tetrascience

Streamline batch release workflows between Signals Notebook, LabX, and Tiamo

CUSTOMER STORY

Inefficiency and high compliance efforts plague batch release labs

Traditional workflows in batch release labs still require numerous manual data handling and transformation tasks. This error-prone, tedious, and time-consuming work places an unnecessary burden on quality and compliance teams, causes tens of thousands of data errors for enterprise-scale batch release labs, and locks data in silos, making trend analysis difficult.

One TetraScience client reported that in an average stability report submission of 2000 data points, manual data handling introduced 6 to 7 mistakes per report, greatly increasing the cost of production, turnaround times, and the organization's compliance efforts.

When a global biopharma finally decided to digitize its batch release workflows, the company engaged with TetraScience. Its first priority was addressing the high-volume data flow between Revvity Signals Notebook and its Mettler Toledo LabX and Metrohm Tiamo instrument software, for weighing and titration, respectively.

Accelerate workflows and automate data engineering

The Tetra Scientific Data and AI Cloud™ enables seamless data transfers between Signals Notebook, LabX, and Tiamo through industrialized integrations and advanced data engineering. Simultaneously, this *sui generis* data stack matures data so it can be easily leveraged for downstream analysis in whatever analytics program the organization prefers, including AI-based applications.

Scientists who were once tasked with manual data transfer, transformation, and QC will be able to simply define sample information within their Signals Notebook, click, and the Tetra Scientific Data and AI Cloud populates the relevant LabX or Tiamo software with the exact sample information. After the experiment is executed, the Tetra Scientific Data and AI Cloud automatically transfers the results data back to their Signals Notebook. See a live demo of the use case here.

Streamline data flows and reduce errors

The round-trip data flow powered by the Tetra Scientific Data and AI Cloud ensures data integrity and decreases overall experiment time by eliminating manual data entry, manual data processing, and the need for redundant QC tasks like second-scientist review.

Based on efficiency trends, this global biopharma can expect:

- 40% increase in lab productivity
- 4x reduction in error rate
- Reduction in FTEs required for QC review

Once this workflow is running, the organization can quickly expand its data automation beyond weighing and titration by leveraging the largest set of industrialized instrument integrations in the world.

Power your QC labs with AI-native data

AI data analysis in batch release laboratories can help identify out-of-specification (OOS)/out-of-trend (OOT)/out-of-expectation (OOE) events before they happen. However, if data is trapped in vendor silos, or in proprietary/unstructured formats, the data cannot be interpreted by AI. As a result, a biopharma organization's most valuable asset—its data—has no practical utility for predictive analytics, let alone AI.

The Tetra Scientific and AI Cloud transforms the raw scientific data of batch release workflows into AI-native Tetra Data through a highly sophisticated data engineering process, providing enterprise-scale biopharmas the atomic building block for Scientific AI in batch release laboratories.

Challenges:

A large biopharma wanted to eliminate manual data handling from a high-volume batch release workflow that included an electronic lab notebook (ELN) along with balance and titrator software.

Solution:

The Tetra Scientific Data and AI Cloud enables the seamless transfer of data between Signals Notebook, LabX, and Tiamo through integrations and advanced data engineering. Simultaneously, the Tetra Scientific Data and AI Cloud will prepare data for downstream use in analytics applications, including AI.

Result:

The Tetra Scientific Data and AI Cloud powers round-trip data flows in batch release labs, while transforming raw, siloed data into AI-native Tetra Data.

This global biopharma can expect:

- **40% increase** in lab productivity
- **4x reduction** in error rate
- **Reduction in FTEs** required for QC review
- **AI-native data** for prediction and troubleshooting

Learn more

Ready to see what TetraScience can do for your batch release lab?

Contact us today