



CALIBRATION CERTIFICATE

AANDERAA DATA INSTRUMENTS

Form No. 622, Dec 2005
Page 1 of 2

Sensing Foil Batch No: 4804
Certificate No: 3830 761 38891

Product: Oxygen Optode 3830
Serial No: 761
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)	780.99	458.38	83.09	-275.23

Giving these coefficients

Index	0	1	2	3
TempCoef	2.67632E+01	-3.25183E-02	3.09285E-06	-4.43632E-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_2SO_3)
Phase reading (°)	3.06516E+01	6.45533E+01
Temperature reading (°C)	1.98637E+01	2.06771E+01
Air Pressure (hPa)	1.00591E+03	

Giving these coefficients

Index	0	1	2	3
PhaseCoef	-1.05407E+01	1.22906E+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:

AANDERAA DATA INSTRUMENTS AS



CALIBRATION CERTIFICATE

AANDERAA DATA INSTRUMENTS

Form No. 622, Dec 2005
Page 2 of 2

Sensing Foil Batch No: 4804
Certificate No: 3830 761 38891

Product: Oxygen Optode 3830
Serial No: 761
Calibration Date: 23 June 2006

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



AANDERAA DATA INSTRUMENTS AS



CALIBRATION CERTIFICATE

AANDERAA DATA INSTRUMENTS

Form No. 621, Dec 2005

Certificate No: 3853 4804 38314
Batch No: 4804

Product: O2 Sensing Foil PSt3 3853
Calibration Date: 25 July 2006

Calibration points and phase readings (degrees)

Temperature (°C)		2.81	10.67	20.23	29.79	39.15
Pressure (hPa)		970.73	970.73	970.73	970.73	970.73
O2 in % of O2+N2	0.00	70.02	69.37	68.43	67.47	66.25
	1.00	65.87	64.80	63.36	61.92	60.25
	2.00	62.07	60.67	58.85	57.04	55.02
	5.00	53.10	51.16	48.76	46.46	44.13
	10.00	43.25	41.09	38.51	36.15	33.89
	20.90	31.53	29.52	27.21	25.18	23.31
	30.00	26.03	24.21	22.17	20.39	18.77

Giving these coefficients ¹⁾

Index	0	1	2	3
C0 Coefficient	3.17242E+03	-1.07261E+02	2.13316E+00	-1.79234E-02
C1 Coefficient	-1.73981E+02	5.10262E+00	-9.85758E-02	8.02240E-04
C2 Coefficient	3.95600E+00	-9.81040E-02	1.85346E-03	-1.42536E-05
C3 Coefficient	-4.26337E-02	8.78820E-04	-1.64409E-05	1.13709E-07
C4 Coefficient	1.76869E-04	-2.95502E-06	5.55039E-08	-3.08493E-10

¹⁾ Ask for Form No 621S when this O2 Sensing Foil is used in Oxygen Sensor 3830 with Serial Numbers lower than 184.

Date: 4/24/2008

Sign:

AANDERAA DATA INSTRUMENTS AS

5851 BERGEN, NORWAY

Tel. +47 55 60 48 00

Fax. +47 55 60 48 01

E-mail: info@aadi.no

Web: <http://www.aadi.no>