# CALIBRATION CERTIFICATE

Certificate Number: H00G83ATF4-0

Order Number: 222-766

2161.01

RAININ
Pipetting 360°

**Customer** Houston Forensic Science Center
Jennifer O'Callaghan
500 Jefferson St

Houston, TX 77002-7300

**Location** 500 Jefferson St

**Serial Number** N41235D

**Model** EPPENDORF MULTIPETTE XSTREAM/STREAM 0.2ML COMBITIP

**Next Service** 31.Oct.2024

**Service Plan** Onsite: Single Channel PM, 3x5 AR

**Inspection** Over All Condition: Good

**Preventive Maintenance:** Cleaned and checked
**Adjustment:** No-Adjustment made

**As left-Passed** Steven Murray 30.Oct.2023

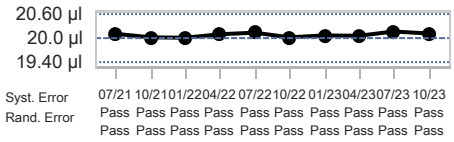
| | | Start \| End | | Start \| End | | |
|---|---|---|---|---|---|---|---|
| **Conditions** | **Humidity** | 49.2 % \| 48.4 % | **Air Temperature** | 20.1 °C \| 20.3 °C | **Z-Factor** | 1.0029 µl/mg |
| | **Air Pressure** | 1012.0 hPa \| 1012.1 hPa | **Water Temperature** | 20.1 °C \| 20.3 °C | **Evaporation** | 0 mg |
| **Equipment** | **Balance** | C132316237Next Cal. (30.Nov.2023)Readability (0.0001 g) | | | **Specification Type** | Custom |
| | | | | | **Pipette Tip** | Customer Supplied |
| | **Climate Monitor** | Bar. pressure abs. air pressure (2112149)Next Cal. (01.Dec.2023) \| Humidity (2112149)Next Cal. (01.Dec.2023) \| Temp (2112149)Next Cal. (01.Dec.2023) | | | | |

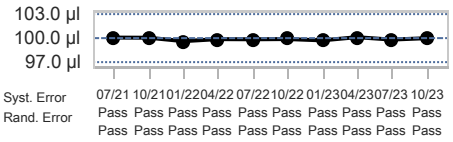
| Test Volume (µl) | Weighings | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 20.0 µl | 20.4 mg | 20.1 mg | 20.0 mg | 20.0 mg | 19.8 mg |
| 100.0 µl | 99.7 mg | 99.6 mg | 99.8 mg | 99.6 mg | 99.8 mg |
| 200 µl | 199.6 mg | 199.5 mg | 199.5 mg | 199.7 mg | 199.8 mg |

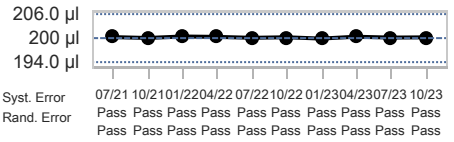
## Results

| 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 (%) | | |
| 20.0 | 20.12 | 0.12 | **0.60** | 0.5909 | **3.0** | 0.22 | **0.60** | 1.092 | **3.0** | 0.65 µl (k=2.87) | **Passed** |
| 100.0 | 99.99 | -0.01 | **3.0** | -0.01087 | **3.0** | 0.10 | **3.0** | 0.1003 | **3.0** | 0.27 µl (k=2) | **Passed** |
| 200 | 200.20 | 0.20 | **6.0** | 0.09945 | **3.0** | 0.13 | **6.0** | 0.06532 | **3.0** | 0.38 µl (k=2) | **Passed** |

## As left History




Serial #

Certificate #

Authorized Signatory, Steven Murray
30.Oct.2023

METTLER TOLEDO
ACCREDITED LABORATORY
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