
ใบรับรองการสอบเทียบ “เครื่องชั่ง”

(Calibration Certificate of Electronic Balance)



Metrological Center

SCI ECO Services Company Limited

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Certificate No. M201073

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Certificate of Calibration

Equipment : Electronic Balance

Manufacturer : Sartorius

Model : BP 210S

Serial No. : S0736477

Customer Code : EQL-008

ID. No. : M3884A0

Customer : Test Tech Co.,Ltd

30, 32 Rama II Soi 63, Rama II Rd.,

Samaedam, Bangkhunthian Bangkok 10150

Customer Location : Balance Room (302)

Date of Receipt : 23 September 2020

Date of Calibration : 28 September 2020

Environment : Temperature (25 ± 5) °C

Relative Humidity (55 ± 10) %

Calibrated By : Atiphong Rongrat (Technician)

Approved By : M. Sae / Sane Musikawan (Assistant Calibration Manager)

Date of Issue : 09 OCT 2020

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

This Certificate is issued in accordance with the conditions of accreditation granted by the Thai Laboratory Accreditation Scheme which has assessed the measurement capability of the laboratory and its traceability to recognized national standards and to the units of measurement realized at the corresponding national standard laboratory. This certificate may not be reproduced other than in full except with the prior written approval of the Metrological Center.

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Calibration Report

Condition of this result of test :

1. Method of Calibration :

The calibration was calibrated by comparison with standard weights according to in-house method: WI-M10 (based on LAB 14 EDITION 5 : July 2015).

2. Reference Standard Instrument :

Standard weight set Mettler Switzerland , the error of this standard weight set is within the limits of accuracy of OIML class E2.

<u>Instrument</u>	<u>Model</u>	<u>Serial No.</u>	<u>Certificate No.</u>	<u>Due Date</u>
1) Standard weight set Mettler	1 g to 500 g E2	15882/M03	M190754	22-Aug-2021

3. This certification is traceable to :

- National Institute of Metrology Thailand (NIMT), through Metrological Center, SCI ECO Services Company Limited (NSC-TISI-TIS 17025 CALIBRATION 0244) (for weight 1 g to 500 g)

4. Description of Calibrated item : Balance capacity 210 g Resolution 0.0001 g

Condition of Calibrated item : Good

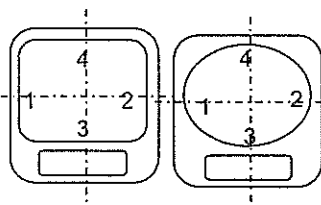
5. Results of test : (X) without adjustment

() adjust by _____ before - g
after - g

Repeatability

Nominal Value g	Standard Deviation of Reading g
200	0.00000

Eccentric Loading



A standard weight was placed on a pan and moved to various position. The balance reading are given in the table.

Nominal Weight: 50 g				
Off-Centre Error (g)				
1.(Left)	2.(Right)	3.(Front)	4.(Back)	Max Difference
0.0001	0.0000	0.0001	0.0001	0.0001

Approved By : M. Sorn

Calibration Report

Departure from Nominal Value

Standard Value g	Average Displayed g	Correction g	Uncertainty $\pm (g)$	Coverage Factor k
0.00000	0.0000	0.0000	0.000082	2.00
0.99998	1.0000	0.0000	0.000083	2.00
1.99999	1.9999	0.0001	0.000084	2.00
20.00000	19.9999	0.0001	0.000095	2.00
44.99997	44.9999	0.0001	0.00014	2.00
64.99985	64.9997	0.0001	0.00015	2.00
79.99987	79.9996	0.0003	0.00017	2.00
99.99977	99.9995	0.0003	0.00016	2.00
119.99977	119.9994	0.0004	0.00020	2.00
139.99976	139.9992	0.0006	0.00024	2.00
159.99964	159.9991	0.0005	0.00026	2.00
179.99964	179.9991	0.0005	0.00030	2.00
199.99951	199.9991	0.0004	0.00029	2.00

The calibration results apply only the above calibrated item.

The results of test were found accurate as shown on date and place of test only.

The reported expand uncertainty is based on a standard uncertainty multiplied by a coverage factor k , providing level of confidence of approximately 95%.

Approved By : M. Sora