Organic complexation of dissolved iron from the U.S. GEOTRACES cruise (GP16) in the South Pacific

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The concentrations, conditional stability constants, and resulting complexation capacity of iron-binding ligands were determined in high-resolution (up to 37-depth) profiles collected from the Eastern Tropical South Pacific as part of the U.S. GEOTRACES East Pacific Zonal Transect (GEOTRACES Section GP16). A competitive ligand exchange-adsorptive cathodic stripping voltammetry (CLE-ACSV) method using salicylaldoxime as the added competing ligand was employed for these speciation analyses. Results of this work will be compared with results from the U.S. GEOTRACES Section GA03 previously obtained using the same CLE-ACSV method for samples collected across the North Atlantic basin. Comparisons highlighting the similarities and differences between these datasets will focus in particular on samples from the productive eastern margins and on hydrothermal vent plume samples obtained from the two basins.