

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 1210
CALIBRATION DATE: 12-Aug-14

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:
Soc = 0.4837
Voffset = -0.5005
Tau20 = 1.28

A = -4.1001e-003
B = 1.8040e-004
C = -2.6120e-006
E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS
D1 = 1.92634e-4 H1 = -3.300000e-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	0.767	1.24	-0.00
1.25	6.00	0.00	0.802	1.25	-0.00
1.25	12.00	0.00	0.852	1.25	-0.00
1.28	20.00	0.00	0.930	1.28	-0.00
1.29	26.00	0.00	0.987	1.29	0.00
1.30	30.00	0.00	1.025	1.30	0.00
3.98	2.00	0.00	1.358	3.98	0.00
4.02	6.00	0.00	1.474	4.02	0.00
4.03	20.00	0.00	1.851	4.03	0.00
4.03	26.00	0.00	2.019	4.04	0.01
4.04	12.00	0.00	1.638	4.03	-0.00
4.06	30.00	0.00	2.144	4.07	0.01
6.77	30.00	0.00	3.231	6.77	-0.01
6.80	6.00	0.00	2.147	6.81	0.00
6.81	2.00	0.00	1.966	6.81	-0.00
6.81	12.00	0.00	2.421	6.81	-0.00
6.83	20.00	0.00	2.790	6.83	-0.00
6.87	26.00	0.00	3.082	6.87	-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

