

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0765

SBE 63 OXYGEN CALIBRATION DATA

CALIBRATION DATE: 22-Sep-15

COEFFICIENTS:

A0 = 1.0513e+000 B0 = -2.4937e-001 C0 = 1.0078e-001 E = 1.1000e-002
A1 = -1.5000e-003 B1 = 1.6534e+000 C1 = 4.3487e-003
A2 = 4.1906e-001 C2 = 5.9023e-005

BATH OX (ml/l)	BATH TEMP (ITS-90)	BATH SAL (PSU)	INSTRUMENT OUTPUT (U)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
0.742	30.00	0.00	30.87	0.736	-0.006
0.754	26.00	0.00	31.65	0.751	-0.004
0.807	20.00	0.00	32.64	0.803	-0.004
0.888	12.00	0.00	34.03	0.886	-0.001
0.994	6.00	0.00	34.94	0.997	0.003
1.089	2.00	0.00	35.52	1.095	0.007
2.210	30.00	0.00	22.76	2.205	-0.005
2.336	26.00	0.00	23.32	2.334	-0.002
2.487	20.00	0.00	24.46	2.482	-0.006
2.988	12.00	0.00	25.39	2.984	-0.003
3.392	6.00	0.00	26.36	3.390	-0.002
3.654	30.00	0.00	18.85	3.653	-0.001
3.788	2.00	0.00	26.90	3.790	0.003
3.907	26.00	0.00	19.27	3.911	0.004
4.321	20.00	0.00	20.04	4.320	-0.001
5.058	12.00	0.00	21.10	5.058	-0.001
5.169	30.00	0.00	16.37	5.167	-0.002
5.649	26.00	0.00	16.60	5.656	0.007
5.830	6.00	0.00	21.91	5.831	0.001
6.258	20.00	0.00	17.27	6.258	0.001
6.472	2.00	0.00	22.47	6.476	0.004
7.289	12.00	0.00	18.26	7.295	0.005
8.330	6.00	0.00	19.07	8.325	-0.005
8.791	2.00	0.00	20.00	8.788	-0.003

$$V = U / 39.457071$$

$$\text{Oxygen (ml/l)} = \{((A0 + A1 \cdot T + A2 \cdot V^2)/(B0 + B1 \cdot V) - 1.0)/(C0 + C1 \cdot T + C2 \cdot T^2)\} \cdot [\text{Scorr}] \cdot \exp(E \cdot P / K)$$

Note: [Scorr] = salinity correction function = 1.0 for calibration in DI water

T = temperature [deg C], K = temperature [Kelvin], P = pressure [dbar]

Residual = instrument oxygen - bath oxygen

