



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

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

SENSOR SERIAL NUMBER: 0715
 CALIBRATION DATE: 03-Jan-19

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS: A = -4.1239e-003
 Soc = 0.5720 B = 1.8586e-004
 Voffset = -0.4858 C = -3.0460e-006
 Tau20 = 1.18 E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS
 D1 = 1.92634e-4 H1 = -3.300000e-2
 D2 = -4.64803e-2 H2 = 5.00000e+3
 H3 = 1.45000e+3

BATH OXYGEN (ml/l)	BATH TEMPERATURE (° C)	BATH SALINITY (PSU)	INSTRUMENT OUTPUT (volts)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
1.15	6.00	0.00	0.720	1.15	-0.00
1.15	2.00	0.00	0.695	1.15	-0.00
1.17	12.00	0.00	0.763	1.16	-0.00
1.18	26.00	0.00	0.865	1.19	0.00
1.19	20.00	0.00	0.823	1.19	0.00
1.20	30.00	0.00	0.901	1.21	0.01
3.93	2.00	0.00	1.202	3.93	-0.00
3.95	6.00	0.00	1.294	3.95	-0.00
3.97	12.00	0.00	1.432	3.97	0.00
4.00	20.00	0.00	1.622	4.00	0.00
4.00	26.00	0.00	1.764	4.01	0.00
4.02	30.00	0.00	1.870	4.03	0.01
6.75	2.00	0.00	1.714	6.75	0.00
6.75	6.00	0.00	1.867	6.75	0.00
6.77	12.00	0.00	2.100	6.77	-0.00
6.80	20.00	0.00	2.418	6.81	0.00
6.83	30.00	0.00	2.834	6.83	-0.00
6.84	26.00	0.00	2.668	6.84	-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)

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

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

