

## CERTIFICATE OF CALIBRATION



G. Viens



Issued By: Certificate Number AC-26608

Date of Issue: 5/14/2021

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Approved Signatory

28-fleet

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Unit #4

Isotech North America, Inc

FDACI

Cnel Lynch 2684, San Justo Provincia de Buenos Aires

Argentina

Instrument:

Customer:

System ID: ID04083

Description: ITS-90 (-50 to 450C)

Manufacturer : Isotech Model Number : 935-14-116 Serial Number : 40821-8

Calibration Info:

Date Received : 4/28/2021 Job Number : J11639-1

Order Number: S534491
Procedure Number: 943
Procedure Version: 20-1.0/N

**Environmental Conditions** 

D. Bartlett

Temperature : 20°C ± 1°C

Relative Humidity: 35%RH ± 10%RH

Mains Voltage :  $120V \pm 10V$ Mains Frequency :  $60Hz \pm 1Hz$ 

#### Comments

This certificate is issued in compliance with ISO/IEC 17025:2017 and our ANAB accredited quality system. Reported measurement uncertainties are stated with a coverage factor *k*=2, corresponding to a coverage probability of 95% This platinum resistance thermometer was calibrated using ITS90 Fixed Points

Traceability Information	0	Certificate Number	Cal. Date	Period [Weeks]
Instrument Description	Serial Number			
670 SPRT	670-011	AC-25931	8/24/2020	52
A11-50-270 TPW (Triple Point of Water)	A11-50-1803	19-06-26	6/6/2019	999
ITL-17401 GA Fixed Point Cell	GA309	836/273191-06	4/13/2006	999
491 SN Fixed Point Cell	29624-1	19-04-84	4/23/2019	999
492 ZN Fixed Point Cell	29624-2	19-04-85	4/23/2019	999
17724-M HG Fixed Point Cell	HG213	10-10-33	10/19/2010	999
microK 500 Precision Thermometry Bridge	381822/35	AC-25683	4/21/2021	52
Calibrated By: Ian Slay		Date of Calibration	5/14/2021	

This certificate provides traceability of measurement to recognized National standards, through units of measurement realized at the National Physical Laboratory (NPL), National Institute of Standards & Technology (NIST) or other recognized National standards laboratories to the International System of Units. Copyright of this certificate is owned by the issuing laboratory and may not be reproduced except in full, without the prior written approval of the issuing laboratory.

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### AS FOUND RESULTS

Test Title	<b>Applied Value</b>	Tolerance	Reading	Uncertainty
System Temperature D	ata			
Mercury Fixed Pt.	-38.8344°C	± 0.025°C	-38.8310°C	± 1.8 mK
Triple Point of H20	0.0100°C	± 0.025°C	0.0040°C	± 0.7 mK
Gallium Fixed Pt.	29.7646°C	± 0.025°C	29.7630°C	± 1.3 mK
Tin Fixed Pt.	231.9280°C	± 0.025°C	231.9170°C	± 2.7 mK
Zinc Fixed Pt.	419.5270°C	± 0.025°C	419.5350°C	± 2.9 mK

#### **Resistance Data**

Ohms @ -38.834°C = 84.7523

Ohms @ 0.010°C = 100.015

Ohms @ 29.765°C = 111.600

Ohms @ 231.928°C = 187.538

Ohms @ 419.527°C = 253.808

#### Coefficients

Rtpw = 100.018

Ap = -2.005652 E-2

Bp = -2.009510 E-4

An = -2.071554 E-2

Bn = 2.125719 E-3

**END OF TEST DATA**