

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0514
CALIBRATION DATE: 30-Jul-14

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:
Soc = 0.4686
Voffset = -0.5064
Tau20 = 1.30

A = -3.3558e-003
B = 1.9182e-004
C = -2.9944e-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)
1.27	12.00	0.00	0.871	1.27	-0.00
1.28	6.00	0.00	0.823	1.28	-0.00
1.28	2.00	0.00	0.789	1.28	-0.00
1.28	20.00	0.00	0.943	1.28	-0.00
1.29	30.00	0.00	1.033	1.29	-0.00
1.30	26.00	0.00	0.999	1.30	0.00
4.01	2.00	0.00	1.397	4.01	-0.00
4.02	12.00	0.00	1.665	4.02	0.00
4.04	20.00	0.00	1.883	4.04	0.00
4.05	30.00	0.00	2.157	4.05	0.01
4.05	6.00	0.00	1.513	4.05	-0.00
4.06	26.00	0.00	2.052	4.07	0.01
6.77	12.00	0.00	2.456	6.77	-0.00
6.77	26.00	0.00	3.078	6.77	-0.00
6.79	2.00	0.00	2.012	6.79	0.00
6.80	20.00	0.00	2.821	6.80	-0.00
6.83	30.00	0.00	3.286	6.83	-0.00
6.84	6.00	0.00	2.206	6.84	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

