

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0455
CALIBRATION DATE: 13-Apr-17

SBE 45 CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -9.918158e-001
h = 1.292346e-001
i = -5.291093e-004
j = 5.357894e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = 8.9947e-008

| BATH TEMP (° C) | BATH SAL (PSU) | BATH COND (S/m) | INSTRUMENT OUTPUT (Hz) | INSTRUMENT COND (S/m) | RESIDUAL (S/m) |
|--------------------|-------------------|--------------------|---------------------------|--------------------------|-------------------|
| 22.0000 | 0.0000 | 0.00000 | 2781.69 | 0.00000 | 0.00000 |
| 1.0000 | 34.6977 | 2.96679 | 5562.30 | 2.96681 | 0.00002 |
| 4.5000 | 34.6783 | 3.27298 | 5773.04 | 3.27297 | -0.00001 |
| 14.9999 | 34.6363 | 4.25185 | 6399.52 | 4.25182 | -0.00003 |
| 18.5000 | 34.6275 | 4.59602 | 6605.36 | 4.59602 | 0.00001 |
| 24.0001 | 34.6179 | 5.15238 | 6924.76 | 5.15240 | 0.00002 |
| 28.9999 | 34.6129 | 5.67273 | 7210.25 | 5.67274 | 0.00001 |
| 32.5000 | 34.6104 | 6.04413 | 7407.01 | 6.04412 | -0.00002 |

$$f = \text{Instrument Output(Hz)} * \text{sqrt}(1.0 + \text{WBOTC} * t) / 1000.0$$

t = temperature (°C); p = pressure (decibars); δ = CTcor; ϵ = CPcor;

$$\text{Conductivity (S/m)} = (g + h * f^2 + i * f^3 + j * f^4) / 10 (1 + \delta * t + \epsilon * p)$$

$$\text{Residual (Siemens/meter)} = \text{instrument conductivity} - \text{bath conductivity}$$

