Supporting Information for

A Novel Strategy Using Peroxymonosulfate to Control the Formation of Iodinated Aromatic Products in Treatment of Phenolic Compounds by Permanganate

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Text S1. Description of the principle of the Precursor Ion Scan (PIS) and Multiple Reaction Monitoring (MRM) approach

The PIS approach has been developed by Zhang et al. [1-3] as an effective tool to selectively pick out polar halogen-containing compounds that are ionizable in negative ESI and its principle has been well elaborated by these authors. There are three quadrupoles of the mass spectrometer called Q_1, Q_2 and Q_3. The compounds in the samples would be firstly ionized by the electrospray ionization producing corresponding molecular ions. These ions then passed Q_1 in sequence with their m/z values scanned. As these ions entered collide chamber (Q_2) and collided with argon gas, fragment ions were then produced. By setting PIS of m/z 127 as conducted in this work, Q_3 would only selectively detect fragment iodide ion (m/z of 127) that generated in Q_2. In this way, polar iodide-containing compounds could be quickly and selectively picked out. For MRM measurement, the combination of molecular ion and the iodide ion was used as the precursor/product ion pairs due to their high intensity.

References

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