

CALIBRATION CERTIFICATE

Form No 854, May 5th 2020

Certificate no: Oxygen Optode 4831_475_189572

FoilID: 1206EM

Product: Oxygen Optode 4831

Serial no: 475

Calibration date: 26.10.2021

2-POINT RECALIBRATION, MULTIPOINT CALIBRATED OXYGEN OPTODE

This is to certify that this product has been calibrated and verified using the following reference equipment:

| Reference Equipment | Serial | | |
|--|---|--|--|
| Calibration Bath Model Toho TM-005-P-A | 12-K | | |
| Fluke 5615 PRT | Serial No. 802054 and Serial No. 849155 | | |
| Fluke CHUB E-4 | Serial No. A7C677 | | |
| Reference sensor 4330 | 338 | | |

Specification

| | O2 Concentration | Air Saturation | Temperature | |
|---------------------|------------------|----------------|-------------|--|
| Range | 0-500 μΜ | 0 - 120% | -5 to +40°C | |
| Accuracy | < ±3µM or ±2% 1) | ±2% 2) | ±0.03°C 3) | |
| Resolution | < 1 µM | < 0.4% | 0.01°C | |
| Settling Time (63%) | < 25 seconds | < 25 seconds | < 2 seconds | |

¹⁾ Requires salinity compensation for salinity variations > 1mS/cm, and pressure compensation for pressure > 100meter

Calibration points and readings:

| | Air Saturated Water | Zero Solution (Na2SO3) |
|--------------------------|---------------------|------------------------|
| Phase reading (°) | 34.12 | 60.24 |
| Temperature reading (°C) | 10.02 | 21.87 |
| Air Pressure (hPa) | 969.00 | |

Giving these coefficients

| Index | 0 (Offset) | 1 (Slope) | |
|----------|--------------|--------------|--|
| ConcCoef | 7.065161E-01 | 9.899411E-01 | |

With following settings

| _ | _ | | | | | | |
|------------------|--------------|---------------|--------------|---------------|--------------|--------------|------------|
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| SVUFoilCoef | 2.49136E-03 | 1.03483E-04 | 2.22181E-06 | 1.82676E+02 | -2.67856E-01 | -4.93932E+01 | 3.76726E+0 |
| PhaseCoef | 0.000000E+00 | 1.000000E+00 | 0.000000E+00 | 0.000000E+00 | | | |
| TempCoef | 1.984963E+01 | -3.042199E-02 | 2.751656E-06 | -3.990066E-09 | 0.000000E+00 | 0.000000E+00 | |
| Salinity (mS/cm) | 0.00 | | | | | | |
| Firmware Version | 5.3.1 | | | | | | |

Date:26.10.2021

Sr. Repair Technician

²⁾ Within calibrated range 0 - 120% / 0 - 30°C

³⁾ Within calibrated range 0 - 36°C for standard version and 0 - 30°C for multipoint version