



ACCURATE TESTING & CALIBRATION SERVICES

(Solutions For All)

P. No. 111, K. No. 604, First Floor, Shyam Vihar, Part-II, Z-Block, Najafgarh, New Delhi-110043
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CC-3378

F. No. ATCS/QPM-32F REV.(01)36-02-2022

CALIBRATION CERTIFICATE

Page 1 of 1

ULR No. : CC337623000000161F	Certificate No. : ATCS23000000161
CUSTOMER NAME & ADDRESS:- M/s. H.S. Pathology Pvt. Ltd. 1st Floor, Above Sri Guru Ram Dass Preparatory School Building, Sector- 19, Chandigarh - 160019	Service Request No.&Date : 0074 & 17-02-2023 Date of Receipt : 17-02-2023 Date of Calibration : 20-02-2023 Sug. Cal. Due Date : 20-08-2023 Issue Date : 20-02-2023

ITEM'S DESCRIPTION & IDENTIFICATION

Instrument Name : Micropipette	Range / Size : 2 to 20 µl
Make : Pfact	Least Count : 1 µl
Model No. : -----	Visual Inspection : Ok
Serial No. : 373335	Location : -----
Assets ID : -----	

ENVIRONMENTAL CONDITIONS	Calibration Procedure : ATCS/CP/M-24
Temperature : (22 ± 2)°C	Reference Standard : ISO: 8655-6
Relative Humidity : (50 ± 15)%	Calibration Performed at : Lab

STANDARD EQUIPMENT USED			
Standard Instrument Name	Serial/Ident. No.	ULR/ Certificate No.	Valid upto
E2 Class Weight (1 mg to 200 g)	ATCS/STD/E2/SW-01	WMCL/E/2021-09/ 1452	01-09-2023
Digital Weighing Balance (Up to 220 g)	ATCS/M/DWB-01	AMC/00002066	13-09-2023

CALIBRATION RESULT				
Nominal Value (UUC)	AVG. Standard Value (Master)	(±) Error	(±)Uncertainty	
(µl)	(µl)	(µl)	(µl)	
5	5.03	-0.03		
10	10.06	-0.06	1.36	
20	20.05	-0.05		

- NOTE :**
1. DUC = Device Under Calibration, UUC=Unit Under Calibration
 2. Expanded uncertainty of measurement at approx 95% confidence level for coverage factor (k) = 2
 3. Suggested next due date of calibration is given as requested by customer.
 4. DUC has been calibrated against lab standards are traceable to national & international standards.
 5. This result of calibration refer to only to the particular item submitted for calibration.
 6. Certificate issued is only scientific or industrial purposes only.
 7. The result produced in this certificate are valid under the stated conditions at the time of calibration.
 8. No report should be reproduced, except in full, unless a written permission for the publication of an approved abstract has been obtained from the CEO, Accurate Testing & Calibration Services, New Delhi.

Deepak Deepak Kumar (Calibrated By)	 *End Of Report*		Issued & Authorised By Harshik Harshikesh Kumar (TM / QH)
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Kuldeep
21/2/2023
Assistant manager
Chandigarh Lab



Acumen Measurements & Consultancy Pvt. Ltd.

(Calibration Division)

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CC-2364

CALIBRATION CERTIFICATE

Format No.: 7.8F-01

Page 1 of 1

ULR No. : CC236422000002066F	Certificate No. : AMC/00002066
CUSTOMER NAME & ADDRESS:- M/s. Accurate Testing & Calibration Services P.No. 111, K. No. 604, First Floor, Shyam Vihar, Part - II, Z - Block, Najafgarh, New Delhi - 110043	Service Request No.&Date : 220370 & 14-09-22 Date of Calibration : 14-09-2022 Sug. Cal. Due Date : 13-09-2023 Issue Date : 20-09-2022

ITEM'S DESCRIPTION & IDENTIFICATION

Instrument Name : DIGITAL WEIGHING BALANCE	Range/Size : 0 to 62g / 62 to 220g
Make : Scale -Tech	Least Count : 0.01 mg / 0.1 mg
Model No. : SAB-265DR	Visual Inspection : OK
Serial No. : 202012211	Location : —
Party ID Mark : ATCS/M/DWB-01	

ENVIRONMENTAL CONDITIONS	Calibration Procedure : MCP-20
Temperature : (20 ± 10)°C	Reference Standard : OIML R 76-1
Relative Humidity : (50 ± 10)%	Calibration Performed at : At Site

MAJOR EQUIPMENT USED			
Nomenclature	Ident. No.	Traceability Certificate No.	Valid upto
Weight (S) / Set (S)	SCW-001/0.2K-E2-ASS	15C/20-21/11038-1	02-02-23

CALIBRATION RESULT					
1. Repeatability Test : a. Half Load on Pan at 30 g & repeatability and the maximum deviation was 0.00001 g b. Full Load on Pan at 60 g & repeatability and the maximum deviation was 0.00001 g c. Half Load on Pan at 100 g & repeatability and the maximum deviation was 0.0001 g d. Full Load on Pan at 200 g & repeatability and the maximum deviation was 0.0001 g					
2. Linearity Test :					
STD Values (g)	Observed Values (g)	Error (g)	STD Values (g)	Observed Values (g)	Error (g)
0.001002	0.00100	0.00000	5.000014	5.00002	0.00001
0.005003	0.00500	0.00000	10.000012	9.99999	-0.00002
0.010004	0.01000	0.00000	50.000010	49.99996	-0.00005
0.100007	0.10002	0.00001	100.000010	99.99998	-0.00003
1.000010	1.00002	0.00001	199.999980	199.99997	-0.00001
3. Eccentricity Test : a. load tested at 20 g & error due to Eccentric Loading is 0.00001 g b. load tested at 100 g & error due to Eccentric Loading is 0.0001 g					

REMARKS :

- DUC = Device Under Calibration, UUC=Unit Under Calibration i.e.
- Expanded uncertainty of measurement at approx 95% confidence level for coverage factor(k)=2 is ± upto 60g/0.02 mg & then upto 220 g / 0.12 mg
- This result of Calibration refer to only to the particular item submitted for calibration
- Certificate issued is only Scientific or Industrial Purpose Only
- Suggested next due date of calibration is given as requested by customer.
- DUC has been calibrated against lab standards are traceable to national & international standards.
- The result reported in this certificate are valid at the time of and under the stated conditions of Measurement.
- This certificate shall not be reproduced, except in full, unless a written permission for the publication of an approved abstract has been obtained from the CEO, Acumen Measurements & Consultancy Pvt. Ltd., New Delhi.

Issued & Authorised By

Sachin Kumar (Calibrated By)

U C Sutar (TM/ GM)



Handwritten signature



CC-2743

Format No.: 7.8-QF-02

D-46, Sector-4, Okhla, Gurgaon, Delhi-110 029, INDIA
 Phone : +91-11-4708 2863, 2779 2863
 Email : info@weightronics.net, Web : www.weightronics.net

Calibration Certificate

Issue Dated: 03-09-2021

Recommended Date for the Next Calibration Mentioned As Per Request of the Customer	Page	No. of Pages
Date: 01-09-2023	-1-	-2-

Certificate No.: WMCL/E/2021-09/1452
 ULR - CC274321000001452F

Date of Calibration: 02-09-2021

Calibrated for

ACCURATE TESTING & CALIBRATION SERVICES

P. No.: 111, K. No.: 604, First Floor,
 Shyam Vihar, Part - II, Z - Block,
 Najafgarh, New Delhi - 110 043, INDIA

Customer Reference

P.O. No.: ATCS/PO/011/21-22, Dated: 16/08/2021

Service Request No

7.8-QF-01-1452

Date of Receipt

31/08/2021

Condition of Receipt

Satisfactorily

Calibrated at

Laboratory

Description of Instrument

Make - "WEIGHTRONICS"

200 g to 1 g

Stainless Steel Knob Type Laboratory Weights

0.5 g to 0.001 g

Stainless Steel Wire Type Laboratory Weights

Manufacturer Serial No

WT/AS-II/2021/1452

Customer Identification No

ATCS/STD/E2/SW-01

Assumed Density (d)

(7.950 ± 140) kg/m³; (k=2) for Stainless Steel

Environmental Conditions

Temperature : (23.0 ± 2.0)^oC

Relative Humidity : (50.0 ± 10.0) %

[Change in Temperature and Relative Humidity during the calibration were less than ± 0.7^oC per hour and ± 10.0 % per 4 hours respectively]

Standard (s) used

WMCL working standard of mass with uncertainty Better than one-third of the reported uncertainty of measurement

Traceability Standard (s)

The Standard used for Calibration are Traceable from "NPL" New Delhi, INDIA vide Calibration Certificate No.: 19100740/D1.01/C-114, Dated: 03/12/2019 valid up to Dated: 03/12/2022

Balance used for Calibration

Precision Balances of Appropriate Accuracy Traceable to Mass Standards

Methodology of Calibration Adopted

The Method of comparison with standard (s) using Substitution Weighing Method and (ABBA or ABA) Weighing Cycle, The Reported Mass Values(s) is (are) the conventional mass value(s) (M_c) related to the true mass value(s) (M_r) by formula: M_c=M_r [1-1.2(1/d-1/8000)]. (Where, 'd' is in kg/m³). (Cal. Procedure No.: WMCL-CP-01)

Issued by:

Lalit Shukla
 Authorized Signatory



Kuldip



CC-2743

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Calibration Certificate

Format No.: 7.8-QF-02

Issue Dated: 03-09-2021

Recommended Date for the Next Calibration Mentioned As Per Request of the Customer	Page	No. of Pages
Date: 01-09-2023	-2-	-2-

Certificate No.: WMCL/E/2021-09/1452
 ULR - CC274321000001452F

Date of Calibration: 02-09-2021

Results:

Sr. No.	Denomination	Mass Value (g)	Uncertainty ($\pm g$)
23	200 g	200.000 11	0.000 10
22	200 g *	200.000 17	0.000 10
21	100 g	100.000 090	0.000 050
20	50 g	50.000 039	0.000 030
19	20 g	20.000 021	0.000 025
18	20 g *	20.000 026	0.000 025
17	10 g	9.999 994	0.000 020
16	5 g	5.000 034	0.000 016
15	2 g	2.000 016	0.000 012
14	2 g *	2.000 000	0.000 012
13	1 g	1.000 016	0.000 010
12	500 mg	0.500 009	0.000 008
11	200 mg	0.199 997	0.000 006
10	200 mg *	0.200 006	0.000 006
9	100 mg	0.099 998	0.000 005
8	50 mg	0.050 007	0.000 004
7	20 mg	0.020 006	0.000 003
6	20 mg *	0.020 002	0.000 003
5	10 mg	0.010 000	0.000 003
4	5 mg	0.005 000	0.000 003
3	2 mg	0.002 003	0.000 003
2	2 mg *	0.001 998	0.000 003
1	1 mg	0.001 002	0.000 003

Remarks: Mass Values of all the weights are conventional mass values and within the maximum errors permissible in "E" Accuracy Class of Weights as per OIML R 111-1:2004.

The Reported uncertainty is at coverage factor $k=2$ which corresponds to a coverage probability of approximately 95% for a normal distribution. The contribution of uncertainty originating from the standard used, the weighing process, drift in standard and the air buoyancy correction are taken in to account.

Notes: This Calibration Certificate may not be reproduced except in full, unless written Permission for Publication of an approved extract has been obtained from the Laboratory (WMCL).

- The Calibration results reported in this Certificate are valid at the time of and under the stated conditions of measurement.
- The Calibration results refer only to the particular item submitted for calibration.
- The Calibration Certificate issued for Weights, Weighing Balance used for Scientific or Industrial purposes only and not used for Commercial.
- Star Mark (*) are used to distinguish the weights of same nominal value.



Issued by:

Lalit Shukla
 Authorized Signatory

Kuldeep