

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0463  
CALIBRATION DATE: 21-Apr-10p

SBE 43 OXYGEN CALIBRATION DATA

**COEFFICIENTS**

Soc = 0.3289  
Voffset = -0.4817  
Tau20 = 1.10

A = -9.4656e-004  
B = 1.8236e-004  
C = -3.1752e-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)
1.20	2.00	0.00	0.859	1.20	0.00
1.20	6.00	0.00	0.900	1.20	0.00
1.21	12.00	0.00	0.965	1.21	0.00
1.23	20.00	0.00	1.053	1.23	0.00
1.23	30.00	0.00	1.159	1.24	0.00
1.24	26.00	0.00	1.117	1.24	0.00
4.12	6.00	0.00	1.918	4.12	-0.01
4.12	2.00	0.00	1.775	4.11	-0.01
4.14	20.00	0.00	2.403	4.14	-0.00
4.14	12.00	0.00	2.135	4.14	-0.00
4.14	30.00	0.00	2.751	4.14	0.00
4.17	26.00	0.00	2.621	4.17	-0.00
6.58	30.00	0.00	4.085	6.58	-0.00
6.75	26.00	0.00	3.948	6.75	-0.00
6.76	20.00	0.00	3.622	6.76	0.00
6.86	12.00	0.00	3.220	6.86	0.00
6.96	6.00	0.00	2.913	6.97	0.00
7.08	2.00	0.00	2.709	7.08	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)

