



Mettler-Toledo S.A.E.

Laboratorio de Calibración

Sede Laboratorio

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METTLER TOLEDO



ITEM Piston operated burette

MANUFACTURER Mettler Toledo

MODEL DV 1005

NOMINAL VOLUME

5 ml

IDENTIFICATION ID004030

APPLICANT **METTLER-TOLEDO PAC RIM AG-TAIWAN**
2F., No 17, Lane 171, Sec. 2 , Jiuzong Rd
11494 Taipei City Taiwan

Calibration date 24 October 2022

Autorized Signatory

*This certificate in digital format is the original one.
Any printing will be considered as a copy.*

Este certificado se expide de acuerdo con las condiciones de la acreditación concedida por ENAC, que ha comprobado las capacidades de medida del laboratorio y su trazabilidad a patrones nacionales o internacionales.

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This certificate is issued in accordance with the conditions of accreditation granted by ENAC which has assessed the measurement capability of the laboratory and its traceability to national or international standards.

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Instrument information

Burette DV 1005
 Serial number ID004030
 Nominal volume 5 ml

Calibration procedure

Procedure PEC/MTE/22 based to the ISO 8655 norm and with the METTLER TOLEDO manuals.
 The measured volume corresponds with delivered volume (Ex) at the reference temperature of 20 °C.

Calibration conditions

Ambient temperature Min. 20,4 °C Max. 20,4 °C
 Relative humidity 64,5 % Hr
 Pressure 1014,1 mbar

Maintenance: Before calibration seals (references 101003 and 25737) and piston have been replaced, and burette glass has been cleaned.

Traceability

Standard equipment used

Balance BAL01 AT201 - 5 decimal places balance
 Burette drive MOT01 T50
 Water temperature TER128 0,1 °C resolution
 Ambient conditions REG02 (air Temp, rH)
 Class III water 2133409813

The reference water density is referred to the ISO/TR 20461 (2000) tables.

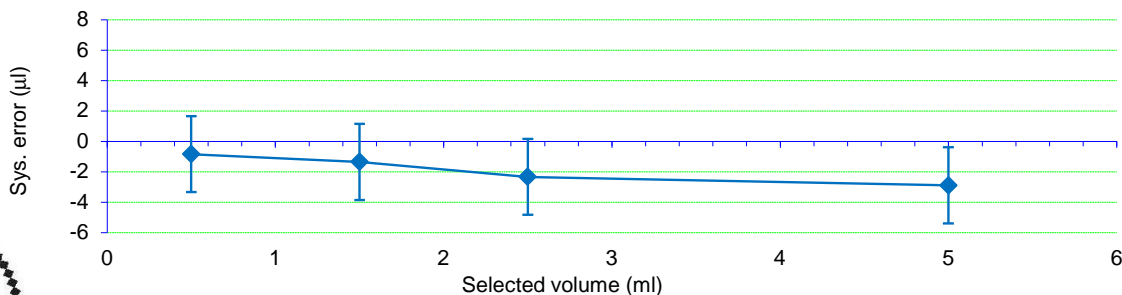
The traceability of measurements are referred to laboratories accredited by recognized ILAC organisms or national laboratories EUROMET participants.

Uncertainty

The reported expanded uncertainty of measurement is stated as the Standard uncertainty of measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with document EA-4/02 M: 2003.

Calibration results (after maintenance)

Burette stroke	10%	30%	50%	100%	
Selected volume	0,5	1,5	2,5	5	ml
Water temperature	20,5	20,5	20,5	20,5	°C
Measured volume	499,2	1498,6	2497,7	4997,1	µl
Systematic error	-0,8	-1,4	-2,3	-2,9	µl
Measurement uncertainty	2,5	2,5	2,5	2,5	µl
Random error	0,13	0,15	0,15	0,17	µl
Max. Permissible Sys. Error	15	15	15	15	µl
Max. Permissible Random Error	5	5	5	5	µl
Evaluation*	Pass	Pass	Pass	Pass	



* Evaluation and permissible errors from ISO 8655-3:2002. According with this norm, uncertainty is not taken into account.

Mettler- Toledo S.A.E.
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Technician: J. Bada
 Remarks: ---