

Increase the Level of Automation

From sample preparation to LC or GC analysis

Agilent and METTLER TOLEDO - Balance Workflow



Facing a gap between the lab balance and your chromatographic system?

Agilent and METTLER TOLEDO have jointly developed an integrated workflow solution that addresses the most pressing root causes for laboratory failure investigations and rework, while supporting the current processes in the laboratory.

This integrated solution allows the automatic and seamless transfer of weighing data and its metadata from the METTLER TOLEDO LabX Balance software to the Agilent OpenLab CDS, and also enables other productivity aspects. It significantly reduces potential errors, by avoiding the need for manual calculations or data transcription throughout the entire analytical workflow.

Sample preparation and the laboratory workflow

Many tasks are performed in the daily routine of a laboratory. Sample preparation is an especially demanding and time-consuming sequence. Half of the errors¹ in the lab happen during sample preparation. Manual data transcription is also error-prone, which can result in missing important sample information concerning metadata, but also affects weighing data results. This can cause poor traceability between the sample preparation process and the analytical outcome. As a consequence, rework of tasks is often required, which is an additional time and profit sink for laboratories.

On average, more than 60%¹ of the personnel-active time in laboratories is spent on sample preparation tasks like the weighing of samples, preparation of calibration standards, and generation of control standards.

The manual process of sample preparation for LC or GC results

Today, many steps in sample preparation are executed manually. Weighing in of samples and standards still follows a traditional way of transferring substances into volumetric flasks on weighing paper, facing all the downsides of loss or contamination. Some dilution steps require sample to be stored in a chromatography accepted container format (typically a septum vial) for the sample to be placed into the instrument autosampler.

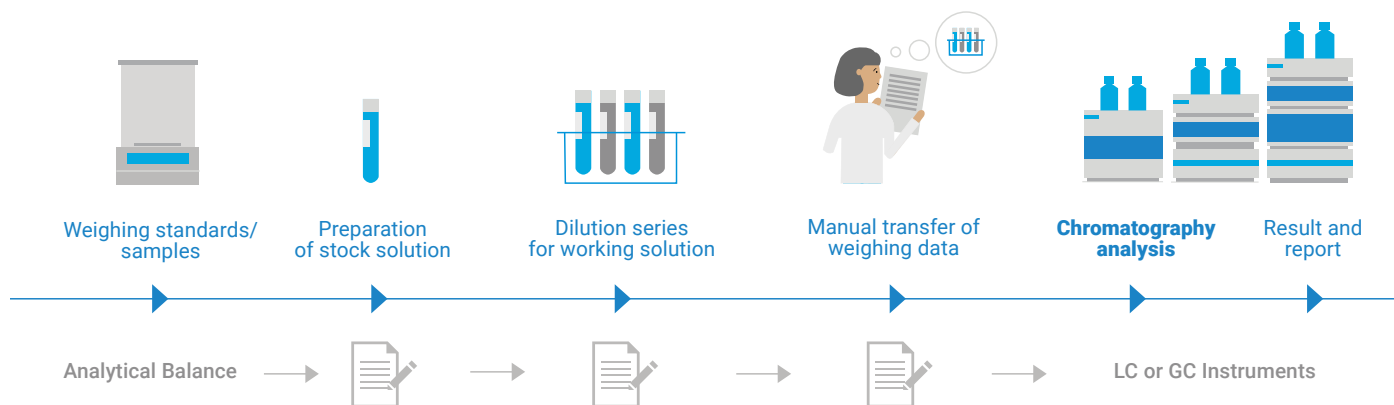
Agilent
OpenLab



Take your chromatography lab to the next level

- Higher productivity by automated processes
- Implementation of barcode centric processes for optimal efficiency and reduced errors
- Elimination of manual transcription with automated data transfer
- Reduction of turnaround time

¹ R.E. Majors, LC/GC Magazine, 2002

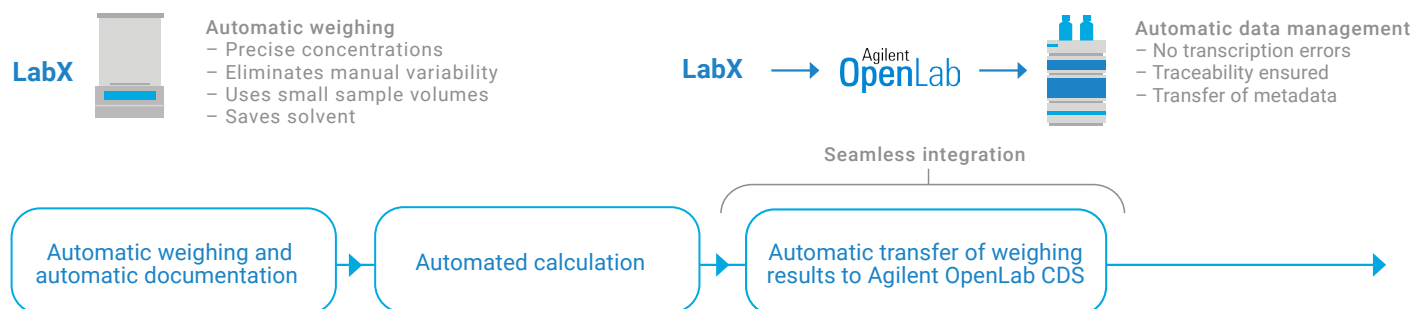


Along the lines of sample handling, a parallel, additional process for data handling has to be executed. A significant amount of manual transcription is required for this process, and metadata and general lab information are often documented via paper lab journals. This is an error-prone and time-consuming procedure, which also requires a personnel-intensive check in regulated laboratories, leading to drastically reduced lab productivity.

How to overcome these productivity gaps?

The integrated solution developed by Agilent and METTLER TOLEDO allows for the automatic and seamless transfer of weighing data and its metadata from the LabX Balance software to the OpenLab CDS. Gaining the highest reliability, user support, and productivity, this barcode workflow is beneficial. Every workflow step can be controlled by ID entry or barcode reading. The user is guided through the appropriate weighing process, and samples and/or standards are created with an optional barcode. Weighing information and metadata are transmitted directly from LabX to OpenLab with the corresponding sample ID. By reading the labeled container, OpenLab can send information about a single sample, or generate a sequence to launch the LC or GC analysis with one click.

The workflow solution developed by Agilent and METTLER TOLEDO addresses major challenges of laboratories today, by automating weighing processes with METTLER TOLEDO balances, and providing automatic data management from LabX to OpenLab. Audit trails additionally provide seamless documentation of the entire workflow, compliant with 21 CFR part 11.



To learn more, contact your local Agilent sales representative or visit

www.agilent.com/chem/openlab-balance-integration

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