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SENSOR SERIAL NUMBER: 2320
CALIBRATION DATE: 25-Mar-25

SBE 63 OXYGEN CALIBRATION DATA

COEFFICIENTS:

A0 = 1.0513e+00 B0 = -2.2602e-01 C0 = 9.5347e-02 E = 1.1000e-02
A1 = -1.5000e-03 B1 = 1.6370e+00 C1 = 4.0455e-03
A2 = 4.2024e-01 C2 = 5.5121e-05

| BATH OXYGEN (ml/l) | BATH TEMPERATURE (° C) | BATH SALINITY (PSU) | INSTRUMENT OUTPUT (µsec) | INSTRUMENT OXYGEN (ml/l) | RESIDUAL (ml/l) |
|-----------------------|---------------------------|------------------------|-----------------------------|-----------------------------|--------------------|
| 0.794 | 30.00 | 0.00 | 30.35 | 0.807 | 0.013 |
| 0.818 | 26.00 | 0.00 | 31.09 | 0.828 | 0.010 |
| 0.871 | 20.00 | 0.00 | 32.14 | 0.877 | 0.006 |
| 0.955 | 12.00 | 0.00 | 33.61 | 0.957 | 0.002 |
| 1.059 | 6.00 | 0.00 | 34.62 | 1.056 | -0.002 |
| 1.158 | 2.00 | 0.00 | 35.23 | 1.152 | -0.006 |
| 2.421 | 30.00 | 0.00 | 22.12 | 2.425 | 0.004 |
| 2.544 | 26.00 | 0.00 | 22.74 | 2.548 | 0.004 |
| 2.691 | 20.00 | 0.00 | 23.93 | 2.692 | 0.001 |
| 3.200 | 12.00 | 0.00 | 24.93 | 3.201 | 0.001 |
| 3.606 | 6.00 | 0.00 | 25.97 | 3.603 | -0.003 |
| 3.954 | 2.00 | 0.00 | 26.66 | 3.949 | -0.005 |
| 4.009 | 30.00 | 0.00 | 18.22 | 4.009 | -0.000 |
| 4.259 | 26.00 | 0.00 | 18.71 | 4.253 | -0.006 |
| 4.692 | 20.00 | 0.00 | 19.49 | 4.685 | -0.007 |
| 5.418 | 12.00 | 0.00 | 20.63 | 5.418 | -0.001 |
| 5.617 | 30.00 | 0.00 | 15.82 | 5.619 | 0.002 |
| 6.035 | 26.00 | 0.00 | 16.17 | 6.031 | -0.004 |
| 6.150 | 6.00 | 0.00 | 21.55 | 6.149 | -0.001 |
| 6.684 | 20.00 | 0.00 | 16.82 | 6.685 | 0.001 |
| 6.763 | 2.00 | 0.00 | 22.19 | 6.761 | -0.002 |
| 7.725 | 12.00 | 0.00 | 17.86 | 7.727 | 0.002 |
| 8.758 | 6.00 | 0.00 | 18.71 | 8.762 | 0.004 |
| 9.254 | 2.00 | 0.00 | 19.62 | 9.257 | 0.003 |

T = temperature (°C) , P = pressure (dbar), U = Instrument output (µsec)

S_{corr} (salinity correction function) = 1.0 for calibration in DI water

See the user manual for more information on S_{corr} calculation

$V = U / 39.457071$

Oxygen (ml/l) = $\{((A0 + A1 \cdot T + A2 \cdot V^2)/(B0 + B1 \cdot V) - 1.0)/(C0 + C1 \cdot T + C2 \cdot T^2)\} \cdot S_{\text{corr}} \cdot \exp(E \cdot P / (T + 273.15))$

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

