



METSAR TECHNOLOGIES PVT. LTD.

Calibration Laboratory

CALIBRATION CERTIFICATE



CC-2191

Customer Name & Address	Certificate No. : MTPL/23/1630/3
EMPLOYEE'S STATE INSURANCE CORPORATION SUPER SPECIALITY HOSPITAL, Sanathnagar, Hyderabad – 500038.	Equipment Received On : 23/08/2023
	Equipment Condition : Satisfactory
	Date of Calibration : 24/08/2023
	Recommended Calibration Due : 23/08/2024
	Date of issue : 25/08/2023
MECHANICAL DISCIPLINE (VOLUME)	ULR No. : CC219123000017989F

Details of Unit Under Calibration:

Instrument Specification : Micro Pipette	
Make : Thermo Scientific	
Model : ---	Range : 10 to 100 µl
Sr. No : KW01439	Resolution : 1 µl
Id. No. : ---	Unit Under Measurement : µl

Standard used for calibration:

Instrument Name	Instrument Sr. No. / Id No.	Certificate No.	Calibration Due On	Traceability with NABL Lab No.
Semi Micro Balance	METSAR-M-002	MTPL/23/0156/2	26/01/2024	CC-2191
Micro Balance	METSAR-M-001	MTPL/23/0156/1	26/01/2024	CC-2191

Environmental Conditions

Temperature : 23 ± 1°C
Humidity : 40 to 60 %RH

SOP Number

MTPL/CL/SOP/MV/03

Results of Calibration:

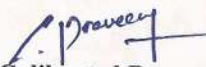
Sr. No.	Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume in µl @ 27 °C	Error (+) in µl	Expanded Uncertainty (+) in µl
1	10	0.010021	9.991	0.009	1.2
2	30	0.03015	30.07	0.07	1.2
3	50	0.05032	50.17	0.17	1.2
4	80	0.08053	80.30	0.30	1.2
5	100	0.10067	100.37	0.37	1.2

Repeatability Results @ 27 °C:

Sr. No.	Set Volume In µl	Actual Calculated Volume In µl				
		100.33	100.37	100.36	100.32	100.42
1	100	100.38	100.43	100.38	100.35	100.36

Remarks:

- The Standard used for calibration is traceable to National/International standards through unbroken chain of Accredited Laboratories.
- Reference Standard and Method used: ISO 8655-6, Gravimetric Method.
- The result stated in this calibration certificate is related only to the item submitted for calibration.
- UUC means Unit Under Calibration.
- The reported expanded uncertainty of measurement is stated at a confidence level of approximately 95.45% with coverage factor $k=2$.
- Certificate shall not be reproduced except in full without the written approval of the laboratory.
- The instrument was calibrated at Mass and Volume Lab-1.


Calibrated By
G. Praveen
Calibration Engineer


Certificate Approved By
N. Chanakya
Sr. Manager Calibration

End of Calibration Certificate

METSAR TECHNOLOGIES PVT. LTD.

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METSAR TECHNOLOGIES PVT. LTD.

Calibration Laboratory



CALIBRATION CERTIFICATE

Customer Name & Address	Certificate No. : MTPL/23/1630/2
EMPLOYE'S STATE INSURANCE CORPORATION SUPER SPECIALITY HOSPITAL, Sanathnagar, Hyderabad – 500038.	Equipment Received On : 23/08/2023
	Equipment Condition : Satisfactory
	Date of Calibration : 24/08/2023
	Recommended Calibration Due : 23/08/2024
	Date of issue : 25/08/2023
MECHANICAL DISCIPLINE (VOLUME)	ULR No. : CC219123000017988F

Details of Unit Under Calibration:

Instrument Specification : Micro Pipette (Fixed)	
Make : Thermo Scientific	
Model : FinnpiPETTE F3	
Sr. No : NW09739	Range : 1000 µl
Id. No. : ---	Unit Under Measurement : g

Standard used for calibration:

Instrument Name	Instrument Sr. No. / Id No.	Certificate No.	Calibration Due On	Traceability with NABL Lab No.
Semi Micro Balance	METSAR-M-002	MTPL/23/0156/2	26/01/2024	CC-2191

Environmental Conditions		SOP Number
Temperature	Humidity	MTPL/CL/SOP/MV/03
23 ± 1°C	40 to 60 %RH	

Results of Calibration:

Sr. No.	Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume in µl @ 27 °C	Error (+) in µl	Expanded Uncertainty (+) in µl
1	1000	1.00045	998.34	1.66	15

Repeatability Results @ 27 °C:

Sr. No.	Set Volume In µl	Actual Calculated Volume In µl				
1	1000	998.37	998.38	998.40	998.31	998.35
		998.36	998.24	998.33	998.28	998.33

Remarks:

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Calibrated By

G. Praveen
Calibration Engineer

Certificate Approved By

N. Chanakya
Sr. Manager Calibration

** End of Calibration Certificate **

METSAR TECHNOLOGIES PVT. LTD.

An ISO 9001-2015 Certified Company

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METSAR TECHNOLOGIES PVT. LTD.

Calibration Laboratory



CALIBRATION CERTIFICATE

Customer Name & Address	Certificate No. : MTPL/23/1630/4
EMPLOYEE'S STATE INSURANCE CORPORATION SUPER SPECIALITY HOSPITAL, Sanathnagar, Hyderabad – 500038.	Equipment Received On : 23/08/2023
	Equipment Condition : Satisfactory
	Date of Calibration : 24/08/2023
	Recommended Calibration Due : 23/08/2024
	Date of issue : 25/08/2023
MECHANICAL DISCIPLINE (VOLUME)	ULR No. : CC219123000017990F

Details of Unit Under Calibration:

Instrument Specification : Micro Pipette	
Make : Thermo Scientific	
Model : ---	Range : 20 to 200 µl
Sr. No : NM03353	Resolution : 1 µl
Id. No. : ---	Unit Under Measurement : µl

Standard used for calibration:

Instrument Name	Instrument Sr. No. / Id No.	Certificate No.	Calibration Due On	Traceability with NABL Lab No.
Semi Micro Balance	METSAR-M-002	MTPL/23/0156/2	26/01/2024	CC-2191

Environmental Conditions		SOP Number
Temperature 23 ± 1°C	Humidity 40 to 60 %RH	MTPL/CL/SOP/MV/03

Results of Calibration:

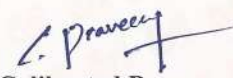
Sr. No.	Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume in µl @ 27 °C	Error (+) in µl	Expanded Uncertainty (+) in µl
1	20	0.02015	20.11	0.11	1.2
2	50	0.05028	50.19	0.19	1.2
3	100	0.10053	100.32	0.32	1.2
4	150	0.15073	150.42	0.42	15
5	200	0.20066	200.28	0.28	15

Repeatability Results @ 27 °C:

Sr. No.	Set Volume In µl	Actual Calculated Volume In µl				
1	200	200.40	200.01	199.87	200.60	200.49
		200.00	200.44	200.54	200.07	200.38

Remarks:

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- UUC means Unit Under Calibration.
- The reported expanded uncertainty of measurement is stated at a confidence level of approximately 95.45% with coverage factor $k=2$.
- Certificate shall not be reproduced except in full without the written approval of the laboratory.
- The instrument was calibrated at Mass and Volume Lab-1.


Calibrated By
G. Praveen
Calibration Engineer


Certificate Approved By
N. Chanakya
Sr. Manager Calibration

End of Calibration Certificate

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Calibration Laboratory



CALIBRATION CERTIFICATE

Customer Name & Address	Certificate No. : MTPL/23/1630/1
EMPLOYEE'S STATE INSURANCE CORPORATION SUPER SPECIALITY HOSPITAL, Sanathnagar, Hyderabad – 500038.	Equipment Received On : 23/08/2023
	Equipment Condition : Satisfactory
	Date of Calibration : 24/08/2023
	Recommended Calibration Due : 23/08/2024
	Date of issue : 25/08/2023
MECHANICAL DISCIPLINE (VOLUME)	ULR No. : CC219123000017987F

Details of Unit Under Calibration:

Instrument Specification : Micro Pipette			
Make : Thermo Scientific	Range : 100 to 1000 μ l		
Model : Finnpiquette	Resolution : 1 μ l		
Sr. No : NW04069	Unit Under Measurement : μ l		

Standard used for calibration:

Instrument Name	Instrument Sr. No. / Id No.	Certificate No.	Calibration Due On	Traceability with NABL Lab No.
Semi Micro Balance	METSAR-M-002	MTPL/23/0156/2	26/01/2024	CC-2191

Environmental Conditions		SOP Number
Temperature 23 \pm 1 $^{\circ}$ C	Humidity 40 to 60 %RH	MTPL/CL/SOP/MV/03

Results of Calibration:

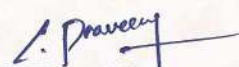
Sr. No.	Set Volume in μ l	Standard Balance Reading in g	Actual Calculated Volume in μ l @ 27 $^{\circ}$ C	Error (+) in μ l	Expanded Uncertainty (+) in μ l
1	100	0.10030	100.07	0.07	1.2
2	300	0.30024	299.58	0.42	15
3	500	0.50031	499.21	0.79	15
4	800	0.80035	798.57	1.43	15
5	1000	1.00050	998.39	1.61	15

Repeatability Results @ 27 $^{\circ}$ C:

Sr. No.	Set Volume in μ l	Actual Calculated Volume in μ l				
1	1000	998.37	998.41	998.46	998.31	998.35
		998.42	998.38	998.39	998.44	998.33

Remarks:

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- The instrument was calibrated at Mass and Volume Lab-1.


Calibrated By
G. Praveen
Calibration Engineer


Certificate Approved By
N. Chanakya
Sr. Manager Calibration

End of Calibration Certificate

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METSAR TECHNOLOGIES PVT. LTD.
Calibration Laboratory



CALIBRATION CERTIFICATE

Customer Name & Address	Certificate No. : MTPL/23/1630/5
EMPLOYEE'S STATE INSURANCE CORPORATION SUPER SPECIALITY HOSPITAL, Sanathnagar, Hyderabad – 500038.	Equipment Received On : 23/08/2023
	Equipment Condition : Satisfactory
	Date of Calibration : 24/08/2023
	Recommended Calibration Due : 23/08/2024
	Date of issue : 25/08/2023
MECHANICAL DISCIPLINE (VOLUME)	ULR No. : CC219123000017991F

Details of Unit Under Calibration:

Instrument Specification : Micro Pipette	
Make : Thermo Scientific	
Model : Finnpiquette	Range : 1 to 10µl
Sr. No : LW08586	Resolution : 0.02 µl
Id. No. : ---	Unit Under Measurement : g

Standard used for calibration:

Instrument Name	Instrument Sr. No. / Id No.	Certificate No.	Calibration Due On	Traceability with NABL Lab No.
Micro Balance	METSAR-M-001	MTPL/23/0156/1	26/01/2024	CC-2191

Environmental Conditions		SOP Number
Temperature 23 ± 1 °C	Humidity 40 to 60 % RH	MTPL/CL/SOP/MV/03

Results of Calibration:

Sr. No.	Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume in µl @ 27 °C	Error (+) in µl	Expanded Uncertainty (+) in µl
1	2.00	0.002027	2.022	0.022	0.1
2	4.00	0.004023	4.010	0.010	0.1
3	6.00	0.006040	6.023	0.023	0.1
4	8.00	0.008061	8.038	0.038	0.1
5	10.00	0.010065	10.036	0.036	0.1

Repeatability Results @ 27 °C:

Sr. No.	Set Volume In µl	Actual Calculated Volume In µl				
1	10.00	10.025	10.034	10.032	10.045	10.031
		10.028	10.035	10.043	10.050	10.041

Remarks:

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- Reference Standard and Method used: ISO 8655-6, Gravimetric Method.
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Calibrated By
G. Praveen
Calibration Engineer

Certificate Approved By
N. Chanakya
Sr. Manager Calibration

**** End of Calibration Certificate****



METSAR TECHNOLOGIES PVT. LTD.

Calibration Laboratory



CALIBRATION CERTIFICATE

Customer Name & Address	Certificate No. : MTPL/23/1630/6
EMPLOYEE'S STATE INSURANCE CORPORATION SUPER SPECIALITY HOSPITAL, Sanathnagar, Hyderabad – 500038.	Equipment Received On : 23/08/2023
	Equipment Condition : Satisfactory
	Date of Calibration : 24/08/2023
	Recommended Calibration Due : 23/08/2024
	Date of issue : 25/08/2023
MECHANICAL DISCIPLINE (VOLUME)	ULR No. : CC219123000017992F

Details of Unit Under Calibration:

Instrument Specification : Micro Pipette			
Make : Thermo Scientific			
Model : Finnpiquette	Range : 1 to 10 μ l		
Sr. No : MW24480	Resolution : 0.02 μ l		
Id. No. : ---	Unit Under Measurement : μ l		

Standard used for calibration:

Instrument Name	Instrument Sr. No. / Id No.	Certificate No.	Calibration Due On	Traceability with NABL Lab No.
Micro Balance	METSAR-M-001	MTPL/23/0156/1	26/01/2024	CC-2191

Environmental Conditions		SOP Number
Temperature 23 \pm 1 $^{\circ}$ C	Humidity 40 to 60 % RH	MTPL/CL/SOP/MV/03

Results of Calibration:


Sr. No.	Set Volume in μ l	Standard Balance Reading in g	Actual Calculated Volume in μ l @ 27 $^{\circ}$ C	Error (+) in μ l	Expanded Uncertainty (+) in μ l
1	2.00	0.002023	2.018	0.018	0.1
2	4.00	0.004022	4.010	0.010	0.1
3	6.00	0.006032	6.014	0.014	0.1
4	8.00	0.008055	8.033	0.033	0.1
5	10.00	0.010075	10.048	0.048	0.1


Repeatability Results @ 27 $^{\circ}$ C :

Sr. No.	Set Volume In μ l	Actual Calculated Volume In μ l				
1	10.00	10.027	10.052	10.034	10.047	10.033
		10.060	10.067	10.055	10.052	10.057

Remarks:

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Calibrated By
G. Praveen
Calibration Engineer


Certificate Approved By
N. Chanakya
Sr. Manager Calibration

** End of Calibration Certificate **

MTPL/CL/FF/CC/ME/MP

METSAR TECHNOLOGIES PVT. LTD.

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METSAR TECHNOLOGIES PVT. LTD.

Calibration Laboratory

CALIBRATION CERTIFICATE



Customer Name & Address	Certificate No. : MTPL/23/1630/7
EMPLOYE'S STATE INSURANCE CORPORATION SUPER SPECIALITY HOSPITAL, Sanathnagar, Hyderabad – 500038.	Equipment Received On : 23/08/2023
	Equipment Condition : Satisfactory
	Date of Calibration : 24/08/2023
	Recommended Calibration Due : 23/08/2024
	Date of issue : 25/08/2023
	ULR No. : CC219123000017993F
MECHANICAL DISCIPLINE (VOLUME)	

Details of Unit Under Calibration:

Instrument Specification : Micro Pipette	
Make : Thermo Scientific	
Model : Finn Pipette	Range : 5 - 50 µl
Sr. No : NW03884	Resolution : 0.1 µl
Id. No. : ---	Unit Under Measurement : µl

Standard used for calibration:

Instrument Name	Instrument Sr. No. / Id No.	Certificate No.	Calibration Due On	Traceability with NABL Lab No.
Semi Micro Balance	METSAR-M-002	MTPL/23/0156/2	26/01/2024	CC-2191
Micro Balance	METSAR-M-001	MTPL/23/0156/1	26/01/2024	CC-2191

Environmental Conditions		SOP Number
Temperature	Humidity	
23 ± 1°C	40 to 60 %RH	MTPL/CL/SOP/MV/03

Results of Calibration:

Sr. No.	Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume in µl @ 27 °C	Error (+) in µl	Expanded Uncertainty (±) in µl
1	5.0	0.005018	5.008	0.008	1.2
2	20.0	0.02039	20.34	0.34	1.2
3	30.0	0.03048	30.41	0.41	1.2
4	40.0	0.04072	40.65	0.65	1.2
5	50.0	0.05080	50.72	0.72	1.2

Repeatability Results @ 27 °C:

Sr. No.	Set Volume in µl	Actual Calculated Volume in µl				
1	50.0	50.79	50.73	50.63	50.67	50.75
		50.79	50.74	50.63	50.77	50.69

Remarks:

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Calibrated By

G. Praveen

Calibration Engineer

Certificate Approved By

N. Chanakya

Sr. Manager Calibration

** End of Calibration Certificate **

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METSAR TECHNOLOGIES PVT. LTD.
Calibration Laboratory



CALIBRATION CERTIFICATE

Customer Name & Address	Certificate No. : MTPL/23/1630/8
EMPLOYEE'S STATE INSURANCE CORPORATION SUPER SPECIALITY HOSPITAL, Sanathnagar, Hyderabad – 500038.	Equipment Received On : 23/08/2023
	Equipment Condition : Satisfactory
	Date of Calibration : 24/08/2023
	Recommended Calibration Due : 23/08/2024
	Date of issue : 25/08/2023
MECHANICAL DISCIPLINE (VOLUME)	ULR No. : CC219123000017994F

Details of Unit Under Calibration:

Instrument Specification : Micro Pipette	
Make : Thermo Scientific	
Model : Finn Pipette	Range : 5 - 50 µl
Sr. No : NW04153	Resolution : 0.1 µl
Id. No. : ---	Unit Under Measurement : µl

Standard used for calibration:

Instrument Name	Instrument Sr. No. / Id No.	Certificate No.	Calibration Due On	Traceability with NABL Lab No.
Semi Micro Balance	METSAR-M-002	MTPL/23/0156/2	26/01/2024	CC-2191
Micro Balance	METSAR-M-001	MTPL/23/0156/1	26/01/2024	CC-2191

Environmental Conditions		SOP Number
Temperature 23 ± 1°C	Humidity 40 to 60 %RH	MTPL/CL/SOP/MV/03

Results of Calibration:

Sr. No.	Set Volume in µl	Standard Balance Reading in g	Actual Calculated Volume in µl @ 27 °C	Error (+) in µl	Expanded Uncertainty (+) in µl
1	5.0	0.005028	5.018	0.018	0.1
2	20.0	0.02048	20.44	0.44	1.2
3	30.0	0.03053	30.46	0.46	1.2
4	40.0	0.04072	40.64	0.64	1.2
5	50.0	0.05065	50.55	0.55	1.2

Repeatability Results @ 27 °C:

Sr. No.	Set Volume in µl	Actual Calculated Volume in µl				
		1	50.0	50.58	50.52	50.44
		50.58	50.63	50.52	50.46	50.58

Remarks:

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G. Praveen
Calibration Engineer

Certificate Approved By
N. Chanakya
Sr. Manager Calibration

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