



CALIBRATION CERTIFICATE

Certificate Number: F00G80Y3V2-0

Order Number: 222-380

RAININ
Pipetting 360°

Customer Houston Forensic Science Center
Callan Hundl
500 Jefferson St
Houston, TX 77002-7300

Location 500 Jefferson St

Serial Number 342782379

Model VWR SIGNATURE 1000-5000 WITH TIP EJECTOR

Next Service Apr.2021

Service Plan Onsite: Single Channel PM, 3x5 AR

Inspection Over All Condition: Good

Preventive Maintenance: Piston cleaned and re-greased

Adjustment: No-Adjustment made

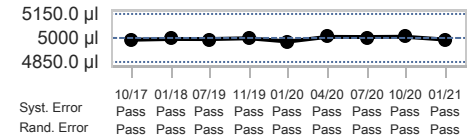
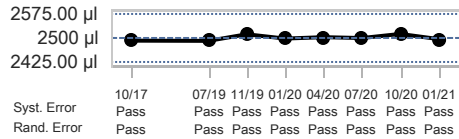
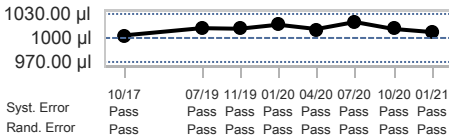
As left-Passed Steven Murray 08.Jan.2021

| | | | | | | |
|-------------------|------------------------|--|--------------------------|------------------------------------|---------------------------|--------------------|
| Conditions | Humidity | Start End 42.25 % 42.25 % | Air Temperature | Start End 19.43 °C 19.43 °C | Z-Factor | 1.0028 µl/mg |
| | Air Pressure | 1025.73 hPa 1025.73 hPa | Water Temperature | 19.43 °C 19.43 °C | | Evaporation |
| Equipment | Balance | B442140901Next Cal. (31.Jul.2021)Readability (0.0001 g) | | | Pipette Tip | Customer Supplied |
| | Climate Monitor | BP (QN400005684)Next Cal. (31.Dec.2021) Humidity - 200017918 (200017918)Next Cal. (10.Jan.2022) Temperature - 200017918 (200017918)Next Cal. (10.Jan.2022) | | | Specification Type | Custom |

| Test Volume (µl) | Weighings | | | | |
|------------------|-----------|-----------|-----------|-----------|-----------|
| | 1 | 2 | 3 | 4 | 5 |
| 1000 µl | 1011.6 mg | 1006.1 mg | 1001.6 mg | 1002.9 mg | 1001.8 mg |
| 2500 µl | 2493.1 mg | 2488.7 mg | 2490.2 mg | 2488.2 mg | 2486.8 mg |
| 5000 µl | 4984.5 mg | 4978.1 mg | 4979.3 mg | 4960.8 mg | 4977.4 mg |

| Test Volume (µl) | Mean Volume (µl) | Systematic Error | | | | Random Error | | | | Expanded Uncertainty (µl) | Status |
|------------------|------------------|------------------|----------------|-----------|---------------|--------------|------------|-------------|-----------|---------------------------|--------|
| | | Error (µl) | Limit (+/- µl) | Error (%) | Limit (+/- %) | Error (µl) | Limit (µl) | Error (CV%) | Limit (%) | | |
| | | 1000 | 1008 | 7.61 | 30.00 | 0.7613 | 3 | 4.22 | 30.00 | | |
| 2500 | 2496.4 | -3.63 | 75.00 | -0.1452 | 3 | 2.41 | 75.00 | 0.09637 | 3 | 8.0 µl (k=2.13) | Passed |
| 5000 | 4990 | -10.05 | 150.0 | -0.2009 | 3 | 8.98 | 150.0 | 0.1799 | 3 | 27 µl (k=2.87) | Passed |

As left History



Authorized Signatory, Steven Murray
08.Jan.2021

METTLER TOLEDO