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Ministerio
del AmbienteOrganismo de Evaluación y
Fiscalización Ambiental - OEFA

"Decenio de las Personas con Discapacidad en el Perú"
"Año de la Producción Responsable y del Compromiso Climático"

7INFORME N° 173 -2014-OEFA/DE-SDCA

Para : **Ing. MARIELLA ROSSANA ATALA ALVAREZ**
Coordinadora de Calidad Atmosférica

Asunto : Reporte del monitoreo de ruido ambiental realizado en el Marco de la Supervisión Regular de la Planta de producción de papel INDUSTRIAS DEL PAPEL S.A., en el distrito de Chaclacayo, provincia de Lima.

Referencia : Memorándum N° 437-2014-OEFA-DS de 3 de marzo de 2014

Fecha : **07 ABR. 2014**

Por medio del presente me dirijo a usted, a fin de saludarla cordialmente e informarle acerca del monitoreo de ruido ambiental en horario diurno, realizado en la Planta de producción de papel INDUSTRIAS DEL PAPEL S.A., en el distrito de Chaclacayo, el día 04 de marzo de 2014, en apoyo a la supervisión regular requerida mediante el documento de la referencia.

Siendo todo cuanto tengo que informar a usted.

Ing. Annia María Vargas Herrera
Dirección de Evaluación

San Isidro, **07 ABR. 2014**

Visto el INFORME N° **173** -2014-OEFA/DE-SDCA y estando conforme con su contenido, **PÓNGASE** a consideración de la Subdirección de Calidad Ambiental para los fines correspondientes.

Atentamente,



Ing. Mariella Rossana Atala Alvarez
Coordinadora de Calidad Atmosférica
Dirección de Evaluación





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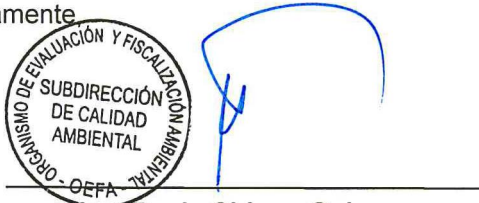
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San Isidro, 07 ABR. 2014

Visto el INFORME N° 173 -2014-OEFA/DE-SDCA y estando conforme con su contenido, **REMÍTASE** a la Coordinación de Industria de la Subdirección de Supervisión Directa de la Dirección de Supervisión para los fines correspondientes.

Atentamente



Ing. Paola Chinen Guima
Subdirectora de Calidad Ambiental
Dirección de Evaluación



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**REPORTE DE MONITOREO DE RUIDO AMBIENTAL EN APOYO A LA
DIRECCIÓN DE SUPERVISIÓN**

FICHA DE RUIDO

N° 002-RU

TIPO DE SUPERVISIÓN	Regular	X	Supervisión Regular a la Planta de Producción de Papel INDUSTRIAS DEL PAPEL S.A.
	Especial		
	Otro		

1. DATOS DEL ADMINISTRADO

Unidad administrada	INDUSTRIAS DEL PAPEL S.A.				
Subsector	Industria				
Región	Lima	Provincia	Lima	Distrito	Chaclacayo
Dirección del establecimiento industrial	Carretera Central Km 18.5 Chaclacayo, Lima.				

**2. DATOS DEL MONITOREO**

Fecha(s)	04/03/2014			
Horario (marcar con aspa)	Diurno (07:01 – 22:00 hrs)	X	Nocturno (22:01 – 07:00 hrs)	
Equipo Técnico	Annia Vargas Herrera (Dirección de Evaluación)			
	Nilton Paz Guevara (Dirección de Supervisión)			
Equipo empleado	Sonómetro Clase II, Larson & Davis LXT 2330			

**Ubicación de puntos de monitoreo**

Código de Punto de Monitoreo	Descripción	Coordenadas UTM (Datum WGS84)	
		Este	Norte
RU-IPSA 01	Pared lateral oeste ubicada en pasaje sin salida, cerca de puerta de ingreso de establecimiento industrial.	301045	8673763
RU-IPSA 02	Pared lateral oeste ubicada en pasaje sin salida, altura de reja de ingreso a pasaje sin salida.	301087	8673648
RU-IPSA 03	Vértice posterior oeste de establecimiento industrial, colindante con ribera de Río Rímac.	300959	8673947
RU-IPSA 04	Vértice posterior este de establecimiento industrial, colindante con ribera de Río Rímac.	301078	8673993

**3. RESULTADOS**

Código de Punto de Monitoreo	Fecha dd/mm/año	Hora	Resultado (LAeqT ¹)	Zona de Aplicación	ECA ²	Observaciones
RU-IPSA 01	04/03/2014	12:40 – 13.40	60.5	Industrial	80	---
RU-IPSA 02	04/03/2014	15:05 – 16.05	62.8	Industrial	80	---
RU-IPSA 03	04/03/2014	16:16 – 17:16	61.3	Industrial	80	---
RU-IPSA 04	04/03/2014	17:30 – 18:30	58.2	Industrial	80	---

**CONCLUSIONES**

Los niveles de ruido obtenidos no superan el Estándar Nacional de Calidad Ambiental para ruido ambiental establecido para una zona de aplicación industrial (80 dBA) en horario diurno.

**NEXOS**

1	Estándares Nacionales de Calidad Ambiental para Ruido (DS N° 085-2003-PCM)
2	Mapa de ubicación de puntos de monitoreo
3	Fotografías
4	Copia de Certificado de Calibración de equipo y calibrador


ING. ANNIA MARÍA VARGAS HERRERA
 Dirección de Evaluación

¹ LAeqT: Nivel de presión sonora continuo equivalente con ponderación A.

² Según zona de aplicación y horario (D.S. 085-2003-PCM)

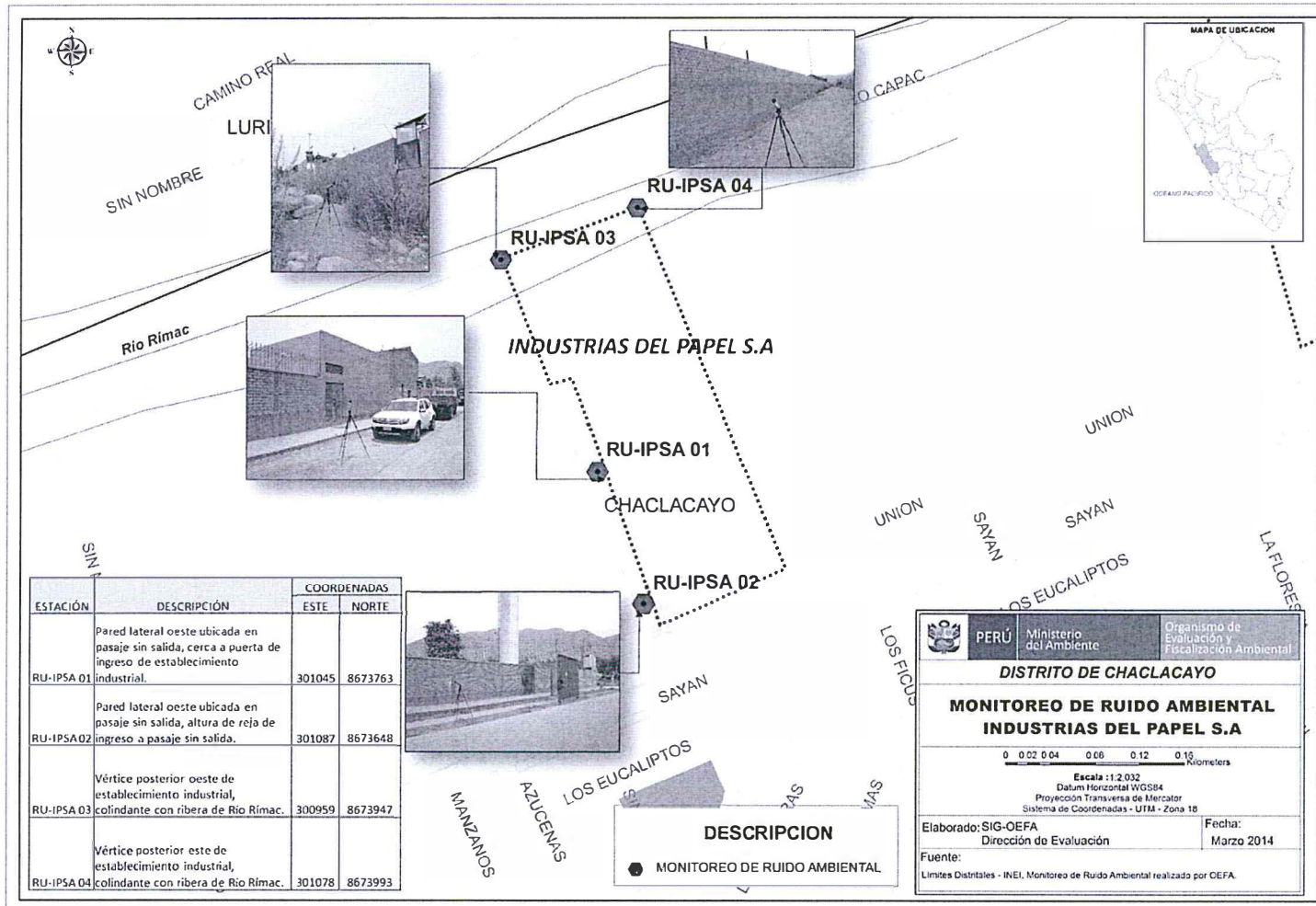


ANEXO 1: Estándares Nacionales de Calidad Ambiental para Ruido (D.S. 085-2003-PCM)

Zonas de Aplicación	Valores Expresados en L_{AeqT}	
	Horario Diurno 07:01 a 22:00	Horario Nocturno 22:01 a 07:00
Zona de Protección Especial	50 dB	40 dB
Zona Residencial	60 dB	50 dB
Zona Comercial	70 dB	60 dB
Zona Industrial	80 dB	70 dB

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ANEXO 2: Mapa de Ubicación de Puntos de Monitoreo de Ruido Ambiental



Fuente: OEFA

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ANEXO 3: Fotografías



Punto de Monitoreo RU-IPSA 01



Punto de Monitoreo RU-IPSA 02



Punto de Monitoreo RU-IPSA 03



Punto de Monitoreo RU-IPSA 04



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ANEXO 4: Copias de Certificados de Calibración de equipo y calibrador



ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC and APLAC signatory)



NVLAP Lab Code: 200625-0

Calibration Certificate No. 29023-A¹

Instrument: Sound Level Meter

Model: Sound Track LXT2

Manufacturer: Larson Davis

Serial number: 0002330

Tested with: Microphone 375A02 s/n 010320
Preamplifier PRMLXT2 s/n 016073

Type (class): 2

Customer: Organismo de Evaluacion y
Fiscalizacion Ambiental

Tel/Fax: -

Date Calibrated: 6/13/2013 Cal Due:

Status:	Received	Sent
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In tolerance:	X	X
---------------	---	---

Out of tolerance:		
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See comments:

Contains non-accredited tests: Yes No

Calibration service: Basic Standard

Address: Calle Manuel Gonzales Olaechea
247, San Isidro - Lima, Peru

Tested in accordance with the following procedures and standards:
Calibration of Sound Level Meters, Scantek Inc., Rev. 6/22/2012
SLM & Dosimeters – Acoustical Tests, Scantek Inc., Rev. 7/6/2011

Instrumentation used for calibration: Nor-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence	Cal. Due
				Cal. Lab / Accreditation	
483B-Norsonic	SME Cal Unit	31052	Sep 14, 2012	Scantek, Inc./ NVLAP	Sep 14, 2013
DS-360-SRS	Function Generator	33584	Sep 9, 2011	ACR Env./ A2LA	Sep 9, 2013
34401A-Agilent Technologies	Digital Voltmeter	US36120731	Sep 12, 2012	ACR Env. / A2LA	Sep 12, 2013
HM30-Thommen	Meteo Station	1040170/39633	Dec 6, 2012	ACR Env./ A2LA	Dec 6, 2013
PC Program 1019 Norsonic	Calibration software	v.5.2	Validated Mar 2011	Scantek, Inc.	-
1251-Norsonic	Calibrator	30878	Dec 14, 2012	Scantek, Inc./ NVLAP	Dec 14, 2013
226-Brüel&Kjær	Multifunction calibrator	2305103	Jul 24, 2012	Scantek, Inc./ NVLAP	Jul 24, 2013

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK).

Environmental conditions:

Temperature (°C)	Barometric pressure (kPa)	Relative Humidity (%)
23.8 °C	98.610 kPa	54.1 %RH

Calibrated by:	Preston Mackin	Authorized signatory:	Mariana Buzduga
Signature	<i>Preston Mackin</i>	Signature	<i>Mariana Buzduga</i>
Date	6/13/2013	Date	6/21/2013

¹ Replaces Certificate #29023 which is now void. Customer name was changed.

Calibration Certificates or Test Reports shall not be reproduced, except in full, without written approval of the laboratory. This Calibration Certificate or Test Reports shall not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.

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Results summary: Device complies with following clauses of mentioned specifications:

1 CLAUSES FROM IEC/ANSI STANDARDS REFERENCED IN PROCEDURES:	RESULT ^{2,3}	EXPANDED UNCERTAINTY (coverage factor 2) [dB]
CALIBRATION OF SOUND LEVEL METER - IEC61672-3 CLAUSE 9.1	Passed	0.2
SELF-GENERATED NOISE - IEC 61672-3 CLAUSE 10	Passed	0.2
FREQUENCY WEIGHTINGS: A NETWORK - IEC 61672-3 CLAUSE 12	Passed	0.2
FREQUENCY WEIGHTINGS: C NETWORK - IEC 61672-3 CLAUSE 12	Passed	0.2
FREQUENCY WEIGHTINGS: Z NETWORK - IEC 61672-3 CLAUSE 12	Passed	0.2
FREQUENCY AND TIME WEIGHTINGS AT 1 KHZ IEC61672-3 CLAUSE 13	Passed	0.2
LEVEL LINEARITY ON THE REFERENCE LEVEL RANGE - IEC 61672-3 CLAUSE 14	Passed	0.2
TONEBURST RESPONSE - IEC 61672-3 CLAUSE 16	Passed	0.2
PEAK C SOUND LEVEL - IEC61672-3 CLAUSE 17	Passed	0.2
OVERLOAD INDICATION - IEC 61672-3 CLAUSE 18	Passed	0.2
FILTER TEST 1/OCTAVE: ANTI ALIAS FILTER - IEC 61260, CLAUSE 4.8 & #5.7	Passed	0.25
FILTER TEST 1/OCTAVE: FILTER INTEGRATED RESPONSE - IEC 61260, CLAUSE 4.5 & 5.4	Passed	0.25
FILTER TEST 1/OCTAVE: LINEAR OPERATING RANGE - IEC 61260, CLAUSE 4.6 & #5.5	Passed	0.25
FILTER TEST 1/OCTAVE: RELATIVE ATTENUATION - IEC 61260, CLAUSE 4.4 & #5.3	Passed	0.25
FILTER TEST 1/OCTAVE: REAL TIME OPERATION - IEC 61260, CLAUSE 4.7 & #5.6	Passed	0.25
FILTER TEST 1/OCTAVE: SUMMATION OF OUTPUT SIGNALS - IEC 61260, CLAUSE 4.9 & #5.8	Passed	0.25
FILTER TEST 1/OCTAVE: FLAT FREQUENCY RESPONSE - IEC 61260, CLAUSE 4.10 & #5.9	Passed	0.25
SUMMATION OF ACOUSTIC TESTS - IEC 61672-3 CLAUSE 11	Passed	See test report

¹ The results of this calibration apply only to the instrument type with serial number identified in this report.

² Parameters are certified at actual environmental conditions.

³ The tests marked with (*) are not covered by the current NVLAP accreditation.

Comments: The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. However, No general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1:2002 because evidence was not publicly available, from an independent testing organization responsible for pattern approvals, to demonstrate that the model of sound level meter fully conforms to the requirements of IEC 61672-1:2002, and because the periodic tests of IEC 61672-3:2006 cover only a limited subset of the specifications in IEC 61672-1:2002.

Note: The instrument was tested for the parameters listed in the table above, using the test methods described in the listed standards. All tests were performed around the reference conditions. The test results were compared with the manufacturer's or with the standard's specifications, whichever are larger. Compliance with any standard cannot be claimed based solely on the periodic tests.

Tests made with the following attachments to the instrument:

Microphone:	PCB Piezotronics 375A02 s/n 010320 for acoustical test
Preamplifier:	Larson Davis PRMLXT2 s/n 016073 for all tests
Other:	line adaptor ADPO05 (18pF) for electrical tests
Accompanying acoustical calibrator:	Larson Davis Cal150 s/n 4432
Windscreens:	none

Measured Data: in Test Report # 29023-A of 16+1 pages.

Place of Calibration: Scantek, Inc.
6430 Dobbin Road, Suite C
Columbia, MD 21045 USA

Ph/Fax: 410-290-7726/ -9167
callab@scantekinc.com

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Scantek, Inc.

CALIBRATION LABORATORY

ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC and APLAC signatory)



NVLAP Lab Code: 200625-0

Calibration Certificate No. 29024-A¹

Instrument: Acoustical Calibrator
Model: Cal150
Manufacturer: Larson Davis
Serial number: 4432
Class (IEC 60942): 2
Barometer type:
Barometer s/n:

Date Calibrated: 6/13/2013 **Cal Due:**

Status:	Received	Sent
In tolerance:	X	X
Out of tolerance:		
See comments:		

Contains non-accredited tests: Yes No

Customer: Organismo de Evaluacion y
Fiscalizacion Ambiental

Address: Calle Manuel Gonzales Olaechea
247, San Isidro - Lima, Peru

Tel/Fax: -

Tested in accordance with the following procedures and standards:

Calibration of Acoustical Calibrators, Scantek Inc., Rev. 10/1/2010

Instrumentation used for calibration: Nor-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence	Cal. Due
				Cal. Lab / Accreditation	
483B-Norsonic	SME Cal Unit	31052	Sep 14, 2012	Scantek, Inc./ NVLAP	Sep 14, 2013
DS-360-SRS	Function Generator	33584	Sep 9, 2011	ACR Env. / A2LA	Sep 9, 2013
34401A-Agilent Technologies	Digital Voltmeter	US36120731	Sep 12, 2012	ACR Env. / A2LA	Sep 12, 2013
HM30-Thommen	Meteo Station	1040170/39633	Dec 6, 2012	ACR Env. / A2LA	Dec 6, 2013
8903-HP	Audio Analyzer	2514A05691	Dec 1, 2010	ACR Env. / A2LA	Dec 1, 2013
PC Program 1018 Norsonic	Calibration software	v.5.2	Validated March 2011	Scantek, Inc.	-
4134-Brüel&Kjær	Microphone	950698	Dec 14, 2012	Scantek, Inc. / NVLAP	Dec 14, 2013
1203-Norsonic	Preamplifier	14052	Nov 19, 2012	Scantek, Inc./ NVLAP	Nov 19, 2013

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK)

Calibrated by:	Preston Mackin	Authorized signatory:	Mariana Buzduga
Signature	<i>Preston Mackin</i>	Signature	<i>Mariana Buzduga</i>
Date	6/13/2013	Date	6/21/2013

¹ Replaces Certificate # 29024 which is now void. Customer name was changed.

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Results summary: Device was tested and complies with following clauses of mentioned specifications:

CLAUSES ¹ FROM STANDARDS REFERENCED IN PROCEDURES:	MET ²	NOT MET	COMMENTS
Manufacturer specifications			
Manufacturer specifications: Sound pressure level	X		
Manufacturer specifications: Frequency	X		
Manufacturer specifications: Total harmonic distortion	X		
Current standards			
ANSI S1.40:2006 B.3 / IEC 60942: 2003 B.2 - Preliminary inspection	X		
ANSI S1.40:2006 B.4.4 / IEC 60942: 2003 B.3.4 - Sound pressure level	X		
ANSI S1.40:2006 A.5.4 / IEC 60942: 2003 A.4.4 - Sound pressure level stability	-	-	
ANSI S1.40:2006 B.4.5 / IEC 60942: 2003 B.3.5 - Frequency	X		
ANSI S1.40:2006 B.4.6 / IEC 60942: 2003 B.3.6 - Total harmonic distortion	X		

¹ The results of this calibration apply only to the instrument type with serial number identified in this report.

² The tests marked with (*) are not covered by the current NVLAP accreditation.

Main measured parameters ³:

Measured ⁴ /Acceptable ⁵ Tone frequency (Hz):	Measured ⁴ /Acceptable ⁵ Total Harmonic Distortion (%):	Measured ⁴ /Acceptable Level ⁵ (dB):
1000.05 ± 1.0/1000.0 ± 20.0	0.5 ± 0.1/ < 4	93.96 ± 0.12/94.0 ± 0.75
1000.02 ± 1.0/1000.0 ± 20.0	0.4 ± 0.1/ < 4	113.96 ± 0.12/114.0 ± 0.75

³ The stated level is valid at reference conditions.

⁴ The above expanded uncertainties for frequency and distortion are calculated with a coverage factor k=2; for level k=2.00

⁵ Acceptable parameters values are from the current standards

Environmental conditions:

Temperature (°C)	Barometric pressure (kPa)	Relative Humidity (%)
24.1 ± 1.0	98.67 ± 0.000	56.2 ± 2.5

Tests made with following attachments to instrument:

Calibrator ½" Adaptor
Other:

Adjustments: Unit was not adjusted.

Comments: The instrument was tested and met all specifications found in the referenced procedures.

Note: The instrument was tested for the parameters listed in the table above, using the test methods described in the listed standards. All tests were performed around the reference conditions. The test results were compared with the manufacturer's or with the standard's specifications, whichever are larger.

Compliance with any standard cannot be claimed based solely on the periodic tests.

Measured Data: in Acoustical Calibrator Test Report # 29024-A of two pages.

Place of Calibration: Scantek, Inc.
6430 Dobbin Road, Suite C
Columbia, MD 21045 USA

Ph/Fax: 410-290-7726/ -9167
callab@scantekinc.com

Calibration Certificates or Test Reports shall not be reproduced, except in full, without written approval of the laboratory. This Calibration Certificate or Test Reports shall not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.

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