

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0021
CALIBRATION DATE: 14-Jan-12

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.3609
Voffset = -0.4850
Tau20 = 1.01

A = -8.6302e-004
B = 1.3612e-004
C = -2.3274e-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	6.00	0.04	0.882	1.25	0.00
1.25	12.00	0.04	0.942	1.25	0.00
1.25	20.00	0.04	1.020	1.25	0.00
1.25	2.00	0.04	0.844	1.25	-0.00
1.26	30.00	0.04	1.128	1.27	0.01
1.26	26.00	0.04	1.087	1.27	0.01
4.13	12.00	0.04	1.994	4.13	-0.01
4.13	6.00	0.04	1.798	4.12	-0.01
4.14	30.00	0.04	2.587	4.15	0.00
4.14	20.00	0.04	2.255	4.14	-0.00
4.16	26.00	0.04	2.458	4.16	-0.00
4.18	2.00	0.04	1.681	4.17	-0.01
6.64	30.00	0.04	3.847	6.63	-0.00
6.68	26.00	0.04	3.656	6.68	0.00
6.71	20.00	0.04	3.355	6.71	0.00
6.75	12.00	0.04	2.953	6.75	0.00
6.82	6.00	0.04	2.660	6.83	0.01
6.91	2.00	0.04	2.469	6.92	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)

