

carboxylic section (<250 nm). This has been shown to be an indicator of NOM reactivity [3]. This method will be correlated with DBP yields. DBPs are extracted by EPA methods 551.1 for THMs and 551.2 for HAAs that output chromatograms. MatLab code is then applied to output the concentrations for each of the species. The linear range was 10-100 ppb, with 4% reproducibility and 94% recovery.

Modeling of drinking water treatment and analysis of disinfection byproduct formation

[1] Krasner, S. W., et al. (2006). Environ. Sci. Technol., 40(23), 7175-7185. [2] Richardson, S. D., et al. (2008). Environ. Sci. Technol., 42(22), 8330-8338. [3] Korshin, G., et al. (2009). Wat. Res., 43 (6), 1541-8. [4] Korshin, G., et al. (1997). Wat. Res., 31 (7), 1787-95.

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Gas Chromatograph with ECD





Results and Discussion

- reactivity as indicated by decreasing ASI
- it produces DBPs in a positive fashion.
- for THM and $\Delta \rho$ =+0.15 for HAAs
- For stranger circumstances like the higher that for I-DBPs, which have a more intricate formation process, ASI would be a better indicator.
- GC was calibrated to pick out the HAA peaks
- Wrote a 850+ line MatLab code to analyze the GC output



