Cruise: SKO1506
Ship: Skogafoss
Expo Code: AGFO20150530
Dates: June 25th – June 28th, 2015
Chief Scientist: Dr. Gilles Reverdin
Equipment: TSG-Underway
Total number of stations: 20
Location: Reykjavik**,** Iceland to Argentia

Samples were collected as part of the SOOP (Ships of Opportunity Program)

Sample Collection

The discrete samples were collected from the TSG underway (UW) system onboard the ship by Antoine Petrelli. The date and time listed in the data file are UTC when each sample bottle was collected.

DIC:
20 locations, 20 samples each 500-ml, no duplicate samples.
Sample_ID#: 220000, etc.; Sample bottle number, no Niskin or cast number
PI: Dr. Rik Wanninkhof
Analyzed by: Robert Castle

TAlk:
20 locations, 20 samples each 500-ml, no duplicate samples.
Sample_ID#: 220000, etc.; Sample bottle number, no Niskin or cast number
PI: Dr. Rik Wanninkhof
Analyzed by: Leticia Barbero and Denis Pierrot

Sample Analysis
DIC:

Instrument ID	Date	Certified CRM (µmol/kg)	CRM Value (µmol/kg)	CRM Offset (µmol/kg)	Blank (Counts)	Avg. Sample Analysis Time
AOML 3	07/27/15	2031.53	2032.25	0.72	24	11

Analysis date: 07/27/2015
Coulometer used: DICE–CM5015- AOML 3
Blanks: 12.0 raised to 24.0 before analysis of CRM counts/min
CRM # 715 was used and with an assigned value of (includes both DIC and salinity):
Batch 144, c: 2031.53 µmol/kg, S: 33.571
CRM values measured: AOML 3: offset 0.72 µmol/kg (2032.25 µmol/kg).
Average run time, minimum run time, maximum run time: 11, 9 and 13 min.

Reproducibility: (# samples and average difference): No duplicate samples were collected.

CRM, salinity and HgCl2 correction applied: Salinity correction was applied using TSG salinity.

Remarks

The volume correction was applied due to added $HgCl_2$ (Measured DIC*1.00037).
The first CRM of each cell was used for a CRM correction.

The DIC instrument was stable: CRM values did not change significantly throughout the life span of each cell.

The samples were analyzed using the DICE (AOML 3) and a new coulometer from UIC, Inc. CM5015 with CM5011 emulation software.

TAlk:

The results posted are duplicate analyses from the same sample bottles used for DIC.
Analysis dates: 08/04/2015
Titration system used: Open cell
CRM batch: 129, S = 33.361, certified TA = 2237.32 µmol/kg

2 CRM samples were run daily on each cell, before and after the seawater samples. The TA for the water samples was corrected using the daily averaged ratios between the certified and measured values of the 2 CRMs run on each cell. The following table shows the CRM measurements for each day and cell.

Cell System	Date	Time	Bottle #	TA	|ΔCRM|
1	2/4/2015	12:57:04	146	2223.74	
1	2/4/2015	16:10:28	756	2226.2	2.46
2	2/5/2015	11:54:15	146	2216.92	
2	2/5/2015	16:17:45	756	2220.46	3.54
				Average	3.00
				Std. Dev.	0.76

Reproducibility: No duplicates were collected.

Remarks

The two systems behaved well during the analyses.

Comments

The latitude, longitude, date, and time reported with the DIC and TAlk measurements were taken from the sample field log. The field log values are provided for reference; no post-cruise assurance of accuracy has been done to this data.
Salinity was measured by Magnus Danielsen after the cruise. SST has been estimated from XBT values.
Sample ID # is the sample bottle number. No station or niskin bottle numbers with underway sampling.

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.