



**UIC Coulometer Quality Control Analysis
Updated: Feb. 20, 2014**

Analyte: Inorganic carbon

DEFINITIONS:

Accuracy: Based on analysis of known standards.

Coefficient of variation (CV): Also known as the relative standard deviation, this value is the standard deviation of a series of measurements divided by the mean and expressed as a percentage. The value reported is the pooled CV over all detection ranges.

REPORTED VALUES:

Values reported (\pm STDEV) in the tables below are those determined by the S-LAB.

Solid inorganic carbon values have been determined using a pure calcium carbonate standard (CAS #471-34-1). Quality control testing for DIC in seawater was conducted using purchased Certified Reference Material (CRM) from the A. Dickson lab at UCSD-SIO. CRM is used during daily runs in order to allow comparison of results to those obtained by the international carbon community.

Inorganic Carbon using UIC acidification module

Standard	pure CaCO₃
Weight % C	12.01
S-LAB wt% C (n=5)	11.82\pm 0.05
Accuracy	\pm 1.58 %
CV	0.4 %

Dissolved Inorganic Carbon in Seawater using VINDTA

Standard	Seawater CRM
True Value	2009.99 \pm 0.52
S-LAB wt% C (n=9)	2010.09 \pm 1.02
Accuracy	\pm0.005 %
CV	0.05 %