Trescal
| CALIBRATION SOLUTIONS TO IMPROVE YOUR PERFORMANCE |

ilac-MRA STANDARDS MALAYSIA ACCREDITED
SAMM 011

Certificate of Calibration

Cert. No. PSYP- 23048519

Reference No	R123107713
Date of Issue	11 Jul 2023
Customer	PRO LAB ENGINEERING SERVICES SDN BHD No.21-g Jalan Bidara 8 saujana utama 3 47000 Sungai Buloh Selangor
ID: 039228	
Instrument	Water Bath
Model	NL 2008/ 002
Serial No	0222040072
Control No	CA6301J
Equipment ID	N/A
Capacity/Range	Max. 100 °C
Date of Receipt	05 Jul 2023
Date of Calibration	10 Jul 2023
Recalibration Date (Specified by Customer)	Customer to Determine The User should be aware there are many factors may cause this instrument to drift out of calibration limits prior to the stated recalibration date.
Condition of Instrument	
Before Calibration	Good Physical Condition
After Calibration	Calibrated as Requested by Customer
Location of Calibration	In-situ
Calibration Environment	(30 ± 1) °C, (50 ± 2) %rh
Calibration Method	LCP 01102

Reference Standard Used

Reference Instrument	Equipment ID	Control No	Certificate No	Traceable to	Due Date
Temperature Recorder With Sensor	PH-ST-RW18	C0002PS	PSYP-22051004	NMIM,NMIA	18 Aug 2023

Calibrated By

Muhammad Iqbal Bin Mohammad Fuad

Approved Signatory

Tamilselvam A/L Chinayah

The reported expanded measurement uncertainty is stated as the standard measurement uncertainty multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95%

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Certificate of Calibration

Control No. CA6301J

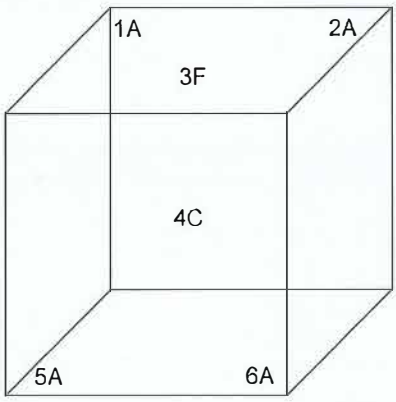
Cert. No. PSYP-23048519

Instrument Calibrated

Set	Resolution	0.1	°C
	Readability	0.1	
Calibration Area : 10% away from internal walls			

ACCURACY TEST			
Set Temperature	**37.8**	**60.0**	
Indicated Enclosure Temperature	37.8	60.0	
Measured Enclosure Temperature	38.5	60.3	
Spatial Variation	0.8	0.5	
Temporal Variation	0.4	0.2	
Overall Variation	1.0	0.7	
Tolerance ±	0.5	0.4	

MAPPING				Measured Value		
Enclosure Position Code	Enclosure Position	1	Back	38.2	60.1	
		2		38.1	60.1	
* C * Center		3	Center	38.6	60.4	
		4		38.6	60.5	
* A * Corner		5	Front	38.9	60.5	
		6		38.4	60.0	
* F * Center of Face	**Measurement Uncertainty ± 0.6 °C**				***k* = 2**	



Info 1 : Set Temperature ~ Temperature Controller Setting.

Info 2 : Indicated Enclosure Temperature ~ Temperature Indicator of Enclosure.

Info 3 : Measured Enclosure Temperature ~ Mid-range value of the temperature obtained from all relevant sites within the enclosure.

Info 4 : Spatial Variation ~ Difference between the mid-range of all measured temperature obtained at one site and at another site for those sites which give the greatest difference.

Info 5 : Temporal Variation ~ Maximum value of the temperature range obtained for each standard site throughout the test interval.

Info 6 : Overall Variation ~ The maximum variation of measure temperature in the working space.

ACCEPTABLE TO USE

Izatul Azira
Lab Manager
Pro Lab Engineering Services Sdn Bhd

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