



Sea-Bird Scientific  
13431 NE 20<sup>th</sup> Street  
Bellevue, WA 98005  
USA

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

SENSOR SERIAL NUMBER: 2691  
CALIBRATION DATE: 29-Apr-22

#### SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:  
Soc = 0.4708  
Voffset = -0.4896  
Tau20 = 0.99  
A = -5.1196e-003  
B = 2.4275e-004  
C = -3.3494e-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<br>OXYGEN (ml/l) | BATH<br>TEMPERATURE (° C) | BATH<br>SALINITY (PSU) | INSTRUMENT<br>OUTPUT (volts) | INSTRUMENT<br>OXYGEN (ml/l) | RESIDUAL<br>(ml/l) |
|-----------------------|---------------------------|------------------------|------------------------------|-----------------------------|--------------------|
| 1.16                  | 12.00                     | 0.00                   | 0.827                        | 1.16                        | -0.00              |
| 1.16                  | 6.00                      | 0.00                   | 0.779                        | 1.16                        | -0.00              |
| 1.16                  | 2.00                      | 0.00                   | 0.748                        | 1.17                        | 0.00               |
| 1.17                  | 20.00                     | 0.00                   | 0.892                        | 1.17                        | -0.00              |
| 1.17                  | 26.00                     | 0.00                   | 0.939                        | 1.17                        | -0.00              |
| 1.17                  | 30.00                     | 0.00                   | 0.973                        | 1.17                        | -0.00              |
| 3.92                  | 6.00                      | 0.00                   | 1.469                        | 3.92                        | -0.00              |
| 3.92                  | 2.00                      | 0.00                   | 1.360                        | 3.93                        | 0.00               |
| 3.94                  | 12.00                     | 0.00                   | 1.636                        | 3.94                        | 0.00               |
| 3.94                  | 20.00                     | 0.00                   | 1.850                        | 3.94                        | 0.00               |
| 3.94                  | 26.00                     | 0.00                   | 2.008                        | 3.94                        | -0.00              |
| 3.96                  | 30.00                     | 0.00                   | 2.120                        | 3.96                        | 0.00               |
| 6.71                  | 2.00                      | 0.00                   | 1.976                        | 6.71                        | -0.00              |
| 6.74                  | 6.00                      | 0.00                   | 2.171                        | 6.74                        | -0.00              |
| 6.78                  | 30.00                     | 0.00                   | 3.284                        | 6.78                        | 0.00               |
| 6.78                  | 12.00                     | 0.00                   | 2.464                        | 6.78                        | -0.00              |
| 6.82                  | 20.00                     | 0.00                   | 2.842                        | 6.82                        | 0.00               |
| 6.85                  | 26.00                     | 0.00                   | 3.125                        | 6.85                        | -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<sup>2</sup> + C \* T<sup>3</sup>) \* Oxsol(T,S) \* exp(E \* P / K)

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

