



Thermal Product Solutions

2821 Old Route 15 - New Columbia, PA 17856 (570)-538-7200

Scope of Work Review



Prepared by (TPS Rep): David Martz Date: 8/8/2019
Prepared for (Company): Monterey Bay Aquarium Research Institute
Address: 7700 Sandholdt Road
Moss Landing CA 95039
Contact: Roman Marin III
Phone: 831-775-1859
Email: maro@mbari.com

Service Order # 8598

For Internal Use Only

Note: Certificates will be e-mailed to the above contact person.

Additional Chambers/Instruments will each require their own form.

Chamber Mfg.: Tenney
Chamber Model: C30S2.0-A-S1.1-B
Chamber S/N: 128082
Asset No.:
Instrument Type: Controller
Instrument Mfg.: Eaton
Instrument Model: Smart 1.1
Instrument S/N: (On Site) 101200005128

Instrument Type:
Instrument Mfg.:
Instrument Model:
Instrument S/N: (On Site)

Select the type of calibration to be performed from the list below (check all that apply):

- UUT: ☐ 1) Electronic Instrument Calibration - (TPS Method determined by controller type).
☒ 2) Chamber Temperature Gradient - (TPS Internal Method M169)
☐ 3) Humidity Sensor Calibration - (Must Use TPS Internal M176 Worksheet)
☐ 4) Temperature Gradient with Humidity - (TPS Internal Worksheet M169H)
☐ 5) Other (Customer Specific)

Calibration intervals determined by customer Q.C. System:

☒ Annual (1 year) ☐ Semi-Annual (6 mo) ☐ Quarterly (3 mo) ☐ Monthly ☐ Other:

TEST POINT IDENTIFICATION AND SOAK TIME

PARAMETERS T1 - T5: Complete the temp/humidity range(s) desired if other than the default values listed below and note the soak time after stabilization time if different than 60 minutes. (Note humidity value for each temp for type 4 only)

CALIBRATION TYPE 2 & 4 ONLY: Check the test points requested in the grid below (1-9, point 10 & 10A are selected by default). Accuracy is listed below.

Chamber Test Points (Type 2 & 4 Only):

10 - Control Sensor

10A - Humidity Sensor (Type 4 only)

Test Parameters:

☐ Fahrenheit ☒ Celsius

T1)	4	
T2)	10	
T3)	30	
T4)	70	
T5)		
T6)		

MINUTES

Soak time after stabilization: 60

Humidity is checked at temperatures specified above.

For Option 2 and 4, at a minimum, an average of five readings will be recorded and displayed on the data page.

Chamber calibration accuracy will be no greater than $\pm 3^\circ\text{C}$ for temperature and ± 5 for relative humidity.

Thermal Product Solutions (TPS) certifies that the above contract will be performed using traceable instruments or reference materials that provides traceability to International, National/Accredited laboratories, intrinsic or consensus standards of measurement. This contract applies only to the specific UUT identified by serial number or asset ID number and calibrated to the specific procedure identified. This contract shall not be amended, without the documented approval of Thermal Product Solutions. The policies and procedures used at Thermal Product Solutions include ISO/IEC 17025:2005, ANSI/NC SL Z540-1.

Note: Please be aware the "Uncertainties are stated but have not been factored into any measurements".

TPS Rep signature: *David Martz*

Date: 8/8/2019

NOTE: Signatures can also be completed on site if necessary

Customer signature: *Roman Marin III*

Date: 8/8/2019

Print customer name: Roman Marin III

PO#: 1910848