

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 1232
CALIBRATION DATE: 23-Dec-11

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.4913
Voffset = -0.5102
Tau20 = 1.95

A = -2.0018e-003
B = 3.8818e-005
C = -6.8890e-007
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)
1.27	6.00	0.05	0.808	1.26	-0.01
1.27	2.00	0.05	0.778	1.27	-0.00
1.28	12.00	0.05	0.861	1.27	-0.01
1.30	20.00	0.04	0.938	1.30	-0.01
1.32	26.00	0.04	1.000	1.31	-0.01
1.33	30.00	0.04	1.044	1.33	-0.01
4.20	2.00	0.05	1.401	4.22	0.02
4.24	12.00	0.05	1.683	4.26	0.01
4.26	6.00	0.05	1.520	4.27	0.02
4.28	20.00	0.04	1.924	4.29	0.01
4.30	26.00	0.04	2.117	4.31	0.01
4.34	30.00	0.04	2.256	4.34	0.00
7.05	30.00	0.04	3.345	7.04	-0.00
7.05	26.00	0.04	3.139	7.05	0.00
7.07	20.00	0.04	2.838	7.06	-0.01
7.09	12.00	0.05	2.461	7.08	-0.01
7.15	2.00	0.05	2.017	7.14	-0.01
7.18	6.00	0.05	2.205	7.17	-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)

