



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

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

SENSOR SERIAL NUMBER: 1876
CALIBRATION DATE: 21-Mar-24

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:
Soc = 0.4778
Voffset = -0.5013
Tau20 = 1.59
A = -2.6363e-003
B = 1.4094e-004
C = -2.6529e-006
E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS
D1 = 1.92634e-4
D2 = -4.64803e-2
H1 = -3.300000e-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) |
|-----------------------|---------------------------|------------------------|------------------------------|-----------------------------|--------------------|
| 1.12 | 2.00 | 0.00 | 0.743 | 1.11 | -0.00 |
| 1.12 | 6.00 | 0.00 | 0.773 | 1.12 | -0.00 |
| 1.13 | 12.00 | 0.00 | 0.818 | 1.12 | -0.00 |
| 1.14 | 20.00 | 0.00 | 0.883 | 1.14 | -0.00 |
| 1.15 | 26.00 | 0.00 | 0.934 | 1.15 | -0.00 |
| 1.15 | 30.00 | 0.00 | 0.968 | 1.15 | -0.00 |
| 3.86 | 2.00 | 0.00 | 1.341 | 3.87 | 0.00 |
| 3.87 | 6.00 | 0.00 | 1.443 | 3.88 | 0.00 |
| 3.89 | 12.00 | 0.00 | 1.599 | 3.89 | 0.01 |
| 3.89 | 20.00 | 0.00 | 1.807 | 3.90 | 0.00 |
| 3.91 | 26.00 | 0.00 | 1.973 | 3.91 | 0.01 |
| 3.91 | 30.00 | 0.00 | 2.088 | 3.91 | 0.00 |
| 6.63 | 2.00 | 0.00 | 1.941 | 6.63 | -0.00 |
| 6.64 | 6.00 | 0.00 | 2.115 | 6.64 | -0.00 |
| 6.66 | 30.03 | 0.00 | 3.201 | 6.65 | -0.00 |
| 6.66 | 12.00 | 0.00 | 2.380 | 6.66 | -0.00 |
| 6.68 | 26.00 | 0.00 | 3.015 | 6.68 | -0.00 |
| 6.69 | 20.00 | 0.00 | 2.740 | 6.69 | -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 * T² + C * T³) * Oxsol(T,S) * exp(E * P / K)

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

