

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1232
CALIBRATION DATE: 18-Aug-09p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.4842

Voffset = -0.4995

Tau20 = 1.30

A = -3.8364e-003

B = 1.9969e-004

C = -3.7366e-006

E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4 H1 = -3.30000e-2

D2 = -4.64803e-2 H2 = 5.00000e+3

H3 = 1.45000e+3

BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.24	2.00	0.00	0.766	1.24	0.00
1.25	6.00	0.01	0.801	1.25	0.00
1.26	20.00	0.01	0.919	1.26	-0.00
1.26	26.00	0.01	0.973	1.26	-0.00
1.26	12.00	0.01	0.854	1.26	0.00
1.29	30.00	0.02	1.019	1.28	-0.01
4.13	26.00	0.01	2.048	4.13	-0.00
4.14	20.00	0.01	1.881	4.14	0.00
4.15	2.00	0.00	1.391	4.15	-0.00
4.15	12.00	0.01	1.664	4.15	-0.00
4.15	6.00	0.01	1.502	4.16	0.00
4.18	30.00	0.02	2.190	4.17	-0.00
6.47	30.00	0.02	3.122	6.47	0.00
6.68	20.00	0.01	2.727	6.68	0.00
6.69	26.00	0.01	3.011	6.70	0.00
6.70	12.00	0.01	2.380	6.70	0.00
6.77	6.00	0.01	2.132	6.77	-0.00
6.80	2.00	0.00	1.961	6.80	0.00

$$\text{Oxygen (ml/l)} = \text{Soc} * (\text{V} + \text{Voffset}) * (1.0 + \text{A} * \text{T} + \text{B} * \text{T}^2 + \text{C} * \text{T}^3) * \text{OxSol}(\text{T},\text{S}) * \exp(\text{E} * \text{P} / \text{K})$$

V = voltage output from SBE43, T = temperature [deg C], S = salinity [PSU] K = temperature [deg K]

OxSol(T,S) = oxygen saturation [ml/l], P = pressure [dbar], Residual = instrument oxygen - bath oxygen

Date, Delta Ox (ml/l)

