

Supplementary Material for

**Determination of Inorganic Anions in Oilfield Water Using Capillary Electrophoresis
with Indirect Fluorescence Detection**

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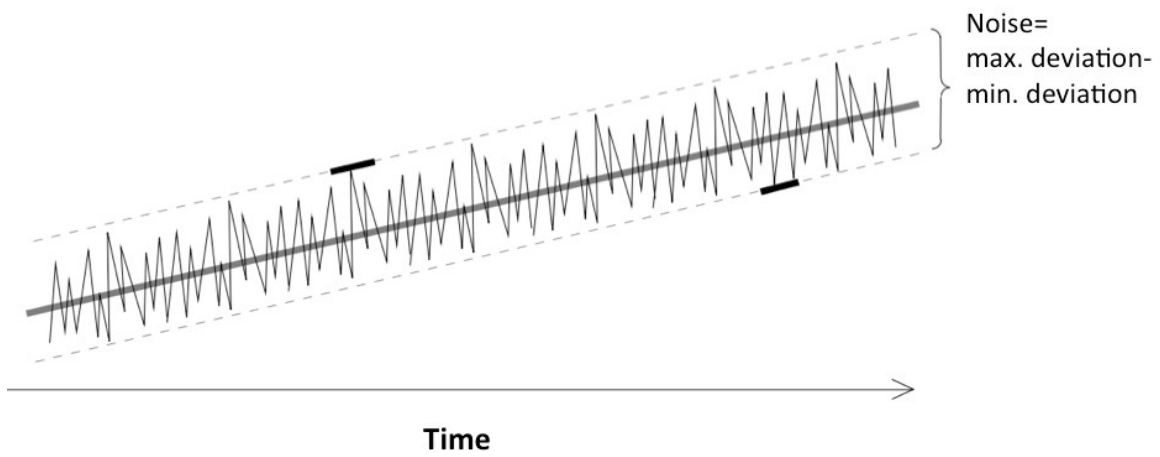


Figure S1 Demonstration of noise calculation used to assess stability of light sources (Section 2.3). Adapted from ref. 59

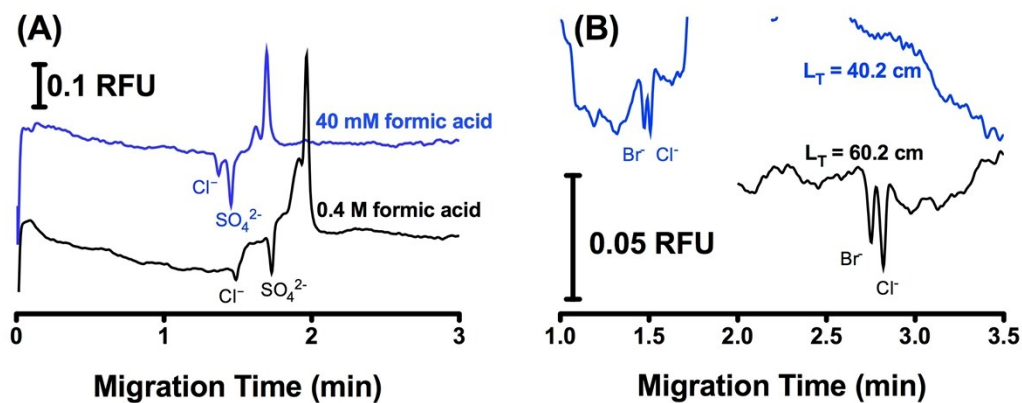


Figure S2 Optimization of (A) formic acid concentration and (B) capillary length.

Conditions: (A) sample, 2 ppm Cl⁻, 5 ppm SO₄²⁻; capillary, L_T 40.2 cm, L_D 30 cm, I.D. 50 μm; voltage, -15 kV; electrolyte, 10 μM HPTS and formic acid, concentration as indicated in the electropherogram. (B) sample, 10 ppm Br⁻, 10 ppm Cl⁻; capillary, L_T as indicated in the electropherogram. L_D = L_T - 10 cm; voltage, -23 kV; electrolyte, 10 μM HPTS and 0.4 M formic acid, pH 2.0; detection, λ_{excitation} = 405 nm and λ_{emission} = 520 nm.

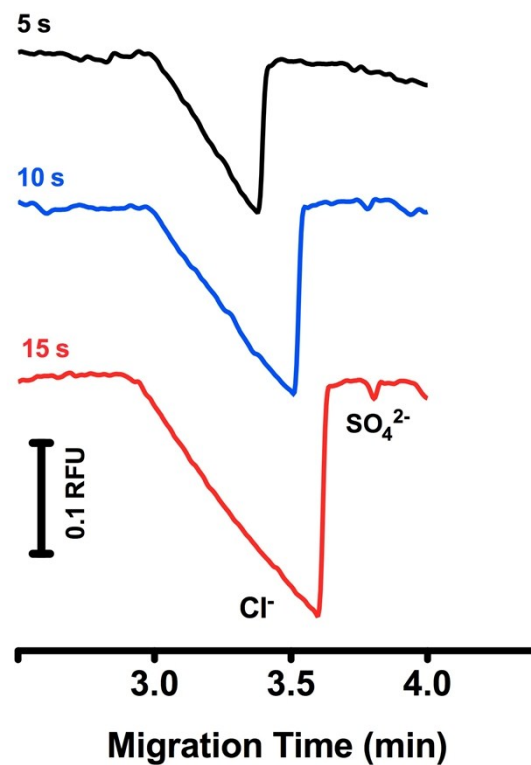


Figure S3 Effect of injection time on sulfate determination in high salinity sample.

Conditions: sample, 0.5 ppm sulfate with 500 ppm chloride; injection, 0.5 psi for time indicated on the figure; electrolyte, 10 μ M HPTS and 0.4 M formic acid, pH 2.0; capillary, L_T 60.2 cm, L_D 50 cm, I.D. 50 μ m; voltage, -22.5 kV; and detection: $\lambda_{\text{excitation}} = 405$ nm and $\lambda_{\text{emission}} = 520$ nm.