

The QualiLab Elite® benchtop plating bath analyzer combines Cyclic Voltammetric Stripping (CVS), potentiometric titration and UV-Vis spectroscopy-based analytical techniques in a single lab instrument. The analyzer delivers the analytical performance you need to control today's rapidly evolving technologies for printed circuit board (PCB) and other advanced metal deposition applications. Application-specific analytical methods—combined with the power of the QualiLab Elite system—provide accurate analysis for easy replenishment and improved yield from your plating solutions.

As feature sizes and process windows continue to shrink, the QualiLab Elite analyzer's precise measurement capabilities are essential to providing better controls and efficiency to maximizing the yield, reliability and profitability of your manufacturing process.

Accurate, Fast and Selective

The QualiLab Elite benchtop analyzer supports multilanguage operations and provides accurate analyses in an ergonomic design. Its modular design configurations range from a simplified, compact single-sample manual analyzer to a fully automated closed-cell system that can measure up to 48 samples without operator intervention. All QualiLab Elite models are streamlined with a minimum of external components. The analyzer's proven architecture maintains high precision and speed of analysis.

Largest Library of Analytical Recipes for Metal Deposition

Through decades of experience, ECI Technology's scientists developed the industry's largest number of chemistry-specific recipes, Chempacks®. Combined with the QualiLab Elite analyzer, these proprietary ready-to-use Chempack applications enable continued metrology support when implementing new and existing plating chemistries to ensure your plating process requirements of today and into the future.



Applications

- **Electroplating:** Organic additives and inorganic bath components for Cu, Ni, Sn, SnAg, SnPb, Pd, Zn and Co
- **Electroless Deposition:** Reducing agents, complexing agents, buffering agents, background ions in Co, Cu, Ni and Pd

Analytical Techniques

- Electrochemical Analysis: LAT, MLAT, DT, RDT, QC, RC, DPA and SBP
 - CVS, CPVS
 - MPVS, Chronoamperometry, Chronopotentiometry (optional)
 - Electrode Potential
- Potentiometric Titration (optional): Direct and Back Titration
- Conductivity (planned feature)
- Spectroscopy

Features

- User-friendly software offers:
 - Flexibility in programming of techniques and automation
 - “Get Me Expert” feature provides easily accessible factory support and remote troubleshooting
 - Embedded User Help
 - Analyze all additive components on the same turntable
 - Advanced reporting and data handling including: Statistics, Trend Analysis and History Management
- Communications: TCP/IP Networking, LIMS

Advantages

CVS Analysis

- Largest application library
- Temperature controlled CVS analysis cell
- Excellent selectivity
- User-independent accuracy especially for MLAT analytical techniques
- Low-maintenance reference electrode
- Built-in galvanostat for advanced electrochemistry

Wide Range of Automation Options

- VMS Delivery
- DI Water Spray Cleaning
- Waste Removal
- Automated preparation of support electrolyte and calibration standards

Multi-Language Operation

Configuration Options



QualiLab Elite V10
Most Compact



QualiLab Elite V20
Fastest



QualiLab Elite V30
Most Convenient

Manual analysis	Automated analysis up to 12 samples	Automated analysis up to 48 samples
0-, 2-, 4-syringes	2- or 4-syringes	4-syringes
Auto prep of support electrolyte	Auto prep of support electrolyte and calibration standard	Auto prep of support electrolyte and calibration standard
Automated VMS delivery*	Automated VMS delivery*	Automated VMS delivery
UV-Vis spectroscopy*, Potentiometric titration*	UV-Vis spectroscopy*, Potentiometric titration*	UV-Vis spectroscopy*
		Automated cell rinsing and draining

*Optional



Combines analytical techniques in a single benchtop lab instrument:

- CVS analysis
- Potentiometric titration
- UV-Vis spectroscopy

Electroplating processes play a critical role in the manufacturing of electronic devices. These processes rely on the use of organic additives – suppressors, accelerators and levelers, and inorganic components – that selectively control deposition, allowing the process to be tuned to a desired deposition profile. Plating bath analysis is required to precisely control the balance of multiple components to ensure void-free, bottom-up filling of small, high-aspect-ratio features and other functional properties. The QualiLab Elite system—combined with application-specific analytical methods—provides accurate analysis for easy replenishment and improved yield from your plating solutions.

Request a demonstration today.

info@ecitechnology.com

KLA SERVICES

From tool installation and system optimization to productivity enhancements and global supply chain management, KLA Services is a trusted partner to customers around the world — delivering an unrivaled experience focused on maximizing tool performance and availability.

© 2023 KLA Corporation. All rights reserved worldwide. KLA reserves the right to change the hardware and/or software specifications without notice. All brands or product/service names may be trademarks of their respective owners including but not limited to: KLA, ECI Technology.

KLA Corporation
www.kla.com

Rev 2.1 Jan 04, 2024