Calibration Laboratory

Accreditation Certificate

Accreditation No.RCL00310

M&S Instruments Inc.
Liquid Handling Calibration Service

2-12-4, Mikuni-Honmachi, Yodogawa-ku, Osaka-shi, Osaka, 532-0005 Japan

meets the following criteria. On the basis of this, Japan Accreditation Board (JAB) grants accreditation to the said calibration laboratory.

Applicable accreditation criteria	:	JIS Q 17025:2018 (ISO/IEC 17025:2017)
Scope of accreditation	:	**Mechanical** (As described in the appendix)
Premises covered by accreditation	:	As described in the appendix.
Expiry date of accreditation	:	November 30, 2023

Renewed (3)	November 28, 2019
Initial accreditation	November 22, 2007

Y. Iizuka

Y. Iizuka, President
Japan Accreditation Board

Issue No. : RCL00310-20191128

Accreditation No.	RCL00310

Accreditation Certificate Appendix

Type of Laboratory	Calibration Laboratory
Name of Laboratory	M&S Instruments Inc. Liquid Handling Calibration Service
Address	2-12-4, Mikuni-Honmachi, Yodogawa-ku, Osaka-shi, Osaka, 532-0005 Japan

1) Premises on which calibration activities are performed

Name of Premises	M&S Instrument Inc. Liquid Handling Calibration Service	
Address of Premises	Postal Code	532-0005
	Address	2-12-4, Mikuni-Honmachi, Yodogawa-ku, Osaka-shi, Osaka
Calibration service at permanent facilities or on site calibration service	☑ Calibration service at permanent facilities ☐ On site calibration service	

Scope of Accreditation

CODE OF CLASSIFICATION, QUANTITY MEASURAND / CALIBRATION ITEM	RANGE OF CALIBRATION	EXPANDED UNCERTAINTY [1)]	CALIBRATION PROCEDURE, REMARKS
M14 Mechanical M14.12 Volume and density Piston pipettes			
Nominal Volume	Volume		
2 µl	0.2 µl	0.014 µl	Calibration method: QB01 (In accordance of Gravimetric methods of ISO 8655-6, without changing tips during a measurement) (in-house method) Reference Standard: OIML weights E2 Type of pipette: Air-displacement Single-channel pipette and Multi-channel pipette
2 µl	0.5 µl	0.014 µl	
2 µl	1 µl	0.014 µl	
2 µl	2 µl	0.015 µl	
10 µl	1 µl	0.014 µl	
10 µl	5 µl	0.019 µl	
10 µl	10 µl	0.022 µl	
20 µl	2 µl	0.019 µl	
20 µl	5 µl	0.022 µl	
20 µl	10 µl	0.025 µl	
20 µl	20 µl	0.029 µl	
100 µl	10 µl	0.05 µl	
100 µl	20 µl	0.05 µl	
100 µl	50 µl	0.06 µl	
100 µl	100 µl	0.07 µl	
200 µl	20 µl	0.08 µl	
200 µl	50 µl	0.08 µl	
200 µl	100 µl	0.09 µl	
200 µl	200 µl	0.11 µl	
300 µl	30 µl	0.09 µl	
300 µl	150 µl	0.10 µl	
300 µl	300 µl	0.12 µl	

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CODE OF CLASSIFICATION, QUANTITY MEASURAND / CALIBRATION ITEM	RANGE OF CALIBRATION	EXPANDED UNCERTAINTY [1)]	CALIBRATION PROCEDURE, REMARKS
1000 µl	100 µl	0.5 µl	
1000 µl	200 µl	0.5 µl	
1000 µl	500 µl	0.5 µl	
1000 µl	1000 µl	0.7 µl	
1200 µl	120 µl	0.4 µl	
1200 µl	600 µl	0.5 µl	
1200 µl	1200 µl	0.6 µl	
5000 µl	500 µl	1.2 µl	
5000 µl	1000 µl	1.2 µl	
5000 µl	2000 µl	1.8 µl	
5000 µl	2500 µl	1.8 µl	
5000 µl	5000 µl	2.8 µl	
10 ml	1000 µl	2.1 µl	
10 ml	2000 µl	2.1 µl	
10 ml	5000 µl	3.4 µl	
10 ml	10000 µl	5.4 µl	

[1)] Information on the coverage factor	☑ k=2; level of confidence of approximately 95 % ☐ coverage factor obtained from the effective degrees of freedom that defines a level of confidence of 95 %, based on the t-distribution ☐ others ( )

(Note 1) In case a calibrated volume of the nominal volume pipette is not listed above, its extended uncertainty shall be the value of the higher and closest volume.

(Note 2) For a fixed volume pipette, its extended uncertainty shall be the value of the volume of the variable volume pipette listed above to which its mechanical structure is equivalent.

Japan Accreditation Board