

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 2940

SBE 43 OXYGEN CALIBRATION DATA

CALIBRATION DATE: 02-Aug-14

COEFFICIENTS:

Soc = 0.4519

Voffset = -0.5133

Tau20 = 1.32

A = -2.7990e-003

B = 1.3679e-004

C = -1.9304e-006

E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS

D1 = 1.92634e-4

D2 = -4.64803e-2

H1 = -3.300000e-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)
1.25	2.00	0.00	0.802	1.26	0.00
1.26	5.96	0.00	0.838	1.26	0.00
1.27	12.00	0.00	0.893	1.27	0.00
1.29	25.99	0.00	1.022	1.29	0.00
1.29	20.00	0.00	0.969	1.29	-0.00
1.30	30.00	0.00	1.064	1.30	0.00
3.99	2.00	0.00	1.430	3.99	-0.00
4.00	5.97	0.00	1.542	4.00	-0.00
4.02	12.00	0.00	1.712	4.01	-0.00
4.04	20.00	0.00	1.941	4.04	-0.00
4.05	25.99	0.00	2.114	4.05	-0.00
4.06	30.00	0.00	2.236	4.06	0.00
6.74	2.00	0.00	2.062	6.74	0.00
6.76	6.00	0.00	2.252	6.76	0.00
6.78	12.00	0.00	2.538	6.78	0.00
6.79	20.00	0.00	2.914	6.79	-0.00
6.82	30.00	0.00	3.401	6.81	-0.00
6.84	26.00	0.00	3.218	6.84	0.01

Oxygen (ml/l) = Soc * (V + Voffset) * (1.0 + A * T + B * T² + C * T³) * OxSol(T,S) * exp(E * P / 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

