QC Kit

Automated Liquid Handling & Pipetting System

- ## Accuracy & Precision Verification
- ## Calibration Recommendations

QC Cal Kit uses similar (and improved) methods, as those found in *ISO IWA 15 "Specification and method for the determination of performance of automated liquid handling systems."*

USB Powered Personalized Mini-Plate Reader, Tablet software, Automated Standard Curve with Validation Reference plate. Satisfies NIST 930e Aqueous or DMSO available!

Automation TRAINER!

Tools and Services for the Simplification and Practical Application of Measurement Standards in Automated Liquid Handling and Pipetting Systems

Repeated Run and Test

for 1 to 384-tip liquid transfer to a microplate (96 or 384-well)

Compatible with most existing readers*

4-Reference dye bottles; 4- Troughs

4-Test dye bottles; 5-Reservoirs

13-Microplates with lids

1-Manual hand-held reference pipette optional

Method

1-Hardcopy Manual

Performance Test Analysis Software

Access to Software

* Other user supplied components required

Satisfaction Guarantee

Simple. Practical. Cost-effective.

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Automation Trainer Reagent Kits are the direct response to feedback gained from training scientists, engineers and academic researchers in automated liquid handling volume verification and calibration. These professionals, were looking to bridge the gap between inconsistent, single-dye home brews, and the more costly, commercial, dual-dye method.

Specifications

Part Number	ATQCKIT Lite - (96-Well PN 27997 / 384-Well PN 27998) Accuracy & Precision Verification plus Calibration recommendations for testing 1 to 384-tip liquid transfer to a microplate (96 or 384-well). Single run, single test; water liquid class; One-time use kit. **DMSO or AQUEOUS Diluent!**
Test/Capacity	Single run, single test, 1 to 384-tip liquid transfer to a microplate (96 or 384-well)
Test Time, Typical	≤ 20 minutes + read time *(With established liquid class; robot and reader methods)*
Reference Dye	Tartrazine-based solution made up of well characterized components which improve consistency and extend shelf-life
Measurement System Performance	**% Relative Error ± 0.8%, % CV ± 0.2%*** **SLAS Poster Presentation Feb 2018 (3rd-party reproducibility study comparing results w/gravimetric & dual-dye methods)* Your actual results depend on your optimization of the liquid class, performance and calibration of your plate reader, performance of the hand-held manual pipette used to generate the reference curve, and the reproducibility of the environmental conditions.
Pipettors, Compatible	1 to 384-fixed-tip & disposable tip heads, ≥100nL to 200 uL
USER SUPPLIED ITEMS	☐ Automated Liquid Handler (ALH) or Pipetting System / Tips ☐ Absorbance Microplate Reader in Calibration (Signal: 405-450 nm; Noise 605-650 nm.) ☐ Orbital Shaker (600 rpm) ☐ Distilled Water, HLPC Grade (diluent for test samples) ≥ 30mL ☐ PC with Internet access required for cloud-based software/Excel template for data gathering
In the Box *(Plate Reader, VRP, Env.Sensor, Tablet +Software, Methods, Sterile Dye & Labware)*	12 month supply of a monthly single test comprised of: • 4-Reference Dye Pillow-packs; 4-Troughs • 4-Test Dye Pillow-packs; 5-Reservoirs • 13-Microplates w/lids, Validation Reference Plate • 1-Manual hand-held reference pipette (optional) • USB PWR Personalize Mini-plate reader, Wireless Env. Sensor • Surface Pro Tablet + Software, Robot Methods Protocols, Training, and Service
Shelf-life	12 months
Warranty, Limited	90-day Satisfaction Guarantee. Reagent Kits are intended for laboratory research use by trained users. Determination of their suitability for specific end-use is the responsibility of the user, who assumes all liability for loss or damage arising out of the use of the product. Warranty is limited to replacement of defective materials, if returned with authorization, within 1-year of purchase date.
Traceability / Compliance	Provides accuracy, precision and calibration recommendations using similar (and improved) methods, as those found in **ISO IWA 15 "Specification and method for the determination of performance of automated liquid handling systems." Satisfies NIST 930e.**

Method

Example based on 96-Channel, 20 uL, fixed-tip head, 2, 10, 20uL test (test samples in triplicate)
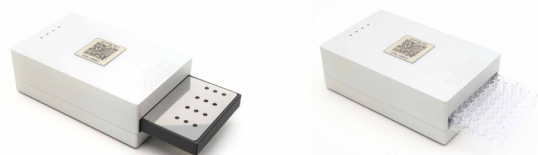
1-Prepare Reference Plate

Trough 1 — REF Dye ALPHA
Trough 2 — REF Dye BETA
Trough 3 — REF Dye GAMMA
Trough 4 — REF Dye OMEGA

Calibrated Hand Pipette Transfers

Transfer 200 uL in Triplicate

Hand Pipette Only a Single Row!

Or Scan Universal Validation Ref. & Test Plate With included Personalized Mini-Plate Reader
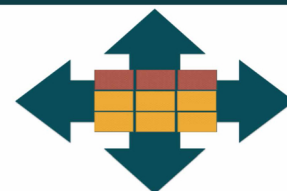

2-Prepare Test Plates in Triplicate

| Reservoir 1 DILUENT (Water)	Reservoir 2 MICRO Sample Dye 2 uL Aspiration	Reservoir 3 BULK Sample Dye 10 uL & 20uL Aspirations
198 uL + 2 uL	198 uL + 2 uL	198 uL + 2 uL
190 uL + 10 uL	190 uL + 10 uL	190 uL + 10 uL
180 uL + 20 uL	180 uL + 20 uL	180 uL + 20 uL

3-Centrifuge or Orbital Mix Plates

2000/600 RPM
2 MINUTES

4-Read Test Plates

Calibrated Personalized Mini-Plate Photometer

425 nm Signal
625 nm Noise
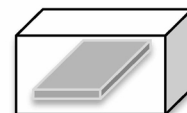
5-Excel Data to Cloud Software

GLHTracker Desktop

GLHTracker

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