

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0140

SBE 43 OXYGEN CALIBRATION DATA

CALIBRATION DATE: 21-Jul-15

COEFFICIENTS:

Soc = 0.4165

Voffset = -0.7288

Tau20 = 1.60

A = -4.0230e-003

B = 1.2228e-004

C = -1.9784e-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)
1.32	12.00	0.00	1.163	1.32	-0.00
1.33	2.00	0.00	1.060	1.33	-0.00
1.34	6.00	0.00	1.104	1.33	-0.00
1.34	20.00	0.00	1.260	1.34	0.00
1.35	26.00	0.00	1.334	1.35	-0.00
1.36	30.00	0.00	1.392	1.37	0.00
4.11	2.00	0.00	1.756	4.11	-0.00
4.11	12.00	0.00	2.084	4.11	0.00
4.12	6.00	0.00	1.886	4.11	-0.00
4.15	20.00	0.00	2.376	4.16	0.00
4.17	26.00	0.00	2.599	4.17	-0.00
4.19	30.00	0.00	2.765	4.20	0.01
6.93	2.00	0.00	2.461	6.93	-0.00
6.93	12.00	0.00	3.011	6.93	-0.01
6.94	6.00	0.00	2.683	6.95	0.01
7.03	20.00	0.00	3.514	7.03	0.00
7.03	26.00	0.00	3.879	7.03	-0.00
7.05	30.00	0.00	4.147	7.05	-0.00

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

