

Silicate nutrient analyser data series at the southern North Sea site

Principal Investigator

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Data Originator

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The silicate NAS nutrient analyser was deployed on the near-bed environmental mooring (Rig H) at the main mooring site A during the southern North Sea experiment from March to May 1998.

This report contains the qualifying documentation and header information associated with the following data series extracted from the BODC database:

Series Reference	Data Type	Latitude deg min	Longitude deg min	Start Date yyyy/mm/dd	Sea Floor Depth m	Sensor Depth m
553141	PC	52 18.0 N	004 18.0 E	1999/03/30	18.0	13.0

where Data Type PC = Hydrography time series at depth

Parameter	Unit	Parameter code	Comments
Silicate concentration	$\mu\text{mol l}^{-1}$	SLCANS01	none

The following single character qualifying flags may be associated with one or more individual parameters within a data cycle:

<u>Flag</u>	<u>Description</u>
	Unqualified
<	Below detection limit
>	In excess of quoted value
B	Beginning of CTD Down/Up Cast
D	Thermometric depth
E	End of CTD Down/Up Cast
K	Uncertain/suspect value
L	Improbable value - originator's quality control
M	Improbable value - BODC quality control
N	Null value
O	Improbable value - user quality control
P	Trace/calm
Q	Indeterminate
R	Replacement value
S	Estimated value
T	Interpolated value
U	Uncalibrated
W	Control value
X	Excessive difference

INFORMATION FOR BODC SERIES REF. NO. 553141

Time Series Inventory Number : 10678

Start Time : 30 Mar 1999 1232 GMT	Latitude : 52deg 18.0min N
End Time : 14 Apr 1999 2132 GMT	Longitude : 004deg 18.0min E
Nominal Cycle Interval : 5400.0 secs	Sensor Depth : 13.00m
	Sea Floor Depth : 18.00m
Positional Uncertainty : 0.1 to 0.5 n.miles	
Sea Floor Datum : Instantaneous	
Sensor Depth Datum : Sea floor reference	
Disposition of Sensors : Sensor fixed, measurements made at fixed depths	
Project : Provens	
Data Category : Hydrography time series at depth	
Instrument Type : In-situ nutrient analyser	
Instrument Mounting : Subsurface mooring - subsurface buoyancy	
Originator Laboratory : Southampton Oceanographic Lab., Southampton, UK	
Originator's Identifier : nas1824_824	

Additional information stored with the data:

Data processing carried out at the Southampton Oceanographic Laboratory, UK: instrument voltages were corrected for blank readings and converted to absorption according to the formula:

$$[\text{Absorbance}] = \log_{10} ([\text{blank voltage}] / [\text{sample voltage}])$$

Absorption readings were then converted to silicate concentrations by calibration against the average standard absorbance value derived from calibration samples taken from an on-board standard every 6 samples during the deployment. The conversion was made according to the formula:

$$[\text{Concentration, } \mu\text{M}] = [\text{sample absorbance}] / ([\text{standard absorbance}] * [\text{standard concentration, } \mu\text{M}])$$

The average standard absorbance value was 0.104 +/- 0.004 for an on-board standard concentration of 10 μM of silicate.

The following additional documents apply to this series:

[63428](#); General Data Screening carried out by BODC

[79983](#); NAS-2E in situ Nutrient Analyser

Data Activity Document: [78072](#)

Project Document : [77554](#)

PARAMETERS

Parameter : AADYAA01 (TIME)
Description : Day number
Method : Computation
Units : Days (1760/01/01 = day 0)

Parameter : AAFDZZ01 (TIME)
Description : Day fraction (GMT)
Method : Computation
Units : Days

Parameters AADY/AAFD are usually supplied as date and time (GMT).

Parameter : SLCANS01 (CNPS)
Description : Silicate (in-situ)
Method : NAS in-situ analyser
Units : Micromoles/litre