



**Shimadzu TOC-L Quality Control Analysis
Updated: Feb. 20, 2014**

Analytes: Dissolved organic carbon (reported as non-purgable organic carbon: NPOC) and Total dissolved nitrogen (TDN)

DEFINITIONS:

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. This value is the pooled CV at all detection ranges.

Mean Detection Limit (MDL): 3 times the standard deviation of the blank (n=10).

Accuracy: Average % accuracy based on analysis of purchased standards

REPORTED VALUES:

Values reported (\pm STDEV) in the tables below are those determined by the S-LAB and are reported in both μ M and ppm (n=27). Quality control testing for NPOC and TDN was conducted using purchased Deep Seawater Reference Material (DSRM) from the RSMAS Consensus Reference Materials (CRM) Project (<http://yyy.rsmas.miami.edu/groups/biogeochem/CRM.html>). Reference material is used during daily runs in order to allow comparison of results to those obtained by the international carbon community.

NPOC

	Deep Seawater Reference Material DOC (μ M)	Deep Seawater Reference Material DOC (ppm)
Accepted Range	41-44	0.492-0.528
S-LAB (n=27)	41.5 \pm 1.8	0.499 \pm .023

TDN

	Deep Seawater Reference Material TDN (mM)	Deep Seawater Reference Material TDN (ppm)
Accepted Range	31.50-33.50	0.441-0.470
S-LAB (n=27)	31.8 \pm 1.4	0.445 \pm 0.02