

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0154  
CALIBRATION DATE: 23-Mar-05p

SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS

Soc = 0.6442

Boc = 0.0000

Voffset = -0.5048

TCor = -0.0008

PCor = 1.350e-04

BATH OX (ml/l)	BATH TEMP ITS-90	BATH SAL PSU	INSTRUMENT OUTPUT(VOLTS)	INSTRUMENT OXYGEN(ml/l)	RESIDUAL (ml/l)
1.25	12.00	0.01	0.769	1.27	0.02
1.27	6.00	0.00	0.736	1.29	0.01
1.29	2.00	0.00	0.713	1.29	0.00
1.31	20.00	0.01	0.832	1.32	0.01
1.33	26.00	0.01	0.874	1.32	-0.01
1.33	30.00	0.01	0.904	1.33	-0.01
4.08	12.00	0.01	1.365	4.13	0.06
4.09	6.00	0.00	1.241	4.10	0.01
4.12	2.00	0.00	1.158	4.06	-0.06
4.15	20.00	0.01	1.542	4.18	0.03
4.17	26.00	0.01	1.667	4.15	-0.02
4.21	30.00	0.01	1.764	4.18	-0.03
6.73	30.00	0.01	2.517	6.68	-0.05
6.87	2.00	0.00	1.592	6.76	-0.11
7.01	26.00	0.01	2.457	6.98	-0.03
7.02	12.00	0.01	1.988	7.13	0.10
7.03	20.00	0.01	2.266	7.09	0.06
7.04	6.00	0.00	1.771	7.06	0.02

$$\text{oxygen (ml/l)} = (\text{Soc} * (\text{V} + \text{Voffset})) * \exp(\text{Tcor} * \text{T}) * \text{Oxsat}(\text{T}, \text{S}) * \exp(\text{Pcor} * \text{P})$$

V = voltage output from SBE43, T = temperature [deg C], S = salinity [PSU]

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

Residual = instrument oxygen - bath oxygen

