

RECALIBRATION **DUE DATE:**

January 11, 2020

ertificate d libration

Calibration Certification Information

Cal. Date: January 11, 2019

Rootsmeter S/N: 438320

Ta: 293

°K

Operator: Jim Tisch

Pa: 760.7

mm Hg

Calibration Model #:

TE-5025A

Calibrator S/N: 0005

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4090	3.2	2.00
2	3	4	1	0.9980	6.4	4.00
3	5	6	1	0.8900	7.8	5.00
4	7	8	1	0.8450	8.7	5.50
5	9	10	1	0.6990	12.6	8.00

	Data Tabulation					
Vstd	Qstd	$\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right) \left(\frac{Tstd}{Ta}\right)}$		Qa	$\sqrt{\Delta H(Ta/Pa)}$	
(m3)	(x-axis)	(y-axis)	Va	(x-axis)	(y-axis)	
1.0138	0.7195	1.4269	0.9958	0.7067	0.8777	
1.0095	1.0115	2.0180	0.9916	0.9936	1.2412	
1.0076	1.1321	2.2561	0.9897	1.1121	1.3877	
1.0064	1.1910	2.3663	0.9886	1.1699	1.4555	
1.0012	1.4323	2.8538	0.9834	1.4069	1.7553	
	m=	1.99861		m=	1.25149	
QSTD[b=	-0.00882	QA	b=	-0.00543	
	r=	0.99997		r=	0.99997	

Calculations				
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	Va=	ΔVol((Pa-ΔP)/Pa)	
Qstd= Vstd/ΔTime		Qa=	Va/ΔTime	
For subsequent flow rate calculations:				
Qstd=	$1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$	Qa=	$1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$	

Standard Conditions				
Tstd:	298.15 °K			
Pstd:	760 mm Hg			
	Key			
ΔH: calibrator manometer reading (in H2O)				
ΔP: rootsmeter manometer reading (mm Hg)				
Ta: actual absolute temperature (°K)				
Pa: actual barometric pressure (mm Hg)				
b: intercept				
m: slope				

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

sch Environmental, Inc.

5 South Miami Avenue

lage of Cleves, OH 45002

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TOLL FREE: (877)263-7610

FAX: (513)467-9009



Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location :		CMA3a				Calbratio	on Date	:	10-Dec-19
Equipment no.	ŀ	HVS012				Calbratio	on Due Date	:	9-Feb-20
CALIBRATION OF CON	TINUOUS	FLOW R	ECORDER						
				Ambient C	Condition				
Temperature, T _a		291		Kelvin	Pressure, P	a	1	019	mmHg
			Orifice Tr	ansfer Sta	ndard Inform	nation			
Equipment No.		0005		Slope, m _c	1.998	61	Intercept, bc		-0.00882
Last Calibration Date		11-Jan-1	9		(Hx	P _a / 101	3.3 x 298 /	T _a) 1	1/2
Next Calibration Date		11-Jan-2	:0		=	m _c x	$Q_{std} + b_c$		
				Calibratio	n of TSP				
Calibration	Man	ometer R	eading	C	std	Continu	ious Flow		IC
Point	H (i	inches of	water)	(m ³	/ min.)	Reco	rder, W	(W(P _a /1	013.3x298/T _a) ^{1/2} /35.31)
	(up)	(down)	(difference)	X-	axis	(C	FM)		Y-axis
1	1.6	1.6	3.2	0.9	9127		27		27.3996
2	2.4	2.4	4.8	1.	1168		34		34.5031
3	3.3	3.3	6.6	1.3	3089		38		38.5623
4	3.8	3.8	7.6	1.4	1042		43		43.6363
5	4.5	4.5	9.0	1.	5277		48		48.7103
By Linear Regression of	Y on X								
	Slope, m	=	33.50	341	Int	ercept, b =	-3	.4912	
Correlation Co	efficient*	=	0.99	13					
Calibration	Accepted	=	Yes/P	10 **					
* if Correlation Coefficien	it < 0.990,	check and	I recalibration	again.					
				_					
** Delete as appropriate.									
Remarks :									
Calibrated by	Lau	rance Yun	g			Checked	by	:	James Chu
Date :	10	0-Dec-19				Date		:	10-Dec-19



綜 合 試 驗 有 限 公 司 SOILS & MATERIALS ENGINEERING CO., LTD.

香港黃竹坑道37號利達中心12樓 12F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. E-mail: smec@cigismec.com Website: www.cigismec.com

Tel: (852) 2873 6860 Fax: (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:

19CA0314 01

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Item tested

Description:

Sound Level Meter (Type 1)

Microphone

Manufacturer. Type/Model No.: Larson Davis LxT1

PCB

377B02

Serial/Equipment No.: Adaptors used:

0003737

171529

Item submitted by

Customer Name:

Lam Geotechnics Ltd.

Address of Customer.

Request No.

Date of receipt:

14-Mar-2019

Date of test:

18-Mar-2019

Reference equipment used in the calibration

Description:

Serial No.

Expiry Date: 23-Aug-2019

Traceable to: CIGISMEC

Multi function sound calibrator Signal generator

Model: B&K 4226 DS 360

2288444 81227

26-Dec-2019

CEPREI

Ambient conditions

Temperature:

21 ± 1 °C 55 ± 10 %

Relative humidity: Air pressure:

1005 ± 5 hPa

Test specifications

1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580; Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.

2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of ±20%.

3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Feng Junqi

Approved Signatory:

19-Mar-2019

Company Chop:

The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

D Sols & Materials Engineering Co., Ltd.

Form No CARP152-Massie 1/Rev C/01/02/2007



綜合試驗有限公司 SOILS & MATERIALS ENGINEERING CO., LTD.

香 進 黃 竹 坑 垣 3 7 號 利 锺 中 心 1 2 樓 12/F., Leader Centre, 37 Wong Chuk Hang Road, Aberdeen, Hong Kong. E-mail: smec@cigismec.com Website: www.cigismec.com

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CERTIFICATE OF CALIBRATION

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Certificate No.:

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Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertanity (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	Pass	0.8	2.1
	Lin	Pass	1.6	2.2
Linearity range for Leq	At reference range , Step 5 dB at 4 kHz	Pass	0.3	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
Frequency weightings	A	Pass	0.3	
	C	Pass	0.3	
	Lin	Pass	0.3	
Time weightings	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	N/A	N/A	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/103 at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/104 at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertanity (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

Fong Chun Wai Date: 18-Mar-2019 Checked by:

Date:

Fung CN Y 19-Mar-2019

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

Form No CARP152-2/sine t/Rev C/01/02/2007

C. Sois & Materials Engineering Co., Ltd.

Calibrated by:

Hong Kong Accreditation Service (HKAS) has accredited this laboratory (Reg. No. HOKLAS 028) under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this certificate are traceable to the International System of Units (SI) or recognised measurement standards. This certificate shall not be reproduced except in full.



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Tel: (852) 2873 6860 Fax: (852) 2555 7533



CERTIFICATE OF CALIBRATION

Certificate No.:

19CA1024 01

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Item tested

Description:

Acoustical Calibrator (Class 1)

Manufacturer: Type/Model No.: Larson Davis CAL200

Serial/Equipment No.:

13098

Adaptors used:

Item submitted by

Curstomer:

Lam Geotechnics Limited.

Address of Customer:

Request No.:

Date of receipt:

24-Oct-2019

Date of test:

24-Oct-2019

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	03-May-2020	SCL
Preamplifier	B&K 2673	2239857	17-May-2020	CEPREI
Measuring amplifier	B&K 2610	2346941	05-Jun-2020	CEPREI
Signal generator	DS 360	33873	10-May-2020	CEPREI
Digital multi-meter	34401A	US36087050	08-May-2020	CEPREI
Audio analyzer	8903B	GB41300350	13-May-2020	CEPREI
Universal counter	53132A	MY40003662	10-May-2020	CEPREI

Ambient conditions

Temperature:

22 ± 1 °C

Relative humidity:

55 ± 10 %

Air pressure:

1000 ± 5 hPa

Test specifications

- The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference 3, pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

Details of the performed measurements are presented on page 2 of this certificate.

Feng. unai

Approved Signatory:

Date:

26-Oct-2019

Company Chop:

Comments: The results reported in this certificate refer to the conditon of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument.

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Form No CARP156-1/Issue 1/Rev D/01/03/2007



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CERTIFICATE OF CALIBRATION

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Certificate No.:

19CA1024 01

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1, Measured Sound Pressure Level

The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties.

			(Output level in dB re 20 μPa)
Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	Estimated Expanded Uncertainty dB
1000	94.00	93.98	0.10

Sound Pressure Level Stability - Short Term Fluctuations 2,

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be:

At 1000 Hz

STF = 0.013 dB

Estimated expanded uncertainty

0.005 dB

3, **Actual Output Frequency**

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was:

At 1000 Hz

Actual Frequency = 999.8 Hz

Estimated expanded uncertainty

0.1 Hz

Coverage factor k = 2.2

Total Noise and Distortion 4,

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was:

TND = 0.5%

Estimated expanded uncertainty

0.7 %

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

Calibrated by:

Date:

Fung Chi Yip 24-Oct-2019 Checked by:

Date:

Shek Kwong Tal 26-Oct-2019

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.

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Form No.CARP156-2/Issue 1/Rev.C/01/05/2005



ALS Technichem (HK) Pty Ltd

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

CONTACT: CHAN KA CHUN WORK ORDER: HK1945646

CLIENT: LAM ENVIRONMENTAL SERVICES LTD

ADDRESS: 11/F CENTRE POINT, SUB-BATCH: 0

181-185 GLOUCESTER ROAD,LABORATORY:HONG KONGWANCHAI, HONG KONGDATE RECEIVED:23-Oct-2019DATE OF ISSUE:01-Nov-2019

COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client. The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the ALS Hong Kong laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the ALS Hong Kong laboratory or quoted from relevant international standards.

Scope of Test: Dissolved Oxygen, pH Value, Salinity and Temperature

Equipment Type: Multifunctional Meter Brand Name/ Model No.: YSI Professional Plus

Serial No./ Equipment No.: 17F100236 Date of Calibration: 01-Nov-2019

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganic

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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK1945646

SUB-BATCH: 0

DATE OF ISSUE: 01-Nov-2019

CLIENT: LAM ENVIRONMENTAL SERVICES LTD

Equipment Type: Multifunctional Meter

Brand Name/ Model No.:

Equipment No.:

YSI Professional Plus

Serial No./

17F100236

Date of Calibration: 01-Nov-2019

Date of Next Calibration: 01-Feb-2020

PARAMETERS:

Dissolved Oxygen

Method Ref: APHA (21st edition), 4500-O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
7.76	7.87	+0.11
5.78	5.75	-0.03
3.84	3.69	-0.15
	Tolerance Limit (mg/L)	±0.20

pH Value Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.14	+0.14
7.0	6.94	-0.06
10.0	10.15	+0.15
	Tolerance Limit (pH unit)	±0.20

Salinity Method Ref: APHA (21st edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	
10	9.94	-0.6
20	19.53	-2.3
30	30.33	+1.1
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganic

REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

WORK ORDER: HK1945646

SUB-BATCH: C

DATE OF ISSUE: 01-Nov-2019

CLIENT: LAM ENVIRONMENTAL SERVICES LTD

Equipment Type: Multifunctional Meter

Brand Name/ Model No.:

YSI Professional Plus

Serial No./

17F100236

Equipment No.:

Date of Calibration: 01-Nov-2019

Date of Next Calibration:

01-Feb-2020

PARAMETERS:

Temperature Method Ref: Section 6 of International Accreditation New Zealand Technical

Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
9.0	9.7	+0.7
25.0	23.8	-1.2
38.0	36.6	-1.4
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

16:5

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganic



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

CONTACT: CHAN KA CHUN WORK ORDER: HK1941420

CLIENT: LAM ENVIRONMENTAL SERVICES LTD

ADDRESS: 11/F CENTRE POINT, SUB- BATCH: (

181-185 GLOUCESTER ROAD,
WANCHAI, HONG KONG

DATE RECEIVED: 25-Sep-2019

DATE OF ISSUE: 08-Oct-2019

COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client. The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the ALS Hong Kong laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the ALS Hong Kong laboratory or quoted from relevant international standards.

Scope of Test: Dissolved Oxygen, pH Value, Salinity and Temperature

Equipment Type: Multifunctional Meter Brand Name/ Model No.: YSI/ Professional Plus

Serial No./ Equipment No.: 14E100105 Date of Calibration: 08-Oct-2019

NOTES

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganic

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

WORK ORDER: HK1941420

SUB- BATCH: 0

DATE OF ISSUE: 08-Oct-2019

CLIENT: LAM ENVIRONMENTAL SERVICES LTD

Equipment Type: Brand Name/

Multifunctional Meter

Model No.:

YSI/ Professional Plus

Serial No./ Equipment No.:

14E100105

Date of Calibration:

08-Oct-2019

Date of Next Calibration: 08-Jan-2020

PARAMETERS:

Dissolved Oxygen Method Ref: APHA (21st edition), 4500- O: G

Expected Reading (mg/ L)	Displayed Reading (mg/ L)	Tolerance (mg/ L)
7.43	7.40	-0.03
5.23	5.09	-0.14
4.19	4.07	-0.12
	Tolerance Limit (mg/L)	±0.20

pH Value Method Ref: APHA (21st edition), 4500H:B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.01	+0.01
7.0	7.12	+0.12
10.0	10.12	+0.12
	Tolerance Limit (pH unit)	±0.20

Salinity Method Ref: APHA (21st edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	
10	10.12	+1.2
20	19.76	-1.2
30	28.76	-4.1
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris

Assistant Manager - Inorganic

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

WORK ORDER: HK1941420

SUB- BATCH: 0

DATE OF ISSUE: 08-Oct-2019

CLIENT: LAM ENVIRONMENTAL SERVICES LTD

Equipment Type: Multifunctional Meter Brand Name/

Model No.:

YSI/ Professional Plus

Serial No./ Equipment No.: 14E100105

Date of Calibration: 08-Oct-2019 Date of Next Calibration: 08-Jan-2020

PARAMETERS:

Temperature Method Ref: Section 6 of International Accreditation New Zealand Technical

Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
8.0	7.4	-0.6
25.5	25.1	-0.4
38.0	36.3	-1.7
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

16:5

Ms. Lin Wai Yu, Iris Assistant Manager - Inorganic



REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

CONTACT:	d by customer: MR. CHAN KA CHUN	IOD DEFENDANCE NO	
CLIENT:	LAM GEOTECHNICS LTD.	JOB REFERENCE NO.:	22787053-K30V6601
DATE RECEIVED:	30/10/2019		
DATE RECEIVED: DATE OF ISSUE:			
ADDRESS:	02/12/2019	CLOUGESTED DO LE	
ADDRESS:	11/F, CENTRE POINT, 181-185,	GLOUCESTER ROAD,	
PROJECT:	WANCHAI, HONG KONG		
ROJECT.			
METHOD OF PERF	ORMANCE CHECK/ CALIBRAT	ΓΙΟΝ:	
Ref: APHA22nd ed 21	30B		
COMMENTS			
t is certified that the it	tem under performance check/calibrat	ion has been calibrated/checked by	corresponding calibrated
quipment in the labor	atory.		
Лахітит Tolerance a	nd calibration frequency stated in the	report, unless otherwise stated, the	internal acceptance criteria
T Laboratories Ltd w	ill be followed.		memar deceptance enteria
cope of Test:		Turbidity	
quipment Type:			
rand Name:		Turbidimeter	
lodel No.:		Xin Rui	
erial No.:		WGZ-3B	
		1807069	
quipment No.: Date of Calibration:		157112010	
emarks:		15/11/2019	
or release.	t. Results apply to sample(s) as submi	aced. An pages of this report have t	een checked and approved

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER:

22787053-K30V6601

DATE OF ISSUE:

02/12/2019

CLIENT:

LAM GEOTECHNICS LTD.

Equipment Type:	Turbidimeter	
Brand Name:	Xin Rui	
Model No.:	WGZ-3B	
Serial No.:	1807069	
Equipment No.:		
Date of Calibration:	15/11/2019	
Date of next Calibation:	14/02/2020	
Lab ID:	H190343-01	

Parameters:

Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance
0	0.00	200
4	3.90	-2.5%
10	10.00	0.0%
40	36.41	-9.0%
100	100.70	0.7%
400	400.6	0.2%
1000	992.0	-0.8%
	Tolerance Limit (±)	10%

Remark: "Displayed Reading" presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.



Page 1 of 2

REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied	by customer:		
CONTACT:	MR. CHAN KA CHUN	JOB REFERENCE NO.: 22777053-K30V6	5701
CLIENT:	LAM ENVIRONMENTAL SERVICES LTD.		
DATE RECEIVED:	30/10/2019		
DATE OF ISSUE:	02/12/2019		
ADDRESS:	11/F, CENTRE POINT, 181-185, GLOUCESTER ROAD,		
	WANCHAI, HONG KONG		
PROJECT:			
METHOD OF PERF	ORMANCE CHECK/ CALIBRAT	ION:	
Ref: APHA22nd ed 21	30B		
COMMENTS			
t is certified that the it	em under performance check/calibrati	on has been calibrated/checked by corresponding calib	orated
equipment in the labora	atory.		
Maximum Tolerance a	nd calibration frequency stated in the	report, unless otherwise stated, the internal acceptance	criteria o
FT Laboratories Ltd wi			
Scope of Test:		Turbidity	
Equipment Type:		Turbidimeter	
Brand Name:		Xin Rui	
Model No.:	1	WGZ-3B	
Serial No.:		1807073	
Equipment No.:			
Date of Calibration:		15/11/2019	
Remarks:		13/11/2017	
for release.		tted. All pages of this report have been checked and ap	proved
Certified By:	Fragrance HO Senior Chemist	Issue Date: 02/12/201	9
This report may not be	reproduced except with prior written a	approval from FT Laboratories Ltd.	

Address: Lot No. DD77 Section 1552 S.A. ss 1RP. Ng Chow South Road, Ping Che, N.T., H. K., Tel: 27584861, Fax: 27588962

Form No.: HG022-002 Rev 0 20190101



REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER:

22777053-K30V6701

DATE OF ISSUE:

02/12/2019

CLIENT:

LAM ENVIRONMENTAL SERVICES LTD.

Equipment Type:	Turbidimeter	
Brand Name:	Xin Rui	
Model No.:	WGZ-3B	
Serial No.:	1807073	
Equipment No.:		
Date of Calibration:	15/11/2019	
Date of next Calibation:	14/02/2020	
Lab ID:	H190344-01	

Parameters:

Turbidity

Method Ref: APHA 22nd ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance
()	0.00	
4	3.87	-3.3%
10	9.98	-0.2%
40	36.80	-8.0%
100	99.89	-0.1%
400	399.9	0.0%
1000	999.9	0.0%
	Tolerance Limit (±)	10%

Remark: "Displayed Reading" presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.

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