**Cruise:** WBTS KN2011-4
**Ship:** R/V Knorr
**Dates:** April 26– May 2, 2011
**Expocode:** 316N20110426
**Chief Scientist:** Bill Johns U. Miami/ Chris Meinen, AOML
**Equipment**: Samples collected from Niskins.
**Total number of stations:** 4

## *Sample Collection*

The discrete samples were collected by AOML PhOD personnel, Kyle Seaton, Chris Hughes, Pedro Pena and Greta Leber from Niskins bottles. Salinities are those reported by the CTD. Temperatures are from CTD annotated on the sample log sheets.
The date and time listed in the data file are UTC when each sample bottle was collected.

**DIC:**
4 locations, 40 samples each 500-ml, 5 sets of duplicate samples. A total of 4 stations; one cast to 4900 m was sampled at 23 depths; 3 stations had 4 samples to a depth of $\approx$ 700-500 m

PI: Dr. Rik Wanninkhof
Analyzed by: Robert Castle

**TAlk:**
4 locations, 40 samples each 500-ml, 5 sets of duplicate samples. A total of 4 stations; one cast to 4900 m was sampled at 23 depths; 3 stations had 4 samples to a depth of $\approx$ 700-500 m.
PI: Dr. Rik Wanninkhof
Analyzed by: Dr. Leticia Barbero

## *Sample Analysis*

**DIC:**
Analysis date: July, 2011
Coulometer used: AOML3 &4 (DICE 3 &4)
Samples were run on two DICE that each were experiencing problems with high blanks and interface issues causing the loop temperatures not to be read and, by using a default of "0" causing incorrect cal. Factors. All calculations had to be done from scrap.
Sample bottles 179,178,and 180 had quality flags of "4" . The calculated value looks OK but CRM was > 165 too high.
Blank: average = 24; minimum = 14; maximum = 30 counts
Run time: average = 13; minimum = 8; maximum = 20 minutes

CRM # used and assigned value (include both DIC and salinity):
Meas CRM     cert CRM     meas sal     cert sal     batch

| | | | | |
|---|---|---|---|---|
| 2171.53 | 2006.5 | 32.801 | 33.357 | 80 |

for bottles 179,178, 181: all QC'd as "4"

| | | | | |
|---|---|---|---|---|
| 2005.98 | 2006.5 | 33.114 | 33.357 | 80 |
| 2006.47 | 2006.5 | 32.049 | 33.357 | 80 |
| 2002.01 | 2000.44 | 33.11 | 33.326 | 85 |

Reproducibility: (# samples and average difference): 4 sets of duplicate samples, average difference 1.3 umol/kg (standard deviation of 4 differences = 1.1 umol/kg). One duplicate discarded.

CRM, salinity and HgCl2 correction applied: Salinity correction was applied using salinity from CTD (that is, corrected the density)
Remarks-
The volume correction was applied due to added HgCl2 (Measured DIC*1.00037).
The first CRM of each cell was used for a CRM correction.

## *Comments*

**TAlk:**
The results posted are duplicate analyses from the same DIC sample bottles.
Analysis date: 08/15/2011 to 08/17/2011
Titration system used: Open cell
CRM # used and assigned value:

| Meas CRM | cert CRM | batch |
|---|---|---|
| 2175.90 | 2212.40 | 96 |
| 2145.12 | 2184.03 | 85 |
| 2152.75 | 2184.03 | 85 |

Reproducibility: (# samples and average difference): 5 sets of duplicate samples, average difference 2.4 umol/kg ± 1.6 umol/kg.
CRM correction applied. CRMs ran at start and end of the analyses were used for the CRM correction.

Remarks-

## *Comments*

UPDATE:
Between March and June of 2021, all of the data for the discrete samples was put into a uniform format. The supporting information was checked for accuracy, especially the expocode, date, time, and positions.