



Level 4 Calibration Service Documentation

Client Information table with fields for Company, Address, and Phone.

Client Instrument table with fields for Manufacturer, Model, Serial #, and ID/User.

Laboratory Test Conditions table with fields for Temperature, Relative Humidity, Bar. Pressure, Water Den., Density Correction, Water Conductivity, and Evaporation Rate.

Laboratory Test Equipment table with fields for Test Balance Serial #, Model, Readability, NIST Cert. Date, and NIST Cert Due Date.

- Replacement Parts list with checkboxes for O-Ring, Seal, Friction Ring, Shaft/Nozzle, Plunger button, Plunger Button Cap, Calibration mechanism, Battery, Shaft/Nozzle Filter(s), Tip Ejector, Multi-Channel Tipcone, Housing Screw, and Other.

Quality Control Authorization table with fields for QC Reviewer, QC Date, and Signature.

The calibration results published in this certificate were obtained gravimetrically using Grade 3 purified water, equipment manufacturer or validated substitute tips, and ISO8655 compliant test equipment that are traceable to NIST and through NIST to the International System of Units (SI). TTE certifies that the above measuring device meets or exceeds all measurement tolerances, unless otherwise noted. TTE prohibits the reproduction of this document, except in its entirety.

Certificate ID section containing a barcode and the alphanumeric string *02042015-04K51626*

Comments: PM Service performed. Channel #2 used for testing.

Service Information table with fields for Service Date, Certificate ID #, Test Technician, and Next Due Date.

As Found Data table showing Test Volumes (µL) and Mean (mg), Density Corr., Mean (ul), Accuracy (% Dev), Inaccuracy Tolerance, Precision (CV%), Imprecision Tolerance, and Test Uncertainty (± uL / ±%) for 10, 50, and 100 µL.

Test Result: PASS PASS PASS

As Left Data table showing Test Volumes (µL) and Mean (mg), Density Corr., Mean (ul), Accuracy (% Dev), Inaccuracy Tolerance, Precision (CV%), Imprecision Tolerance, and Test Uncertainty (± uL / ±%) for 10, 50, and 100 µL.

Test Result: PASS PASS PASS

PASS grade denotes that tolerances have been met according to OEM specifications, exclusive of measurement uncertainty. The risk for reporting a false PASS result is calculated to be < 2%. The reported expanded uncertainty value uses a coverage factor k=2 to a coverage probability of approximately 95%.



Level 4 Calibration

MC Plus data is collected from a 5-place multichannel test balance and is not considered to reflect a statistically valid representation of each individual channel.

Service Information	
Service Date	04/Feb/2015
Certificate ID #	02042015-04K51626
Test Technician	RF
Next Due Date	31/Aug/2015

As-Found Calibration Equipment Data:	
Test Balance Serial #	8-1128380329
Test Balance Model	MCP2
Test Balance Readability (mg)	0.01
Test Balance NIST Cert. Date	27/Oct/2014

As-Left Calibration Equipment Data:	
Test Balance Serial #	8-1128380329
Test Balance Model	MCP2
Test Balance Readability (mg)	0.01
Test Balance NIST Cert. Date	27/Oct/2014

As-Found MC-Plus Readings

Vol:	10 ul			50 ul			100 ul		
Tot:	9.6-10.4 ul			49.3-50.7 ul			99.2-100.8 ul		
UOM:	mg	ul	P-F	mg	ul	P-F	mg	ul	P-F
1	10.05	10.08	P	50.08	50.24	P	100.48	100.79	P
2	9.96	9.99	P	50.13	50.29	P	100.46	100.77	P
3	9.93	9.96	P	50.04	50.20	P	100.15	100.46	P
4	9.93	9.96	P	49.93	50.08	P	99.71	100.02	P
5	9.90	9.93	P	49.98	50.13	P	99.84	100.15	P
6	9.95	9.98	P	50.15	50.31	P	100.00	100.31	P
7	9.91	9.94	P	50.07	50.23	P	100.11	100.42	P
8	9.84	9.87	P	50.04	50.20	P	100.01	100.32	P

As-Left MC-Plus Readings

Vol:	10 ul			50 ul			100 ul		
Tot:	9.6-10.4 ul			49.3-50.7 ul			99.2-100.8 ul		
UOM:	mg	ul	P-F	mg	ul	P-F	mg	ul	P-F
1	9.95	9.98	P	50.02	50.18	P	100.38	100.69	P
2	9.94	9.97	P	50.12	50.28	P	100.35	100.66	P
3	9.97	10.00	P	50.00	50.16	P	100.03	100.34	P
4	9.86	9.89	P	49.82	49.97	P	99.71	100.02	P
5	9.89	9.92	P	49.96	50.11	P	99.90	100.21	P
6	9.87	9.90	P	49.95	50.10	P	100.17	100.48	P
7	9.80	9.83	P	50.05	50.21	P	100.12	100.43	P
8	9.81	9.84	P	50.07	50.23	P	100.39	100.70	P