



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

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

SENSOR SERIAL NUMBER: 0765
CALIBRATION DATE: 31-Aug-21

SBE 63 OXYGEN CALIBRATION DATA

COEFFICIENTS:

A0 = 1.0513e+000 B0 = -2.4177e-001 C0 = 1.0987e-001 E = 1.1000e-002
A1 = -1.5000e-003 B1 = 1.5801e+000 C1 = 4.6997e-003
A2 = 3.5159e-001 C2 = 6.5731e-005

BATH OXYGEN (ml/l)	BATH TEMPERATURE (° C)	BATH SALINITY (PSU)	INSTRUMENT OUTPUT (µsec)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
0.704	30.00	0.00	31.19	0.701	-0.003
0.736	26.00	0.00	31.79	0.734	-0.002
0.796	20.00	0.00	32.70	0.793	-0.003
0.873	12.00	0.00	34.10	0.871	-0.002
0.976	6.00	0.00	35.01	0.975	-0.001
1.062	2.00	0.00	35.62	1.059	-0.002
2.119	30.00	0.00	23.02	2.115	-0.004
2.250	26.00	0.00	23.55	2.249	-0.001
2.420	20.00	0.00	24.62	2.418	-0.002
2.911	12.00	0.00	25.53	2.914	0.003
3.300	6.00	0.00	26.52	3.307	0.007
3.515	30.00	0.00	19.05	3.509	-0.006
3.633	2.00	0.00	27.18	3.641	0.007
3.753	26.00	0.00	19.50	3.752	-0.001
4.199	20.00	0.00	20.18	4.195	-0.004
4.929	12.00	0.00	21.22	4.932	0.003
4.993	30.00	0.00	16.49	5.000	0.007
5.377	26.00	0.00	16.84	5.382	0.005
5.644	6.00	0.00	22.09	5.648	0.004
6.056	20.00	0.00	17.41	6.053	-0.004
6.223	2.00	0.00	22.72	6.223	0.001
7.089	12.00	0.00	18.37	7.090	0.000
8.096	6.00	0.00	19.19	8.091	-0.005
8.555	2.00	0.00	20.11	8.551	-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

