AMARC | ASIA MEDICAL AND AGRICULTURAL LABORATORY AND RESEARCH CENTER

NSC-TISI-TIS17025
CALIBRATION 0152

Certificate No. : 23-091314

Sample Code : 23-33641-003

CERTIFICATE OF CALIBRATION

Customer : National Healthcare Systems Co., Ltd.
Biomedical Engineering
2301/2 New Petchburi Road, Soi 47, Bangkapi, Huaykwang, Bangkok 10310

Location of Calibration : Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (Calibration Laboratory)

Equipment : ELECTRONIC BALANCE

Manufacturer : VIBRA

Model : AJ-620E

Serial No. : 211004088

ID No. : WINJ002

Date of Receipt : 09 August 2023

Date of Calibration : 11 August 2023

Calibrated by : Mr. Somwang Sangdee
Scientist

Approved by : (Mr. Somchai Neampunt)
Signed for Director

Issue date : 15 August 2023

The uncertainties are for a confidence probability of approximately 95%.

The calibration result is applied only to the above calibrated item and was found accurate as shown on date and place of calibration only.

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REPORT OF CALIBRATION

Equipment :	ELECTRONIC BALANCE
Manufacturer :	VIBRA
Model :	AJ-620E
Capacity :	Max 620 g
Resolution :	0.001 g
Serial No. :	211004088
ID No. :	WINJ002

Result of Calibration

1.Test weight and repeatability of reading

Repeatability is a measure of the ability of a balance to supply the same result in repetitive weighings with one and the same load under the same measurement condition. The measurement of the repeatability must include both the balance specifications and the ambient (vibration, fluctuating air current/temperature/humidity,etc.) Operator handling of the balance is also included in the standard deviation.

Unit : g

Range : 620

☐ No adjustment

☑ Adjustment

	☑ Before adjustment		☑ After adjustment	
Nominal value	300	600	300	600
Standard weight	300.000110	600.000249	300.000110	600.000249
Average reading of indicator	300.003	600.000	300.002	600.000
Standard deviation	0.0005	0.0004	0.0005	0.0004

Unit : -

Range : -

☐ No adjustment

☐ Adjustment

	☐ Before adjustment		☐ After adjustment	
Nominal value	-	-	-	-
Standard weight	-	-	-	-
Average reading of indicator	-	-	-	-
Standard deviation	-	-	-	-

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REPORT OF CALIBRATION

Result of Calibration

2. Sensitivity or value of a scale division

Change in the output variable of a measuring instrument divided by the associated change in the input variable.

Unit : g

Range : 620

Test Point	Sensitivity, S
0	0.000
300	1.000
600	1.000

Range : -

Test Point	Sensitivity, S
-	-
-	-
-	-

3. Departure of indication from nominal value, Linearity

Unit : g

Nominal Value	Standard Value	Average Reading of Indicator	Correction Value	Expanded Uncertainty	Coverage Factor (k)
Unload	0.000000	0.000	0.000	0.00094	2.01
60	60.000059	60.000	0.000	0.00095	2.01
120	120.000097	120.002	-0.002	0.00095	2.01
180	180.000156	180.003	-0.003	0.00097	2.01
240	240.000154	240.003	-0.003	0.0010	2.01
300	300.000110	300.002	-0.002	0.0011	2.01
360	360.000169	360.001	-0.001	0.0011	2.00
420	420.000172	420.000	0.000	0.0011	2.00
480	480.000231	480.000	0.000	0.0012	2.00
540	540.000293	540.000	0.000	0.0013	2.00
600	600.000249	600.000	0.000	0.0013	2.00

The result expanded uncertainty of measurement U is stated as the standard uncertainty of measurement multiplied by the coverage factor k, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with UKAS M3003.

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Result of Calibration :

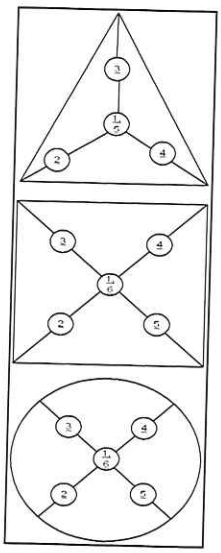
4. Eccentric or off-centre loading

Deviation of the measurement value through off - center (eccentric) loading. The corner load increases with the weight of the load and its removal from the center of the pan support.

Weighing pan: (●) Circle ( ) Triangular ( ) Rectangular

Test weight : 200 Unit : g

Range	620	-
Position	Reading of indicator	Reading of indicator
1	200.002	-
2	200.006	-
3	200.003	-
4	199.998	-
5	200.002	-
6	200.002	-
Maximum difference	0.004	-



Condition of Calibration

1. Calibration Method : WI-CL-004 base on UKAS LAB 14: 2019
2. This result of calibration was found accurate as shown on date and place of calibration only.
3. Condition of Calibration item: Normal
4. This certification is traceable to the International System of Unit maintained at : -

- Through the reference standard laboratory of Asia Medical and Agricultural Laboratory and Research Center Public Company Limited (Instrument number 1).

5. Reference standard instrument :

Instrument	Class	ID No.	Certificate No.	Due Date
1) STANDARD WEIGHT 1 mg to 1 kg	E2	LB-WE-78	22-089927	16 September 2023

6.

Ambient conditions	Min	Max
Temperature (°C)	19.8	19.9
Relative Humidity (%Rh)	44.0	48.2
Air pressure (hPa)	1007.1	1007.7

- End of Report -