

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0171
CALIBRATION DATE: 13-Oct-15

SBE 43F OXYGEN CALIBRATION DATA

COEFFICIENTS:
Soc = 3.4886e-004
Foffset = -817.18
Tau20 = 1.49

A = -4.0586e-003
B = 2.1399e-004
C = -3.3884e-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 (Hz)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
1.18	2.00	0.00	1170.787	1.19	0.00
1.20	12.00	0.00	1282.806	1.20	-0.00
1.20	30.00	0.00	1479.021	1.20	-0.00
1.21	6.00	0.00	1223.057	1.21	0.00
1.21	26.00	0.00	1440.362	1.21	-0.01
1.22	20.00	0.00	1376.764	1.21	-0.00
3.93	30.00	0.00	2998.220	3.94	0.01
3.93	12.00	0.00	2349.340	3.94	0.00
3.94	2.00	0.00	1992.505	3.94	0.00
3.94	26.00	0.00	2850.425	3.94	0.00
3.95	6.00	0.00	2139.448	3.95	0.00
3.95	20.00	0.00	2639.815	3.95	0.00
6.69	30.00	0.00	4518.798	6.69	-0.00
6.70	2.00	0.00	2816.012	6.70	-0.00
6.71	12.00	0.00	3427.850	6.71	-0.00
6.71	20.00	0.00	3913.844	6.72	0.01
6.72	26.00	0.00	4277.617	6.71	-0.01
6.72	6.00	0.00	3067.608	6.72	-0.00

$$\text{Oxygen (ml/l)} = \text{Soc} * (\text{F} + \text{Foffset}) * (1.0 + \text{A} * \text{T} + \text{B} * \text{T}^2 + \text{C} * \text{T}^3) * \text{OxSol}(\text{T}, \text{S}) * \exp(\text{E} * \text{P} / \text{K})$$

F = frequency output from SBE43F, 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

