



Sea-Bird Scientific
13431 NE 20th Street
Bellevue, WA 98005
USA

+1 425-643-9866
seabird@seabird.com
www.seabird.com

SENSOR SERIAL NUMBER: 1018
CALIBRATION DATE: 24-Sep-22

SBE 63 OXYGEN CALIBRATION DATA

COEFFICIENTS:

A0 = 1.0513e+000 B0 = -2.3085e-001 C0 = 9.9486e-002 E = 1.1000e-002
A1 = -1.5000e-003 B1 = 1.6426e+000 C1 = 4.2721e-003
A2 = 4.2625e-001 C2 = 5.7375e-005

BATH OXYGEN (ml/l)	BATH TEMPERATURE (° C)	BATH SALINITY (PSU)	INSTRUMENT OUTPUT (µsec)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
0.714	30.00	0.00	30.98	0.711	-0.003
0.751	26.00	0.00	31.57	0.747	-0.004
0.817	20.00	0.00	32.43	0.817	0.000
0.903	12.00	0.00	33.85	0.901	-0.002
1.010	6.00	0.00	34.78	1.011	0.001
1.120	2.00	0.00	35.30	1.125	0.005
2.147	30.00	0.00	22.80	2.145	-0.002
2.283	26.00	0.00	23.33	2.281	-0.003
2.457	20.00	0.00	24.35	2.463	0.005
2.975	12.00	0.00	25.25	2.971	-0.005
3.378	6.00	0.00	26.24	3.372	-0.006
3.550	30.00	0.00	18.86	3.550	-0.000
3.720	2.00	0.00	26.89	3.718	-0.002
3.812	26.00	0.00	19.27	3.810	-0.002
4.257	20.00	0.00	19.92	4.275	0.018
4.964	30.00	0.00	16.43	4.958	-0.006
5.019	12.00	0.00	20.96	5.019	-0.001
5.359	26.00	0.00	16.75	5.352	-0.008
5.750	6.00	0.00	21.81	5.751	0.001
6.089	20.00	0.00	17.22	6.105	0.016
6.348	2.00	0.00	22.43	6.352	0.003
7.176	12.00	0.00	18.16	7.168	-0.008
8.213	6.00	0.00	18.95	8.206	-0.007
8.710	2.00	0.00	19.83	8.714	0.004

T = temperature (°C) , P = pressure (dbar), U = Instrument output (µsec)

S_{corr} (salinity correction function) = 1.0 for calibration in DI water

See the user manual for more information on S_{corr} calculation

$V = U / 39.457071$

Oxygen (ml/l) = $\{((A0 + A1 \cdot T + A2 \cdot V^2) / (B0 + B1 \cdot V) - 1.0) / (C0 + C1 \cdot T + C2 \cdot T^2)\} \cdot S_{corr} \cdot \exp(E \cdot P / (T + 273.15))$

Residual (ml/l) = instrument oxygen - bath oxygen

