



NATIONAL STANDARDS OF PUERTO RICO TEMPERATURE METROLOGY LABORATORY

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Calibration Report

EDACI

Cnel Lynch 2684 San Justo, Buenos Aires, Argentina

Description: SPRT
Manufacturer: ACCUMAC
Serial Number: 1621255
ID Number: N/A

Test Number: TEM18-1056B
Model Number: AM1860-25
Received Date: 11/05/18
Calibration Date: 11/21/18
Next Due: 11/21/19

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INTRODUCTION

This report covers the operations used to assign temperature deviation of the thermometry equipment identified in the first page of this document. It includes a brief description of the measurement methods and procedures which were used, measurement data, and calibration analysis. The results are presented in several formats: Standard Reading, Thermometer Reading and uncertainties value.

Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results (1994). The uncertainty calculations are applied for temperature comparisons. The uncertainty is evaluated either by Type A or Type B method of evaluation. Type A evaluation is based on a statistical analysis of a series of measurements whereas Type B evaluation is based on scientific judgment using all the relevant information available.

METHODOLOGY

Thermometers are calibrated by comparison method against a certified SPRT using defined fixed points. The SPRT shall be used before and after the Thermometer under Calibration in the Fixed Point Cell in order to verify the cell plateau.

The measure of uncertainty intended to meet the requirements is termed **expanded uncertainty**, suggested symbol U , and is obtained by multiplying $u_c(y)$ by a coverage factor, suggested symbol k . The value of the coverage factor k is determined on the basis of the desired level of confidence to be associated with the interval defined by $U=ku_c$. A coverage factor of $k=2$ allows for a confidence interval of 95.54 %.

UNCERTAINTY

The uncertainty calculations are based on

"No statement of compliance with specifications is made or implied on this certificate. However, measurement results are reviewed, where applicable, to establish where any measurement result exceeds the manufacturer's specifications. Measurement result greater than limits of error are indicated by * "

TOLERANCE TEST

The tolerance test is a verification that the W value at TP-Hg or MP-Ga for test thermometer is correct or not within the maximum permissible errors according to ITS-90 [1] document.

REFERENCES

- The following references are suggested for general information concerning the temperature measurement process:
1. H. Preston-Thomas, The international Temperature Scale of 1990(ITS-90), Metrologia 27, 3-10 (1990)
 2. JCGM 100:2008. "Evaluation of measurements data - Guide to the expression of uncertainty in measurements". First Edition, September 2008.



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