Boron isotope ratio measurements with a Q-ICP-MS in seawater samples

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A method was developed for Boron isotope ratios measurements in 4 seawater samples from the Atlantic, Indic, and Pacific Oceans by Q-ICP-MS. Samples were spiked with lithium, and both ⁷Li, ⁶Li, and ¹¹B ¹⁰B values were collected. Lithium internal standardization corrected the measured ¹¹B and ¹⁰B values for statistical fluctuations; instrument drift; matrix elements concentrations; and mass bias correction factor. A synthetic isotopic mixture of boron SRM 951 and enriched ¹⁰B SRM 952 also was examined. This method provided a measured boron isotopic ratio precision in Seawater samples of 0.05% RSD and accuracy of 100,9% for SRM 951.