Cruise: ABACO, Eastern Boundary Current
Ship: R/V Ronald H. Brown
Dates: March 9- 28, 2006
Expocode: 33RO20060312
Chief Scientists: Molly Baringer, Lisa Beal
Equipment: 24 bottle CTD with dual C, T, and O2 sensors and LADCP
Number of Stations: 72

Sample Collection

O2:
Shipboard, all stations, all depths
PI: Molly Baringer, AOML
Analyzed By: Robert Roddy, AOML
O2 in umol/kg

Halocarbons:
Shipboard
PI: Dr. Shari-Yvon Lewis, TAMU
Analyzed by:

Nutrients:
23 stations, 391 samples, frozen and returned to lab. Note: in the lab the samples thawed and were analyzed XX weeks after samples were thawed.
 PI: Dr. Jia-Zhong Zhang, AOML
Analyzed By: Charlie Fischer, AOML

DOC/TOC:
33 stations, 506 samples, samples frozen and shipped to RSMAS.
PI: Dr. Dennis Hansell, RSMAS
Analyzed by: Wenhao Chen, RSMAS
                   Charles Farmer, RSMAS

DIC:
6 stations, 80 samples each 500-ml, 6 sets of duplicate samples
PI: Dr. Rik Wanninkhof, AOML
Analyzed by: Esa Peltola, AOML

TALK:
2 stations, 40 samples, 3 duplicates
PI: Dr. Frank Millero, RSMAS
Analyzed by: Fen Huang, RSMAS

Sample Analysis

DIC:
Analysis Date: April 4-6, 2006.
Coulometers used: AOML1 and AOML2
Blank range: 15.6-29.2 counts/min
CRM # used and assigned value (include both DIC and salinity): Batch 69, c:1907.63 umol/kg, S:31.569.
CRM value measured: AOML 1: offset 9.9 umol/kg (1897.7 umol/kg)
                                     AOML-2: offset 7.4 umol/kg (1900.2 umol/kg)
The average run time was 13 minutes, the minimum run time was 9 minutes and the maximum run time was 20 minutes.
Reproducibility: (# samples and average difference): 6 sets of duplicate samples, average difference 1.1 umol/kg.
CRM, salinity and HgCl2 correction applied: yes
Remarks-
A density correction was applied for all the samples. Due to added HgC12 (measured DIC*1.00037), a volume correction was applied for all the samples. The average CRM correction was 8.7 umol/kg and was run at the beginning and end of the cell. If the cell's lifetime reached it, a CRM was also run at 12 mg of C. The first CRM of each cell was used for a CRM correction. There was good agreement between the duplicate samples. The CTD temperature and salinity was interpolated by Carlos Fonseca for the following samples:
   Station 57/Niskin Bottle 2
   Station 62/Niskin Bottle 16
The DIC sample bottle number 104 was not found in the sampling sheets.
It was estimated to be station 20/Niskin bottle 8 by Carlos Fonseca and added as such.

During the cruise, there was some confusion about how to secure the top to the sample bottles with rubber bands. The coulometers had not been used for several months. Acid delivery valve #8 and drain valve #9 malfunctioned and needed to be replaced. Forty samples were sent to Dr. Millero's lab for alkalinity analysis.

Comments

The Sample_ID is the rosette niskin bottle number from which the discrete samples were drawn.

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.