



CALIBRATION CERTIFICATE

AANDERAA DATA INSTRUMENTS

Form No. 622, Dec 2005
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Sensing Foil Batch No: 4804
Certificate No: 3830 762 38891

Product: Oxygen Optode 3830
Serial No: 762
Calibration Date: 23 June 2006

This is to certify that this product has been calibrated using the following instruments:

ASL Digital Thermometer model F250
Platinum Resistance Thermometer
Calibration Bath model FNT 321-1-40

Serial No. 06792/06
Serial No. 2H1072/1

Parameter: Internal Temperature:

Calibration points and readings:

Temperature (°C)	1.14	12.08	24.08	36.04
Reading (mV)	706.36	382.82	14.96	-330.31

Giving these coefficients

Index	0	1	2	3
TempCoef	2.45758E+01	-3.31947E-02	3.12854E-06	-4.39602E-09

Parameter: Oxygen:

	O2 Concentration	Air Saturation
Range:	0-500 μM ¹⁾	0 - 120%
Accuracy ¹⁾ :	< $\pm 8 \mu\text{M}$ or $\pm 5\%$ (whichever is greater)	$\pm 5\%$
Resolution:	< 1 μM	< 0.4%
Settling Time (63%):	< 25 seconds	

Calibration points and readings²⁾:

	Air Saturated Water	Zero Solution (Na ₂ SO ₃)
Phase reading (°)	2.96303E+01	6.36611E+01
Temperature reading (°C)	1.98587E+01	2.06754E+01
Air Pressure (hPa)	1.00591E+03	

Giving these coefficients

Index	0	1	2	3
PhaseCoef	-9.14922E+00	1.22441E+00	0.00000E+00	0.00000E+00

¹⁾ Valid for 0 to 2000m (6562ft) depth, salinity 33 - 37ppt

²⁾ The calibration is performed in fresh water and the salinity setting is set to:

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SR10 Scaling Coefficients:

At the SR10 output the Oxygen Optode 3830 can give either absolute oxygen concentration in μM or air saturation in %. The setting of the internal property "Output"³⁾, controls the selection of the unit. The coefficients for converting SR10 raw data to engineering units are fixed.

Output = -1	Output = -2
A = 0	A = 0
B = 4.883E-01	B = 1.465E-01
C = 0	C = 0
D = 0	D = 0
Oxygen (μM) = A + BN + CN2 + DN3	Oxygen (%) = A + BN + CN2 + DN3

³⁾ The default output setting is set to -1

Date: 7 August 2006

Sign:

Tor-Ove Kvalvaag, Calibration Engineer



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