*Environmental organic iron-binding ligand and siderophore data*

Organic iron-binding ligand data from BATS and HOT were analyzed using competitive ligand exchange adsorptive cathodic stripping voltammetry (CLE-ACSV) as described in detail elsewhere (Buck and Bruland 2007; Fitzsimmons et al. 2015; Bundy et al. 2018). Organic iron-binding ligand data from HOT was used from previous work, as described in Fitzsimmons et al. (2015) and Bundy et al. (2018). Organic iron-binding ligand data for BATS was used from the occupation of BATS (Station 12) during the U.S. GEOTRACES GA03 cruise (Buck et al. 2015).

Siderophore concentrations were measured using liquid chromatography (LC) coupled to inductively coupled plasma mass spectrometry (ICP-MS) after pre-concentration via solid phase extraction (Boiteau et al. 2013, 2016; Bundy et al. 2018). Siderophore concentrations for surface waters in the North Atlantic was obtained from Mawji et al. (2008) (stations 41-62), but no data was available from the deep chlorophyll maximum in the North Atlantic. The siderophore concentrations near HOT were reported from Bundy et al. (2018), and from Park et al. (in prep). The deep chlorophyll maximum was defined as the approximate observed depth range of the chlorophyll maximum for HOT (100- 125 m) and BATS (90- 135 m), while surface data was defined as depths shallower than the deep chlorophyll maximum.

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