

2007-01 Dissolved Inorganic Carbon

Duplicate analysis for samples drawn from a single Niskin bottle:

Event Number	Sample Number	Station	Pressure dbar	DIC 1 $\mu\text{mol/kg}$	DIC 2 $\mu\text{mol/kg}$	DIC 3 $\mu\text{mol/kg}$	Difference $\mu\text{mol/kg}$	Absolute Difference	Standard deviation	Comments
7	49	P4	999.6	2371.78	2370.76		-1.02	1.02		
30	125	P12	1251.4	2385.07	2384.54		-0.54	0.54		
41	163	P16	3002.3	2234.71	2333.14					Bad calibration
51	203	P20	3000.5	2372.34	2354.58					Unstable analyses
68	250	P26	2503.6	2369.78	2369.16		-0.62	0.62		
92	386	R11S	2005.9	2387.55	2387.52		-0.03	0.03		
92	387	R11S	2007.3	2389.68	2389.06		-0.62	0.62		
92	388	R11S	2006.9	2388.55	2388.38		-0.17	0.17		
92	389	R11S	2005.5	2388.45	2389.49		1.03	1.03		
92	390	R11S	2005.6	2389.95	2388.96		-0.99	0.99		
average variability:							-0.37	0.63		
standard deviation of variability:							0.66	0.38		

Duplicate Niskins at the same pressure

Event Number	Sample Number	Station	Nominal Pressure dbar	DIC A $\mu\text{mol/kg}$	DIC B $\mu\text{mol/kg}$	DIC C $\mu\text{mol/kg}$	DIC D $\mu\text{mol/kg}$	DIC E $\mu\text{mol/kg}$	Difference $\mu\text{mol/kg}$	Absolute Difference	Standard deviation	Comments
7	49 / 50	P4	1000	2371.27	2371.41				0.14	0.14		
30	124 / 125	P20	1250	2384.76	2384.81				0.04	0.04		
41	162 / 163	P16	3000	2229.19	2234.71							Bad calibration
51	203 / 204	P20	3000	2372.33	2375.23				2.89	2.89		
92	386 - 390	R11S	2005	2387.53	2389.37	2388.47	2388.97	2389.46			0.79	
average variability:									1.0			0.97
standard deviation of variability:									1.6			1.33

Precision estimate: 0.97 $\mu\text{mol/kg}$