

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

SENSOR SERIAL NUMBER: 0343

SBE 43 OXYGEN CALIBRATION DATA

CALIBRATION DATE: 05-Dec-23

 COEFFICIENTS:
 A = -4.5368e-003
 NOMINAL DYNAMIC COEFFICIENTS

 Soc = 0.5118
 B = 1.6850e-004
 D1 = 1.92634e-4
 H1 = -3.300000e-2

 Voffset = -0.5217
 C = -2.4263e-006
 D2 = -4.64803e-2
 H2 = 5.00000e+3

 Tau20 = 1.09
 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)
1.20	20.00	0.00	0.908	1.20	0.00
1.21	12.00	0.00	0.845	1.21	-0.00
1.21	26.00	0.00	0.960	1.21	0.00
1.22	6.00	0.00	0.801	1.22	-0.00
1.22	30.00	0.00	0.996	1.22	0.00
1.22	2.00	0.00	0.771	1.22	-0.00
3.98	20.00	0.00	1.800	3.98	0.00
3.98	12.00	0.00	1.591	3.98	0.00
3.99	6.00	0.00	1.437	3.99	0.00
3.99	26.00	0.00	1.963	3.99	-0.00
3.99	2.00	0.00	1.335	3.99	-0.00
4.00	30.00	0.00	2.077	4.00	0.00
6.78	2.00	0.00	1.902	6.78	0.00
6.82	30.01	0.00	3.172	6.81	-0.00
6.82	6.00	0.00	2.085	6.82	-0.00
6.85	12.00	0.00	2.361	6.85	0.00
6.89	20.00	0.00	2.731	6.89	-0.00
6.94	26.00	0.00	3.026	6.94	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

