

*Geochemistry, Geophysics, Geosystems*

Supporting Information for

**The Fate of Sedimentary Reactive Iron at the Land-Ocean Interface:
A Case Study from the Amazon Shelf**

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**Additional Supporting Information (Files uploaded separately)**

Captions for Tables S2 to S5

**Introduction**

The supplementary data includes additional information on analytical results for nutrient measurements on board M147 (S1), data and results used for correcting sedimentary K data (S5) as well as the complete data sets for (S2) sedimentary pore water data, (S3) sedimentary solid phase data and (S4) suspended particulate matter data.

Table S1. Analytical results for nutrient measurements on M147 relative to certified values of the used certified reference material (CRM).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| CRM: |  | Nitrate | Phosphate | Nitrite | Silicate | Number of |
|  |  | (µmol/kg) | (µmol/kg) | (µmol/kg) | (µmol/kg) | observations |
| BW | certified value | 25.2 | 1.58 | 0.069 | 61.5 |  |
|  | average measured value | 25 | 1.56 | 0.067 | 58.0 | 81 |
|  | stdeviation | 0.2 | 0.03 | 0.017 | 1.1 |  |
|  | deviation from CRM (%) | 0.8 | 1.3 | 3.0 | 6.1 |  |
| CG1 | certified value | 24.3 | 1.74 | 0.062 | 57.8 |  |
|  | average measured value | 24.0 | 1.71 | 0.053 | 54.7 | 60 |
|  | stdeviation | 0.6 | 0.07 | 0.016 | 0.9 |  |
|  | deviation from CRM (%) | 1.3 | 1.8 | 17.0 | 5.7 |  |
| CG | certified value | 24.3 | 1.74 | 0.062 | 57.8 |  |
|  | average measured value | 24.0 | 1.70 | 0.050 | 56.6 | 48 |
|  | stdeviation | 0.6 | 0.08 | 0.016 | 0.9 |  |
|  | deviation from CRM (%) | 1.4 | 2.4 | 24.0 | 2.1 |  |

Table S2. Pore water and bottom water Fe, K and nitrate data. The table also includes bottom water salinity, temperature and oxygen data.

Table S3. Solid phase organic carbon (Corg), Al, K and Fe data.

Table S4. Suspended particulate matter data.

Table S5. Sedimentary K data corrected for pore water K concentrations and cation exchange capacity.