

Certificate of Performance

Date: 4/24/20

S/N: 30142

Every calibration is documented and follows GLP & NIST standard laboratory quality control & traceability guidelines. Calibration is performed using photometry and includes a 3-3 “as left” certificate of performance for accuracy and precision at 15% (or lower) & 100% of the rated volume. The “3-3 as Left” certification indicates that the instrument was calibrated by dispense three calibration tests are averaged at each volume with respective accuracy and precision calculated and documented on this Certificate of Performance. Additional details of the calibration can be provided upon request. Test results shown below on the serial number identified above accurately state the results of calibration performed on this date.

Technician's Signature: _____

volume 3 ul

| <> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------|--------------------|------|------|------|------|------|------|------|------|------|------|------|
| A | 3.05 | 3.04 | 3.05 | 3.03 | 3.06 | 3.02 | 2.99 | 3.02 | 3.01 | 3.03 | 3.01 | 3.02 |
| B | 3.05 | 3.05 | 3.10 | 3.08 | 3.05 | 3.03 | 3.05 | 3.03 | 3.07 | 3.03 | 3.01 | 3.06 |
| C | 3.04 | 3.06 | 3.03 | 3.08 | 3.07 | 3.04 | 3.06 | 3.06 | 3.00 | 3.02 | 3.02 | 3.05 |
| D | 3.04 | 3.05 | 3.03 | 3.06 | 3.07 | 3.04 | 3.04 | 3.04 | 3.06 | 3.05 | 3.01 | 3.01 |
| E | 3.01 | 3.04 | 3.06 | 3.08 | 3.02 | 3.06 | 3.07 | 3.07 | 3.04 | 3.02 | 3.01 | 3.05 |
| F | 3.06 | 3.04 | 3.04 | 3.08 | 3.09 | 3.04 | 3.03 | 3.07 | 3.06 | 3.02 | 3.05 | 3.02 |
| G | 3.06 | 3.04 | 3.05 | 3.04 | 3.04 | 3.03 | 3.05 | 3.04 | 3.04 | 3.09 | 3.04 | 3.02 |
| H | 3.05 | 3.04 | 3.03 | 3.01 | 3.04 | 3.00 | 3.02 | 3.06 | 3.05 | 3.01 | 3.02 | 3.02 |
| Avg. Vol. | 3.04 ul | | | | | | | | | | | |
| Std. Dev. | 0.02 ul | | | | | | | | | | | |
| Accuracy | 1.39% Pass @ +/-3% | | | | | | | | | | | |
| Precision | 0.97% Pass @ <5% | | | | | | | | | | | |

volume 20 ul

| <> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| A | 20.20 | 20.17 | 20.18 | 20.21 | 20.17 | 20.13 | 20.14 | 20.11 | 19.98 | 20.25 | 20.04 | 20.04 |
| B | 20.11 | 20.13 | 20.37 | 20.43 | 20.30 | 20.11 | 19.97 | 20.22 | 20.36 | 20.11 | 20.15 | 20.34 |
| C | 20.21 | 20.18 | 20.28 | 20.21 | 20.18 | 20.25 | 20.16 | 20.31 | 20.24 | 20.17 | 20.14 | 20.20 |
| D | 20.12 | 20.25 | 20.16 | 20.24 | 20.35 | 20.09 | 20.18 | 20.12 | 20.29 | 20.26 | 20.11 | 20.11 |
| E | 20.29 | 20.13 | 20.26 | 20.13 | 20.14 | 20.26 | 20.35 | 20.21 | 20.24 | 20.26 | 20.18 | 20.24 |
| F | 20.28 | 20.20 | 20.18 | 20.49 | 20.31 | 20.22 | 20.21 | 20.20 | 20.21 | 20.26 | 20.18 | 20.26 |
| G | 20.15 | 20.15 | 20.19 | 20.21 | 20.30 | 20.21 | 20.35 | 20.11 | 20.07 | 20.31 | 19.94 | 19.96 |
| H | 20.07 | 20.00 | 20.09 | 19.91 | 20.06 | 19.94 | 19.99 | 20.00 | 20.12 | 20.04 | 20.11 | 20.03 |

| | |
|-----------|--------------------|
| Avg. Vol. | 20.18 ul |
| Std. Dev. | 0.11 ul |
| Accuracy | 0.89% Pass @ +/-3% |
| Precision | 0.64% Pass @ <3% |