

Sea-Bird Scientific 13431 NE 20th Street Bellevue, WA 98005 USA +1 425-643-9866 seabird@seabird.com www.seabird.com

SENSOR SERIAL NUMBER: 0582 CALIBRATION DATE: 01-Mar-23

SBE 43 OXYGEN CALIBRATION DATA

 COEFFICIENTS:
 A = -3.9907e-003
 NOMINAL DYNAMIC COEFFICIENTS

 Soc = 0.4700
 B = 2.2359e-004
 D1 = 1.92634e-4
 H1 = -3.300000e-2

 Voffset = -0.4920
 C = -3.3657e-006
 D2 = -4.64803e-2
 H2 = 5.00000e+3

 Tau20 = 1.18
 E nominal = 0.036
 H3 = 1.45000e+3

BATH OXYGEN (ml/l)	BATH TEMPERATURE (° C)	BATH SALINITY (PSU)	INSTRUMENT OUTPUT (volts)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
1.19	6.00	0.00	0.787	1.19	-0.00
1.19	2.00	0.00	0.756	1.19	-0.00
1.20	12.00	0.00	0.837	1.20	-0.00
1.21	20.00	0.00	0.904	1.21	-0.00
1.22	26.00	0.00	0.955	1.22	-0.00
1.23	30.00	0.00	0.992	1.23	-0.00
4.00	2.00	0.00	1.380	4.01	0.00
4.02	6.00	0.00	1.492	4.02	0.01
4.05	12.00	0.00	1.661	4.06	0.00
4.10	20.00	0.00	1.889	4.11	0.00
4.13	26.00	0.00	2.061	4.14	0.00
4.14	30.00	0.00	2.174	4.14	0.00
6.85	1.97	0.00	2.006	6.84	-0.01
6.90	5.91	0.00	2.202	6.90	0.00
6.99	12.00	0.00	2.507	6.99	-0.00
7.03	30.00	0.00	3.347	7.03	-0.00
7.13	20.00	0.00	2.917	7.13	-0.00
7.17	26.00	0.00	3.214	7.18	0.00

V = instrument output (volts); T = temperature (°C); S = salinity (PSU); K = temperature (°K)

Oxsol(T,S) = oxygen saturation (ml/l); P = pressure (dbar)

Oxygen (ml/l) = Soc * (V + Voffset) * (1.0 + A * T + B * T^2 + C * T^3) * Oxsol(T,S) * exp(E * P / K)

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

