

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: 0345

SBE 43 OXYGEN CALIBRATION DATA

CALIBRATION DATE: 05-Dec-23

COEFFICIENTS: Tcor = -0.0009 NOMINAL DYNAMIC COEFFICIENTS
Soc = 0.3590 Pcor = 1.350e-04 D1 = 1.92634e-4 H1 = -3.300000e-2
Boc = 0.0000 D2 = -4.64803e-2 H2 = 5.00000e+3
Voffset = -0.6976 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) |
|-----------------------|---------------------------|------------------------|------------------------------|-----------------------------|--------------------|
| 1.20                  | 20.00                     | 0.00                   | 1.238                        | 1.21                        | 0.01               |
| 1.21                  | 12.00                     | 0.00                   | 1.152                        | 1.22                        | 0.01               |
| 1.21                  | 26.00                     | 0.00                   | 1.309                        | 1.21                        | 0.00               |
| 1.22                  | 6.00                      | 0.00                   | 1.091                        | 1.22                        | 0.00               |
| 1.22                  | 30.00                     | 0.00                   | 1.358                        | 1.22                        | -0.00              |
| 1.22                  | 2.00                      | 0.00                   | 1.049                        | 1.22                        | -0.01              |
| 3.98                  | 20.00                     | 0.00                   | 2.483                        | 4.00                        | 0.02               |
| 3.98                  | 12.00                     | 0.00                   | 2.197                        | 4.01                        | 0.03               |
| 3.99                  | 6.00                      | 0.00                   | 1.984                        | 4.00                        | 0.01               |
| 3.99                  | 26.00                     | 0.00                   | 2.707                        | 3.99                        | -0.00              |
| 3.99                  | 2.00                      | 0.00                   | 1.842                        | 3.96                        | -0.03              |
| 4.00                  | 30.00                     | 0.00                   | 2.859                        | 3.98                        | -0.02              |
| 6.78                  | 2.00                      | 0.00                   | 2.639                        | 6.73                        | -0.05              |
| 6.82                  | 30.01                     | 0.00                   | 4.378                        | 6.78                        | -0.04              |
| 6.82                  | 6.00                      | 0.00                   | 2.897                        | 6.83                        | 0.01               |
| 6.85                  | 12.00                     | 0.00                   | 3.277                        | 6.90                        | 0.04               |
| 6.89                  | 20.00                     | 0.00                   | 3.787                        | 6.92                        | 0.03               |
| 6.94                  | 26.00                     | 0.00                   | 4.186                        | 6.93                        | -0.01              |

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

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

Oxygen (ml/l) = (Soc \* (V + Voffset)) \* exp(Tcor \* T) \* Oxsat(T, S) \* exp(Pcor \* P)

 $Residual \; (ml/l) = instrument \; oxygen \; \text{-} \; bath \; oxygen \;$ 

