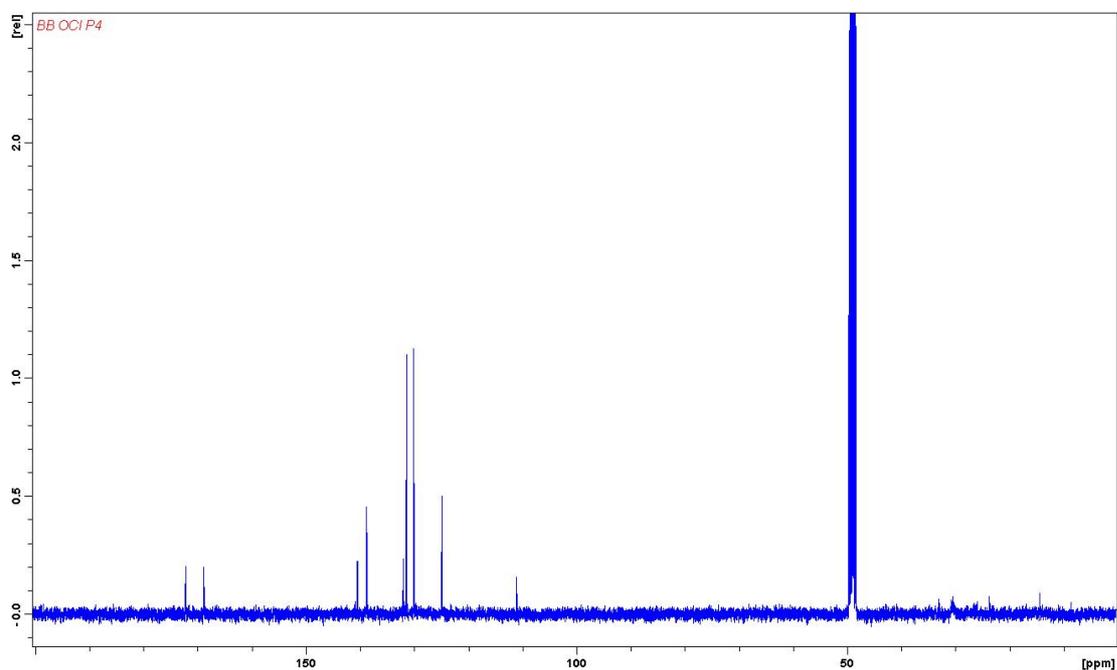


Figure S8 <sup>13</sup>C NMR spectrum of brilliant blue-R major oxidation product P<sub>4</sub> (6'-chloro-5'-hydroxy-bicyclohexylidene-2,5,2'-triene-4,4'-dione) with hypochlorite.

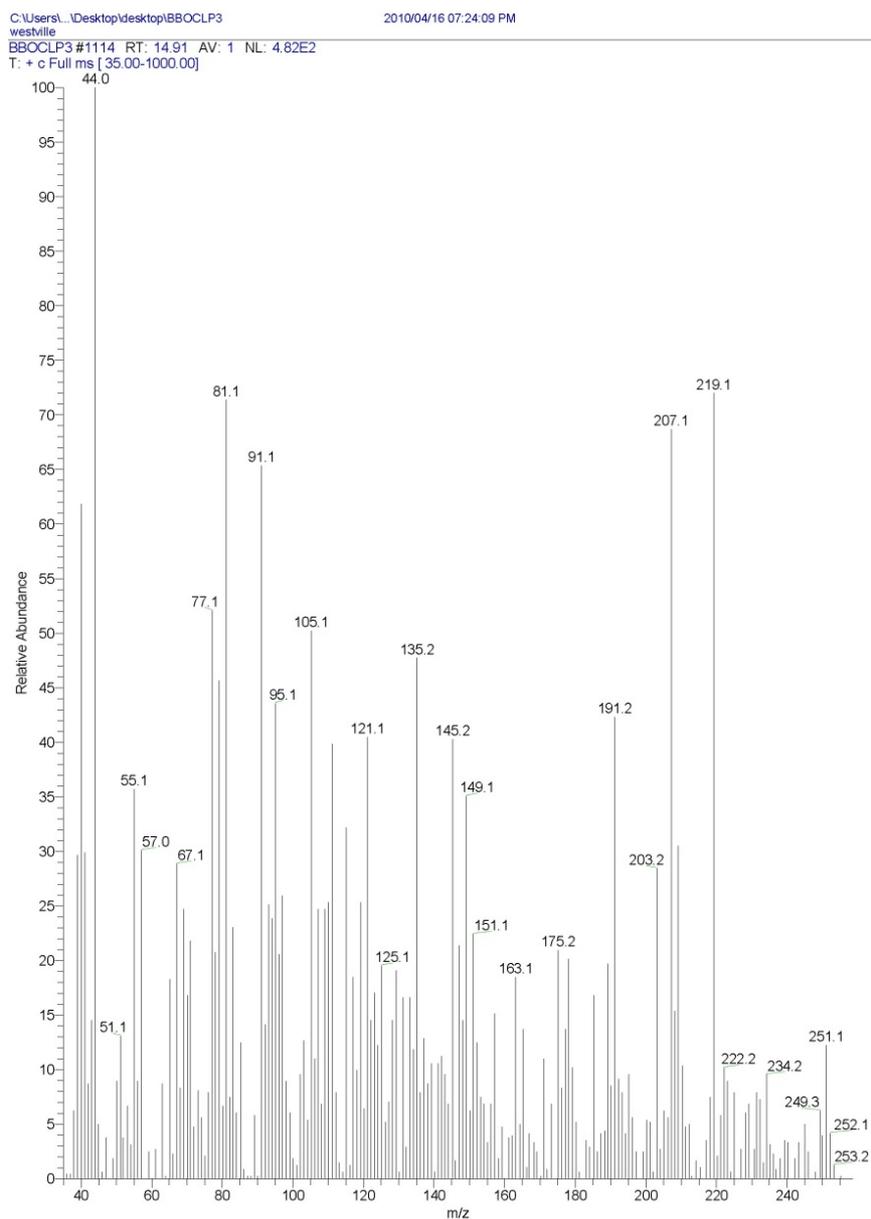


Figure S9. GC-MS spectrum of brilliant blue-R major oxidation product P<sub>4</sub> (6'-chloro-5'-hydroxy-bicyclohexylidene-2,5,2'-triene-4,4'-dione) with hypochlorite.