

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0463  
CALIBRATION DATE: 23-Mar-09p

## SBE 43 OXYGEN CALIBRATION DATA

### COEFFICIENTS

Soc = 0.3190  
Voffset = -0.4725  
Tau20 = 1.10

A = -3.8883e-004  
B = 1.1492e-004  
C = -2.0163e-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)
1.22	6.00	0.01	0.912	1.22	0.00
1.22	2.00	0.01	0.868	1.22	0.00
1.22	12.00	0.01	0.979	1.23	0.00
1.23	20.00	0.01	1.067	1.23	0.00
1.23	26.00	0.02	1.134	1.24	0.00
1.25	30.00	0.02	1.189	1.25	0.00
4.08	2.00	0.01	1.791	4.07	-0.01
4.08	12.00	0.01	2.153	4.08	-0.00
4.08	20.00	0.01	2.436	4.07	-0.01
4.08	6.00	0.01	1.938	4.08	-0.01
4.09	26.00	0.02	2.662	4.09	0.00
4.13	30.00	0.02	2.830	4.13	-0.00
6.47	30.00	0.02	4.165	6.46	-0.00
6.66	26.00	0.02	4.040	6.67	0.01
6.73	20.00	0.01	3.717	6.73	-0.00
6.78	12.00	0.01	3.269	6.78	0.01
6.83	6.00	0.01	2.929	6.83	0.00
6.89	2.00	0.01	2.708	6.90	0.01

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

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)

