

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0021
CALIBRATION DATE: 02-Nov-10p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.3478
Voffset = -0.4783
Tau20 = 1.01

A = -1.3299e-003
B = 2.0580e-004
C = -3.9783e-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	0.01	0.846	1.24	-0.00
1.27	6.00	0.01	0.898	1.27	-0.00
1.28	12.00	0.02	0.963	1.28	0.00
1.29	20.00	0.02	1.050	1.29	0.00
1.29	30.00	0.02	1.158	1.30	0.00
1.30	26.00	0.02	1.114	1.30	0.00
4.17	2.00	0.01	1.719	4.17	-0.00
4.21	6.00	0.01	1.869	4.21	-0.00
4.22	30.00	0.02	2.690	4.22	0.00
4.22	12.00	0.02	2.077	4.22	0.00
4.23	20.00	0.02	2.345	4.23	-0.00
4.23	26.00	0.02	2.549	4.23	-0.00
6.50	30.00	0.02	3.882	6.50	0.00
6.55	26.00	0.02	3.685	6.55	-0.00
6.56	12.00	0.02	2.964	6.56	0.00
6.59	20.00	0.02	3.386	6.59	0.00
6.59	6.00	0.01	2.657	6.59	-0.00
6.69	2.00	0.01	2.472	6.70	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)

