Laboratorio de Metrología Termómetros de lectura directa



Certificado de calibración

Juan Daniel Padilla de la Sancha/JD Calibraciones. Agustin Millán #130. Granjas Valle de Guadalupe, Ecolepec Edo. de México, 55270, fel. 01 (55) 4999 4110. Acreditación ISO/IEC 17025:2005 #93752 por Perry Johnson Laboratory Accreditation inc.





1. Cliente

Spectralab Instrumentación

2. Dirección del cliente

Calle Chimalpopoca No.76 Col. Arenal 2a Sección CP15680, Venustiano Carranza, CDMX

3. Método y procedimiento utilizado

Calibración de termómetros de lectura directa

4. Datos del instrumento a calibrar (IBC)

Marca	Taylor	
Modelo	9834	
Serie	ND	
echa de recepción	22/01/2020	

ID del cliente	Taylor 9834 20-0127	
Resolución	0.1 °C	
Alcance	-40 a 250 °C	
cha de calibración	23/01/2020	

5. Condiciones ambientales

Temperatura

20.6 °C

humedad relativa

50%

6. Datos del patrón utilizado

Patrón	Precision Plus Them	nometer Resolución	0.01 °C	
No serie	D18120931	Identificación	Inv#38	
Alcance	-50 a 200 °C	Exactitud & incertidumbre	0.05 & 0.03 ℃	

7. Resultado de la calibración

Indicación del patrón °C	Indicación del IBC °C	Error del IBC °C	Incertidumbre expandida ± °C
31.7	31.3	-0.4	1.2
36.8	36.2	-0.6	1.2
44.7	44.2	-0.5	1.2

La incertidumbre combinada "U" se expresa con un factor de cobertura k=2 que corresponde aproximadamente a un nivel de confianza del 95%. Se calcula con base en la guía para la expresión de incertidumbre en los resultados de las mediciones (NMX-CH-140-IMNC-2002)

"Los resultados de calibración publicados en este certificado se abtuvieron utilizando equipo capaz de producir resultados trazables al CENAM y a través del CENAM al Sistema Internacional de Unidades (SI)".

8. Próxima calibración (indicada por el cliente)

Fecha de próxima calibración

Enero 2021

Autorizado por: Gerente/Daniel Padilla

Fecha de emisión:

23/01/2020





PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Juan Daniel Padilla de la Sancha / JD Calibraciones
Agustín Millán #130, Col. Granjas Valle de Guadalupe
Ecatepec, Estado de México, México C.P. 55270

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2005

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Thermodynamic and Electrical Calibration

(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President/Operations Manager

Perry Johnson Laboratory Accreditation, Inc. (PJLA) 755 W. Big Beaver, Suite 1325 Troy, Michigan 48084 Initial Accreditation Date:

Issue Date:

Expiration Date:

April 14, 2017

April 06, 2019

July 31, 2021

Accreditation No.:

Certificate No.:

93752

L19-204

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PILA website: www.pjlabs.com





Certificate of Accreditation: Supplement

Juan Daniel Padilla de la Saucha/ID Calibraciones Artusia Milla: #130. Col. Granja: Valle de Guteleja. Bestepe: Estado de México C.P. 55.10 Centaci Natur Ituu Danier Padila: de la Sanctu. Phone. 556-156-2487.

A creditation is granted to the facility to perform the following calibrations

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Infrared Temperature Insertuaces ***	30 °C to 500 °C	1.3 %	Diarkbody Target Themsowicks USB Reference Them under and Calibratio VATIE Precision Plut Thermonides CENAM Technical Grade	
lifested Temperature Institutents**	0.4.	13.40	The Black Body The surveys is and Thermoweeks USR Reference Thermouries Pression Part Thermouries CENAM Technical Origin	
Thomso-Hygrousers	32 % RH	3 % RH	Salt Chamber and Hardheld Thurbar-Hygrometer 6500 CENAM Technical Guide	
Fixed Points Hamelity Only*	45 % RH	3 % RH		
transactly cleary.	N O KH	3 % RH		
	50 % RH	3.8 KH		
	45 % KH	J S KH		
L guiption of Massire Temperature, Theateometer - United Reading (1)	15 °C to 275 °C	4,1 °C	Thethodyoka Dry Weit 2401 Fisher 41906 Sociel CC C 25d Chamber Zeiglich C vol Chamber Zeiglich C vol Chamber Themas with USB Reterior Themas week California VA 712 Processor Fish Thermotopers CLEAM Tochnesis Gradia	
Temperature Measurement. Thomas outle Type E ^{4,2}	-15 C to 315 C	97 C		
Temperatus Measurement. Tierruse onple Type I ⁽ⁿ⁾	-15 °C to 375 °C	0.1 °C.		
Temperature Measurement Thermocouple Type K ^N	~15 K 10 275 K	0.1 C		
Temperature Measurement Themiscouple Type N ^{No}	-15 °C' to 3°5 °C	0.1 °C		
Temperature Measurement Thermocomple Type T ^{FO}	-15 °C to 175 °C	4.1 °C		

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Certificate of Accreditation: Supplement

Juan Daniel Padilla de la Suncha/JD Calibraciones Again Malia 4136 Cal Granas Valla de Quaddige Peatgue Fitado de Mexico, Mexico CP 5530 Conse. Natur Juan Daniel Fadilla de la Sancia, Plone 526-350-2187

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- The laboratorists range of catabation explaintsy for all disciplines for which they are accordisted with measured from the standard could represent the standard could be added to the largest calcitation that the said of the range must be an attainable value for which the laboratory has on his access to the accession of the range of the range
- The presence of a imperiority! meant that the falsocatory performs calibration of the indicated parameter at its
 fixed location. Example: Outside Micromoter's would mean that the laboratory performs this cameration at its
 fixed focation.
- The personne of a superiorist PC means that the laboratory personne calibration of the adicated parameter both at its fitted location and outsite at entionier for atoms. Personale, Oncode Micrometer⁶⁶ would mean that the interesting personne the cultivation at we tree incarce and onate at consonne for atoms.
- 3. Measurement uncertainties obtained to chibration) performed at curiouser ties can be expected to be larger than the mostrement uncertainties obtained at the laboratories (fixed location for summer Calibration. This is that to the effects of transportation of the standards and equipment and upon currenteemental conduction as the cultivatories are which are typically one controlled as closely as it the laboratories titted location.



Certificate of Accreditation: Supplement

Juan Daniel Padilia de la Sancha/JD Calibraciones JUAN DARRET FARMER QUE LA SANCTRO-JO CAMINI AUGUSTA Agusta Millia (1) D. Cel. Graspas Velle de citaleltique Ecatepre, Estado de México, Mexico C.P. 38270 Contact Nome Juan Daniel Padilla de la Socias - Piscue: 586-350-1447

Accreditation is greated to the facility to perform the following california six

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Temperature Calibration Indication, and Council Equipment used with Themsecouple Type B**	-216 °C 6950°C	7.4.	Hete Vica, Shoulation on Thermore capie. Thermore was: Thermore was: Calibratica VA746 CTN/AM Yechinera Guide BURAMET cg-15
Temperature Califeration Indication, and Crested Equipment used with Themsecutive Type ?"	-200 °C to 1 200 °C	. ·c	
Temperature Cambration ladication, and Control liquipment med with Thermocoupie Type K ²¹	-200 °C to 1 376 °C	. "	
Temperature Calibration Indication, and Control Equational used with Thermocompic Type T ⁵⁰	-100 °C to 400 °C	: ·c	
Equipment to Measure	Up to 4 DBD dgV	Closes Mulot reading + Uli 4 m/V	Brant GPUVP Med: GPG018A CESAM Technical Grade EURAMET og 15
DC Volume ²	4 V to 1 000 V	0.082 % of reading + 0.000.59 V	
Equipment to Measure	0.2 A to 21 A	0.17 % of reading + 0.000 01 \	
DC Current	2 m 4 to 30 m 4	0.17 % of reading + 0.627 mA	
	20 µA to 4Kl µA	6.17 9 of reading a 35 µ A	
Equipment to Measure	Up to 4 Sitting	0.39 % of reading + 0.19 mV	
AC Vidage" MODID	4 V to 1 100 V	0.082 % of reading + 0.000 18 V	
Equipment to Measure	0.2 A to 20 A	0.003 % of reading = 0.000 18 A	
AC Clarent* V: 68 1/2	2 m 4 to 10 m/A	0.36 % of reading + 0.17 in A	1
Equipment to Measure	0 k(1 (- 2 kf)	0.96 % of reading + 0.000 58 kg a	1
Rossome*	0 17 to 200 ft	1.3 % of reading + 0.000 5842	
	28510 1851	0.96 % of reading + 0.000 58 kg1	
	200 ft to 100 ft	1.3 % of reading + 0.000 050 f2	
	2 MGHo 4 MG	1.5% of reading + 0.000 061 Mf2	
	eMate 2Ma	1.3 % of reading + 0.000 06) M(r)	
Dipagainst to Measter Current by Chinp Mears	Up to 260 A	0.96 % of reading + 0.000 (159 A	Braid GPUVE
	200 t± 600 A	1.3 % of reading + 0.000 059 A	Model, GF6018A
	600 to 1 000 A	3.6 % of reading + 0.000 058 A	CBNAM Technical Crinic EURAMET 18-15

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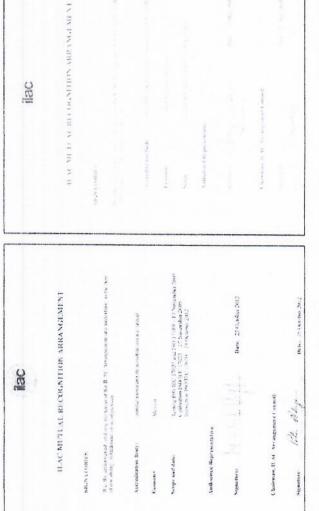


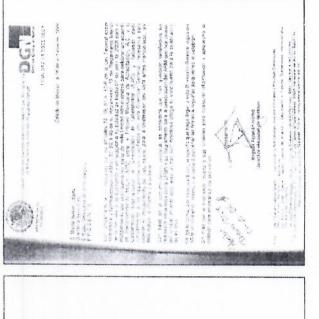
Acreditación ISO/IEC 17025:2005



(México), UKAS (Inglaterra), a2La (EU), etc. A continuación se muestra la documentación que respalda territorio Nacional. Está respaldado por una acreditación otorgada por PERRY JONHSON LABORATORY calibraciones la misma validez que los laboratorios acreditados por otros cuerpos por ejemplo ema A CREDITATION INC. (PJLA), uno de los cuerpos de acreditación mas prestigiados a nivel nacional e El certificado de calibración que tienes en tus manos, emitido por JD Calibraciones, es válido en el internacional, así como por el acuerdo internacional ILAC-MRA. Este acuerdo da a nuestras lo indicado:

ilac





Estos documentos fundamentan la validez de nuestras calibraciones y certificados por lo cual no dude en presentarlos ante cualquier, inspección, auditoría, autoridad, etc.



Trazabilidad del laboratorio

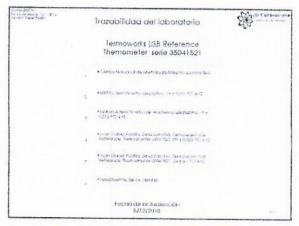
Termoworks Precision Plus
Thermometer serie D18120931

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Trazabilidad del laboratorio

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