



CC - 3237

**MSIR INDIA**
Calibration#40, 2nd Floor, 2nd Street,
Padmavathi Nagar, Chromepet,
Chennai, Tamil Nadu - 600 044.**CALIBRATION CERTIFICATE**

MCAL/FOR/QD-12

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PRF #	: MCAL/PRF/0423139	Date of Calibration	: 21-Apr-2023
Certificate #	: MSIR/410423/139-006	Recom. Due Date	: 20-Apr-2024

DETAILS OF USER CUSTOMER	ULR #	: CC323723000007807F
M/S. ESIC Medical College & PGIMSR	Calibrated at	: Lab
K.K. Nagar, Chennai.	Date of Receipt	: 21-Apr-2023
	Cond. On Receipt	: Satisfactory
	Date of Issue	: 9-May-2023

DETAILS OF TEST / UNIT UNDER CALIBRATION			
Description	: Micropipette	Identification #	: PATH/EQ/316
Range	: 100 to 1000 µl	Serial #	: --
Cal. / Working Range	: --	Make	: Thermo Scientific
Least Count	: 5 µl	Model # / Input	: --
Location	: --	Accuracy	: --



DETAILS OF MASTER INSTRUMENT USED			
Description (Range)	Identification #	Valid upto (Due Date)	Traceability Certificate #
Digital Weighing Balance	MCAL/INS/MV-04	16-Dec-2023	MSIR/411222/168-001

MFC #	: MCAL/MFC/MV-03
Details of Env.	: Temperature : 25±10°C Relative Humidity : 40-70 % RH

Sl.No	DUC Readings µl	Standard Reading µl					Mean value µl	Error µl	Uncertainty ±µl
1.	100	100.29	100.31	100.30	100.33	100.27	100.30	-0.30	0.50
		100.30	100.26	100.33	100.26	100.32			
2.	500	500.54	500.55	500.51	500.51	500.55	500.53	-0.53	2.80
		500.51	500.50	500.53	500.54	500.53			
3.	1000	1000.70	1000.76	1000.76	1000.71	1000.74	1000.74	-0.74	2.80
		1000.70	1000.76	1000.76	1000.75	1000.77			

Remarks

- The reported Expanded Uncertainty is calculated at 95.45 % C.L with coverage factor k=2.
- DUC is defined as Device Under Calibration.

Issued by :		Authorised by :	
MCAL - Engineer	SANGEETHA. B	Technical Manager	KAMALANATHAR. V

**MSIR INDIA PRIVATE LIMITED**

(The Madras Science and Industrial Resources)

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CALIBRATION CERTIFICATE

MCAL/FOR/QD-12

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PRF #	MCAL/PRF/0423139	Date of Calibration	21-Apr-2023
Certificate #	MSIR/410423/139-005	Recom. Due Date	20-Apr-2024

DETAILS OF USER CUSTOMER	ULR #	CC323723000007806F
M/S. ESIC Medical College & PGIMSR	Calibrated at	Lab
K.K. Nagar, Chennai.	Date of Receipt	21-Apr-2023
	Cond. On Receipt	Satisfactory
	Date of Issue	9-May-2023

DETAILS OF TEST / UNIT UNDER CALIBRATION			
Description	Micropipette	Identification #	PATH/EQ/318
Range	10 to 100 µl	Serial #	--
Cal. / Working Range	--	Make	Thermo Scientific
Least Count	1 µl	Model # / Input	--
Location	--	Accuracy	--

DETAILS OF MASTER INSTRUMENT USED			
Description (Range)	Identification #	Valid upto (Due Date)	Traceability Certificate #
Digital Weighing Balance	MCAL/INS/MV-04	16-Dec-2023	MSIR/411222/168-001

MFC #	MCAL/MFC/MV-03	
Details of Env.	Temperature : 25±10°C	Relative Humidity : 40-70 % RH

Sl.No	DUC Readings µl	Standard Reading µl					Mean value µl	Error µl	Uncertainty ±µl
1.	10	10.19	10.15	10.20	10.14	10.14	10.16	-0.16	0.50
		10.18	10.13	10.14	10.20	10.14			
2.	50	50.28	50.33	50.33	50.33	50.32	50.32	-0.32	0.50
		50.31	50.30	50.34	50.30	50.32			
3.	100	100.52	100.46	100.49	100.50	100.50	100.49	-0.49	0.50
		100.47	100.50	100.46	100.46	100.50			

Remarks

1. The reported Expanded Uncertainty is calculated at 95.45 % C.L. with coverage factor k=2.
2. DUC is defined as Device Under Calibration.

Issued by : MCAL - Engineer SANGEETHA. B	Authorised by : Technical Manager KAMALANANTHAM.
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