

QUALI-FILL® LIBRÅ

Online Chemical Management System



The Preferred Analyzer for Advanced Packaging, Electroplating and Electroless Deposition

The new QUALI-FILL® LIBRÅ online standalone metrology systems have been specifically engineered to quantify material properties like Ni, Cu, SnAg and other crucial chemical species in plating solutions used for wafer packaging and other applications.

The QUALI-FILL LIBRÅ system has a modular design and can be configured to fulfill users' demands. Developed based on ECI's established QUALI-FILL chemical management platform, this sturdy system easily combines with R&D and production fabrications and is in compliance with the latest SECS/GEM and safety guidelines.

The QUALI-FILL LIBRÅ K series takes metrology performance to an ultra-safe and ultra-clean wafer fabrication environment. It helps monitor plating chemicals used for wafer level packaging processes like TSV, RDL, UBM and Micro Bumping processes like fan-out, SOC, and others.

The QUALI-FILL LIBRÅ A system has been developed for the tough settings of printed circuit board manufacturing. It is exclusively designed for analyzing plating chemicals in PLP and PCB manufacturing, like Electroplated Ni, Cu, Au, Pd, Sn and Sn-alloys, as well as Electroless Ni, Cu, Pd, Au and Zincate.

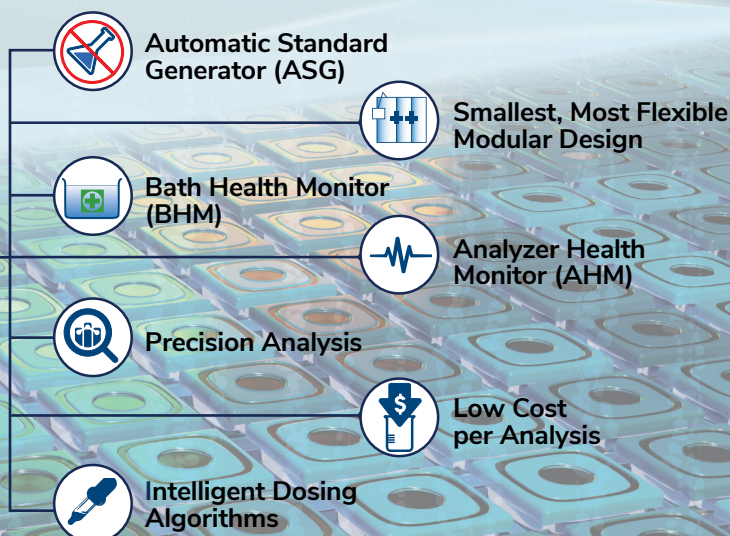
The QUALI-FILL LIBRÅ M system is a semi-automated analyzer with six to 12 sampling ports.

The smart QUALI-DOSE® system combines easily with QUALI-FILL LIBRÅ systems to accurately dose plating baths with replenishing solutions.

Key Features

- Versatile, modular design supports various types of manufacturing lines
- Includes several analytical techniques to find and quantify the concentrations of crucial chemical species
- Parallel close-loop integration to several plating process tools
- Parallel analysis of various chemistries
- Users can communicate with fabrications CIM via SECS/GEM
- Multiple tanks can be supported for each chemistry

**FOWLP • TSV • Cu Pillar • Bumping
RDL • PLP • PCB**



Key Benefits

- The main advantages of the QUALI-FILL LIBRÅ analyzers are their patented and proprietary methods to detect and quantify contaminants like photoresist, additive by-products and trace foreign metals. Such contaminants have an impact on the plating results and are crucial to managing the quality of the plated products.
- The system monitors and allows process understanding of control process solutions and waste streams for treatment or recycling
- Intelligent dosing capabilities help tighten the process
- Unprecedented repeatability and accuracy can be ensured by using minimal, cost effective reagent solutions. High value analyses can be performed with low consumables and low cost per analysis.
- ECI offers fast development times for brand new chemistries
- Flexible configurations with an extensive range of applications

Breakdown Products

Process Solution	Contaminant	Analytical Technique
Cu	Suppressor BP Accelerator BP Leveler BP Cu(I) H ₂ O ₂ PR/contaminant Metal contaminants: Sn, Ni, Co, Au	SBP, ST-based, TOC DPA, ABP, AABP, HPLC DPA-C CVS DPA-C CVS Spectroscopy/Titration
Sn and SnAg	PR/contaminant (SnIV) Metal contaminants: ICP Cu, Ni, Co, Au	Spectroscopy/Titration ICP
Ni, Co	PR/contaminant Metal contaminants: Cu, Sn, Au Leveler BP in Atotech chemistry	Spectroscopy UV-Vis for Cu, ICP for Sn and Au UV-Vis
Au	Metal contaminants: Cu, Ni, Co, Sn	UV-Vis for Cu, ICP for Sn and Au

Facility Requirements

Dimensions	1 cabinet: 762 mm (30") W x 2064 mm (81.2") H x 610 mm (24") D 2 cabinets: 1524 mm (60") W x 2064 mm (81.2") H x 610 mm (24") D 3 cabinets: 2286 mm (90") W x 2064 mm (81.2") H x 610 mm (24") D
AC	180 to 245 Vac, 50/60 Hz, 15 Amps
Data communication	Multiple communication protocols: Serial, TCP/IP, RS-232, SECS/GEM, Serial
Conforming standards	CE, SEMI F47, SEMI S2-S8, NFPA 79

Backed by ECI Technology's Global Support

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