



# Calibration Certificate

Certificate No. 311868

Page 1 of 3 Pages

**Customer :** Enovative Environmental Service Limited

**Address :** Room 23, 6/F, Block C, Goldfield Industrial Centre, 1 Siu Wo Road, Shatin, N.T.

**Order No. :** Q34412

**Date of receipt :** 14-Dec-23

## Item Tested

**Description :** Sound Level Meter

**Manufacturer :** RION

**Model :** NL-52

**I.D. :** --

**Serial No. :** 01143484

## Test Conditions

**Date of Test :** 9-Jan-24

**Ambient Temperature :**  $(23 \pm 3)^{\circ}\text{C}$

**Supply Voltage :** --

**Relative Humidity :**  $(50 \pm 25) \%$

## Test Specifications

Calibration check.

The UUT has an indication that it conforms to IEC 61672-1:2002 Class 1

Ref. Document/Procedure: Z01, IEC 61672-1:2013.

## Test Results

All results were within the IEC 61672 Class 1, manufacturer's specification or Tolerance.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S240	Sound Level Calibrator	303941	NIM-PRC & SCL-HKSAR
S017	Multi-Function Generator	C211339	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.  
The test results apply to the above Unit-Under-Test only

**Calibrated by :**

Elva Chong

**Approved by :**

Kin Wong

**Date:** 9-Jan-24

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F, Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646

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Results :

## Acoustical signal test

### 1. Indication at the Calibration Check Frequency ( 1kHz )

UUT Setting		Applied Value (dB)	UUT Reading (dB)
Weight.	Response		After Adjust.*
A	F	94.0	94.0
	S		94.0
C	F		94.0
Z			94.0

\*Adjustment using the customer's sound calibrator was performed immediately before test.

Tolerance :  $\pm 1.0$  dB

Uncertainty :  $\pm 0.1$  dB

### 2. Self-generated noise (Microphone Installed, most sensitive range) : 16.5 dBA (Mfr's Spec. $\leq 17$ dBA)

## Electrical signal tests

### 3. Frequency weightings ( A ,F )

Frequency	Attenuation (dB)	IEC 61672-1 Class 1 Spec.
31.5 Hz	-39.7	- 39.4 dB, $\pm 1.5$ dB
63 Hz	-26.2	- 26.2 dB, $\pm 1.0$ dB
125 Hz	-16.1	- 16.1 dB, $\pm 1.0$ dB
250 Hz	-8.6	- 8.6 dB, $\pm 1.0$ dB
500 Hz	-3.2	- 3.2 dB, $\pm 1.0$ dB
1 kHz	0.0 (Ref)	0 dB, $\pm 0.7$ dB
2 kHz	+1.0	+ 1.2 dB, $\pm 1.0$ dB
4 kHz	+0.7	+ 1.0 dB, $\pm 1.0$ dB
8 kHz	-1.2	- 1.1 dB, + 1.5 dB ~ -2.5 dB
16 kHz	-8.6	- 6.6 dB, + 2.5 dB ~ - 16.0 dB

Uncertainty :  $\pm 0.1$  dB



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## 4. Frequency & Time weightings

### 4.1 Frequency Weighting ( 1kHz )

UUT Setting		Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
Time Weight.	Freq. Weight.			
F	A	94.0	94.0 (Ref.)	--
	C		94.0	± 0.2 dB
	Z		94.0	

Uncertainty : ± 0.1 dB

### 4.2 Time Weighting ( 1kHz )

UUT Setting		Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
Time Weight.	Freq. Weight.			
F	A	94.0	94.0 (Ref.)	--
S			94.0	± 0.1 dB
eq			94.0	

Uncertainty : ± 0.1 dB

## 5. Level Linearity on the Reference Level Range ( 8 kHz, A, F )

Anticipated Value (dB)	UUT Reading (dB)	IEC 61672-1 Class 1 Spec.
124.0	123.9	± 0.8 dB
114.0	113.9	
104.0	104.0	
94.0	94.0 (Ref.)	
84.0	84.0	
74.0	74.0	
64.0	64.0	
54.0	54.0	
44.0	44.1	

Uncertainty : ± 0.1 dB

## 6. Level Linearity including the level range control ( 1 kHz, A, F )

N.A. ( UUT is single range )

Remarks : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure: 1 008 hPa.

4. Microphone model: UC-59, S/N: 07032.

5. Preamplifier model: NH-25, S/N: 43399.

----- END -----





# Calibration Certificate

Certificate No. 311870

Page 1 of 2 Pages

**Customer :** Enovative Environmental Service Limited

**Address :** Room 23, 6/F, Block C, Goldfield Industrial Centre, 1 Siu Wo Road, Shatin, N.T.

**Order No. :** Q34412

**Date of receipt :** 14-Dec-23

## Item Tested

**Description :** Sound Calibrator

**Manufacturer :** RION

**Model :** NC-74

**I.D. :** --

**Serial No. :** 34678506

## Test Conditions

**Date of Test :** 9-Jan-24

**Ambient Temperature :**  $(23 \pm 3)^{\circ}\text{C}$

**Supply Voltage :** --

**Relative Humidity :**  $(50 \pm 25) \%$

## Test Specifications

Calibration check.

The UUT has an indication that it conforms to IEC 60942:2003 Class 1.

Ref. Document/Procedure : F21, Z02, IEC 60942:2003.

## Test Results

All results were within the IEC 60942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S014	Spectrum Analyzer	303639	NIM-PRC & SCL-HKSAR
S240	Sound Level Calibrator	303941	NIM-PRC & SCL-HKSAR
S041	Universal Counter	300591	SCL-HKSAR
S206	Sound Level Meter	303634	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.  
The test results apply to the above Unit-Under-Test only

**Calibrated by :**

Elva Chong

**Approved by :**

Kin Wong

**Date:** 9-Jan-24

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646

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# Calibration Certificate

Certificate No. 311870

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Results :

## 1. Generated Sound Pressure Level

UUT Nominal Value (dB)	Measured Value (dB)	IEC 60942 Class 1 Spec.
94.0	93.9	$\pm 0.4$ dB

Uncertainty :  $\pm 0.2$  dB

## 2. Short-term Level Fluctuation : 0.0 dB

IEC 60942 Class 1 Spec. :  $\pm 0.1$  dB

Uncertainty :  $\pm 0.05$  dB

## 3. Frequency

UUT Nominal Value (kHz)	Measured Value (kHz)	IEC 60942 Class 1 Spec.
1	1.001	$\pm 1$ %

Uncertainty :  $\pm 3.6 \times 10^{-6}$

## 4. Total Distortion + Noise : $< 1.2$ %

IEC 60942 Class 1 Spec. :  $< 3.0$  %

Uncertainty :  $\pm 2.3$  % of reading

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1 008 hPa.

----- END -----

ENVIROTECH SERVICES CO.

**High-Volume TSP Sampler**  
**5-Point Calibration Record**

Location : AMS5(Ma Wan Chung Village)  
Calibrated by : P.F.Yeung  
Date : 23/05/2024

Sampler

Model : TE-5170  
Serial Number : S/N3640

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454  
Next Calibration Date : 15 December 2024  
Slope (m) : 2.07544  
Intercept (b) : -0.03205  
Correlation Coefficient(r) : 0.99999

Standard Condition

Pstd (hpa) : 1013  
Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1019  
Ta(K) : 300

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	18 holes	12.2	3.475	1.690	55	54.72
2	13 holes	9.0	2.984	1.453	50	49.74
3	10 holes	7.0	2.632	1.284	45	44.77
4	7 holes	4.6	2.134	1.043	37	36.81
5	5 holes	2.8	1.665	0.818	30	29.84

Notes:  $Z = \text{SQRT}\{dH(Pa/Pstd)(Tstd/Ta)\}$ ,  $X = Z/m - b$ ,  $Y(\text{Corrected Flow}) = IC * \{\text{SQRT}(Pa/Pstd)(Tstd/Ta)\}$

Sampler Calibration Relationship

Slope(m): 29.111      Intercept(b): 6.567      Correlation Coefficient(r): 0.9964

Checked by: Magnum Fan

Date: 24/05/2024

ENVIROTECH SERVICES CO.

**High-Volume TSP Sampler**  
**5-Point Calibration Record**

Location : AMS5(Ma Wan Chung Village)  
Calibrated by : P.F.Yeung  
Date : 22/08/2024

Sampler

Model : TE-5170  
Serial Number : S/N3640

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454  
Next Calibration Date : 15 December 2024  
Slope (m) : 2.07544  
Intercept (b) : -0.03205  
Correlation Coefficient(r) : 0.99999

Standard Condition

Pstd (hpa) : 1013  
Tstd (K) : 298.18

Calibration Condition

Pa (hpa) : 1010  
Ta(K) : 303

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC	Y
1	18 holes	11.4	3.344	1.627	54	53.48
2	13 holes	9.0	2.971	1.447	49	48.53
3	10 holes	6.8	2.583	1.260	43	42.59
4	7 holes	4.5	2.101	1.028	35	34.66
5	5 holes	2.8	1.657	0.814	28	27.73

Notes:  $Z = \sqrt{dH(Pa/Pstd)(Tstd/Ta)}$ ,  $X = Z/m - b$ ,  $Y(\text{Corrected Flow}) = IC * \{\sqrt{Pa/Pstd}(Tstd/Ta)\}$

Sampler Calibration Relationship

Slope(m): 32.023      Intercept(b): 1.849      Correlation Coefficient(r): 0.9994

Checked by: Magnum Fan

Date: 23/08/2024





# Certificate of Calibration

## Calibration Certification Information

Cal. Date: December 15, 2023      Rootsmeter S/N: 438320      Ta: 295 °K  
Operator: Jim Tisch      Pa: 748.5 mm Hg  
Calibration Model #: TE-5025A      Calibrator S/N: **2454**

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4250	3.2	2.00
2	3	4	1	1.0090	6.4	4.00
3	5	6	1	0.9040	7.9	5.00
4	7	8	1	0.8610	8.8	5.50
5	9	10	1	0.7110	12.8	8.00

## Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left( \frac{Ta}{Pa} \right)}$ (y-axis)
0.9907	0.6952	1.4106	0.9957	0.6988	0.8878
0.9864	0.9776	1.9949	0.9914	0.9826	1.2556
0.9844	1.0890	2.2304	0.9894	1.0945	1.4037
0.9832	1.1420	2.3393	0.9882	1.1478	1.4723
0.9779	1.3754	2.8213	0.9829	1.3824	1.7756
<b>QSTD</b>	m=	<b>2.07544</b>	<b>QA</b>	m=	<b>1.29961</b>
	b=	<b>-0.03205</b>		b=	<b>-0.02017</b>
	r=	<b>0.99999</b>		r=	<b>0.99999</b>

## Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
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= $1/m \left( \left( \sqrt{\Delta H \left( \frac{Ta}{Pa} \right)} \right) - b \right)$	

## Standard Conditions

Tstd:	298.15 °K
Pstd:	760 mm Hg
<b>Key</b>	
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





# Enovative Environmental Service Limited

## REPORT OF EQUIPMENT CALIBRATION

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### INSTRUMENT DESCRIPTION

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler and the filter paper is weighted by HOKLAS laboratory.

Instrument: Handheld TSP meter  
Brand Name: TSI  
Model No.: AM520  
Serial No.: 5201735004  
Date of Calibration: 20 October, 2023  
Date of Next Calibration : 20 October, 2024

### ISSUING ORGANISATION

#### **Address**

Enovative Environmental Service Limited  
Flat 23, 6/F, Block C, Goldfield Industrial Centre  
1 Sui Wo Road  
Shatin, N.T.  
Hong Kong

**Phone:** 852-2242 1020  
**Fax:** 852-3691 9240  
**Email:** [info@eno.com.hk](mailto:info@eno.com.hk)



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Mr Wong Siu Ho, Thomas  
Manager

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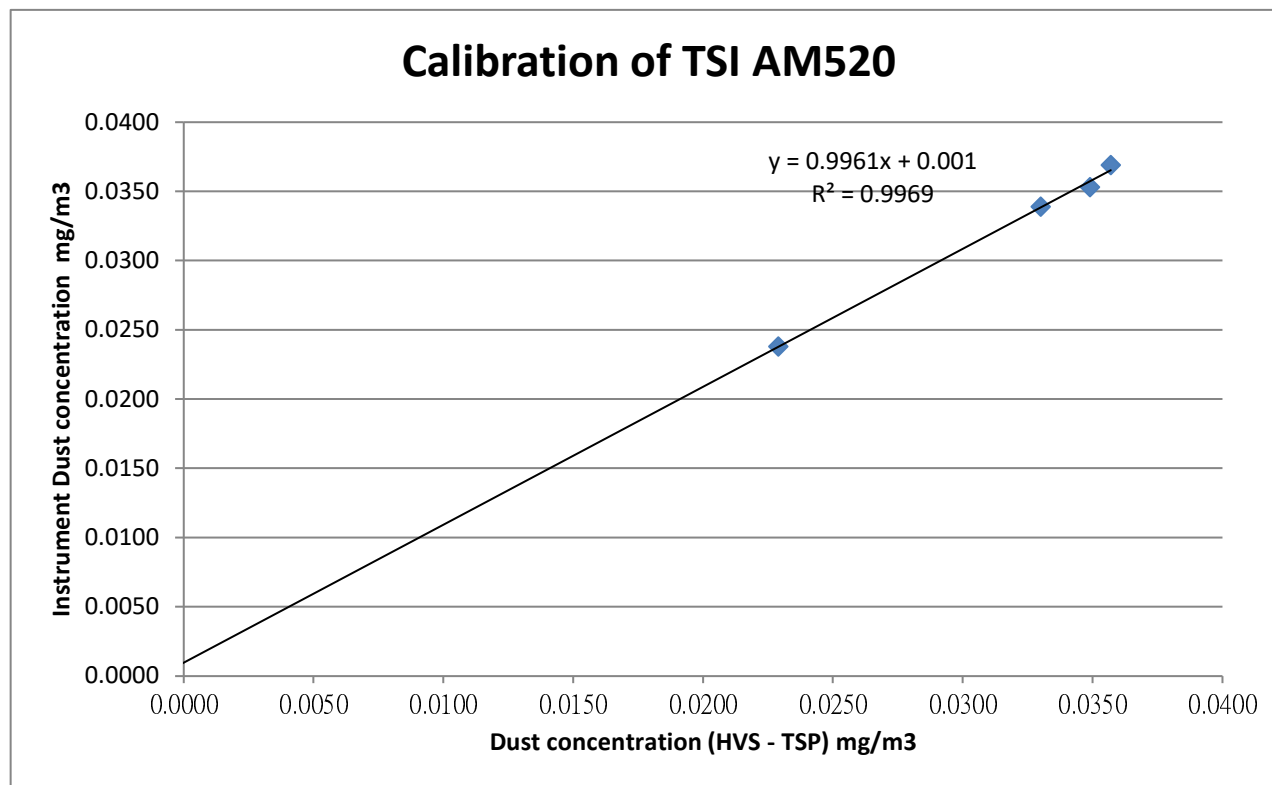
# Enovative Environmental Service Limited

Brand Name: TSI  
Model No.: AM520  
Serial No.: 5201735004  
HVS No.: A12-TSP-102  
Date of Calibration: 20 October, 2023  
Date of next Calibration: 20 October, 2024

## Calibration Record

HVS - TSP (mg/m3)	0.0229	0.0330	0.0357	0.0349
TSI AM520 (mg/m3)	0.0238	0.0339	0.0369	0.0353

K Factor :	0.9961
Correlation Coefficient :	0.9969



\*\*\* Filter paper being used in the calibration : 209591, 209592, 209593, 209594  
Those filter papers are weighted by HOKLAS laboratory (ALS Technichem (HK) Pty Ltd.)



*Thomas*

Mr Wong Siu Ho, Thomas  
Manager



# Enovative Environmental Service Limited

## REPORT OF EQUIPMENT CALIBRATION

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### INSTRUMENT DESCRIPTION

It is certified that the item under calibration has been calibrated by corresponding calibrated High Volume Sampler and the filter paper is weighted by HOKLAS laboratory.

Instrument: Handheld TSP meter  
Brand Name: TSI  
Model No.: AM520  
Serial No.: 5202345003  
Date of Calibration: 21 January, 2024  
Date of Next Calibration : 21 January, 2025

### ISSUING ORGANISATION

#### **Address**

Enovative Environmental Service Limited  
Flat 23, 6/F, Block C, Goldfield Industrial Centre  
1 Sui Wo Road  
Shatin, N.T.  
Hong Kong

**Phone:** 852-2242 1020  
**Fax:** 852-3691 9240  
**Email:** [info@eno.com.hk](mailto:info@eno.com.hk)



*Thomas*

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Mr Wong Siu Ho, Thomas  
Manager

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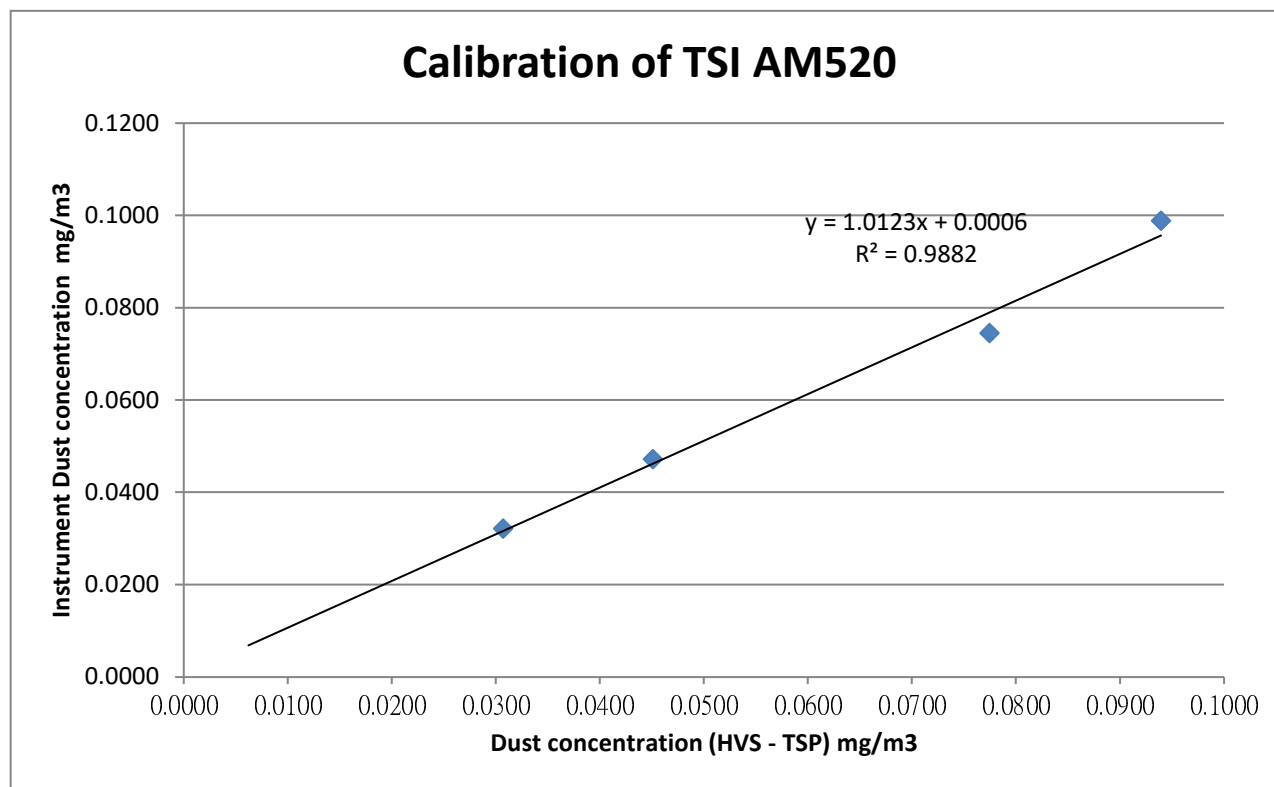
# Enovative Environmental Service Limited

Brand Name: TSI  
Model No.: AM520  
Serial No.: 5202345003  
HVS No.: A12-TSP-102  
Date of Calibration: 21 January, 2024  
Date of next Calibration: 21 January, 2025

## Calibration Record

HVS - TSP (mg/m3)	0.0940	0.0451	0.0775	0.0307
TSI AM520 (mg/m3)	0.0988	0.0472	0.0745	0.0321

K Factor :	1.0123
Correlation Coefficient :	0.9882



\*\*\* Filter paper being used in the calibration : 209603, 209604, 209605, 209606  
Those filter papers are weighted by HOKLAS laboratory (ALS Technichem (HK) Pty Ltd.)



*Thomas*

Mr Wong Siu Ho, Thomas  
Manager



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Kwai Chung, N.T., Hong Kong  
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F: +852 2610 2021  
www.alsglobal.com

## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**CONTACT:** W S CHAN  
**CLIENT:** AECOM ASIA COMPANY LIMITED  
**ADDRESS:** 1501-10, 15/F, TOWER 1,  
GRAND CENTRAL PLAZA,  
138 SHATIN RURAL COMMITTEE ROAD,  
SHATIN, NEW TERRITORIES, HONG KONG

**WORK ORDER:** HK2428528  
**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 16-Jul-2024  
**DATE OF ISSUE:** 22-Jul-2024

### GENERAL COMMENTS

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 laboratory or quoted from relevant international standards.

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

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

This report superseded any previous report(s) with same work order number.

### EQUIPMENT INFORMATION

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.

Equipment Type: Multifunctional Meter

Service Nature: Performance Check

Scope: Conductivity, Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature

Brand Name/ Model No.: [YSI]/ [6820 V2]

Serial No./ Equipment No.: [00H1019]/ [W.026.09]

Date of Calibration: 16-July-2024

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2428528  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 22-Jul-2024  
**CLIENT:** AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [6820 V2]  
Serial No./ Equipment No.: [00H1019]/ [W.026.09]  
Date of Calibration: 16-July-2024

Date of Next Calibration: 16-October-2024

## PARAMETERS:

### Conductivity

Method Ref: APHA (23rd edition), 2510B

Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)
146.9	151	+2.8
6667	7073	+6.1
12890	13057	+1.3
58670	60981	+3.9
	Tolerance Limit (%)	$\pm 10.0$

### Dissolved Oxygen

Method Ref: APHA (23rd edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.57	2.45	-0.12
4.81	4.83	+0.02
7.61	7.54	-0.07
	Tolerance Limit (mg/L)	$\pm 0.20$

### pH Value

Method Ref: APHA (23rd edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.04	+0.04
7.0	6.94	-0.06
10.0	9.95	-0.05
	Tolerance Limit (pH unit)	$\pm 0.20$

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 - Inorganics



# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2428528  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 22-Jul-2024  
**CLIENT:** AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [6820 V2]  
Serial No.: [00H1019]/ [W.026.09]  
Equipment No.:  
Date of Calibration: 16-July-2024

Date of Next Calibration: 16-October-2024

## PARAMETERS:

### Turbidity

Method Ref: APHA (23rd edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.0	--
4	4.2	+5.0
10	9.7	-3.0
20	18.9	-5.5
50	51.0	+2.0
100	100.8	+0.8
	Tolerance Limit (%)	±10.0

### Salinity

Method Ref: APHA (23rd edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.01	--
10	10.20	+2.0
20	20.09	+0.4
30	30.78	+2.6
	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 - Inorganics

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2428528  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 22-Jul-2024  
**CLIENT:** AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter  
Brand Name/  
Model No.: [YSI]/ [6820 V2]  
Serial No./  
Equipment No.: [00H1019]/ [W.026.09]  
Date of Calibration: 16-July-2024

Date of Next Calibration: 16-October-2024

## 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)
10.0	10.33	+0.3
19.5	19.47	-0.0
37.5	37.18	-0.3
	Tolerance Limit (°C)	±2.0

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 - Inorganics



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**CONTACT:** WS CHAN  
**CLIENT:** AECOM ASIA COMPANY LIMITED  
**ADDRESS:** 1501-10, 15/F, TOWER 1,  
GRAND CENTRAL PLAZA,  
138 SHATIN RURAL COMMITTEE ROAD,  
SHATIN, NEW TERRITORIES, HONG KONG

**WORK ORDER:** HK2421924  
**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 04-Jun-2024  
**DATE OF ISSUE:** 12-Jun-2024

### GENERAL COMMENTS

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 laboratory or quoted from relevant international standards.

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

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

This report superseded any previous report(s) with same work order number.

### EQUIPMENT INFORMATION

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.

Equipment Type: Multifunctional Meter

Service Nature: Performance Check

Scope: Conductivity, Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature

Brand Name/ Model No.: [YSI]/ [ProDSS]

Serial No./ Equipment No.: [22J104777/22H104506]/ [W.026.37]

Date of Calibration: 04-June-2024

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics



# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2421924  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 12-Jun-2024  
**CLIENT:** AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [ProDSS]  
Serial No./ Equipment No.: [22J104777/22H104506]/ [W.026.37]  
Date of Calibration: 04-June-2024 Date of Next Calibration: 04-September-2024

## PARAMETERS:

### Conductivity

Method Ref: APHA (23rd edition), 2510B

Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)
146.9	144.6	-1.6
6667	6295	-5.6
12890	12187	-5.5
58670	53558	-8.7
	Tolerance Limit (%)	$\pm 10.0$

### Dissolved Oxygen

Method Ref: APHA (23rd edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.11	2.14	+0.03
4.54	4.58	+0.04
6.75	6.72	-0.03
	Tolerance Limit (mg/L)	$\pm 0.20$

### pH Value

Method Ref: APHA (23rd edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	4.00	+0.00
7.0	7.07	+0.07
10.0	9.88	-0.12
	Tolerance Limit (pH unit)	$\pm 0.20$

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 - Inorganics

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2421924  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 12-Jun-2024  
**CLIENT:** AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [ProDSS]  
Serial No./ Equipment No.: [22J104777/22H104506]/ [W.026.37]  
Date of Calibration: 04-June-2024 Date of Next Calibration: 04-September-2024

**PARAMETERS:**

**Turbidity**

Method Ref: APHA (23rd edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.00	--
4	3.99	-0.2
10	9.98	-0.2
20	19.03	-4.8
50	47.38	-5.2
100	97.16	-2.8
Tolerance Limit (%)		±10.0

**Salinity**

Method Ref: APHA (23rd edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.01	--
10	9.96	-0.4
20	19.07	-4.7
30	29.02	-3.3
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 - Inorganics

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2421924  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 12-Jun-2024  
**CLIENT:** AECOM ASIA COMPANY LIMITED

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [ProDSS]  
Serial No./ Equipment No.: [22J104777/22H104506]/ [W.026.37]  
Date of Calibration: 04-June-2024 Date of Next Calibration: 04-September-2024

**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)
10.5	10.3	-0.2
21.0	21.6	+0.6
37.5	37.0	-0.5
	Tolerance Limit (°C)	±2.0

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 - Inorganics