

Sasol Embarks on Journey to Digitalize Laboratory Operations with STARLIMS

Sasol has transformed lab operations for enhanced productivity and data traceability with the STARLIMS R&D/Quality Manufacturing Informatics Platform.

Sasol, a global chemicals company committed to innovating for a better world, offers a broad, state-of-the-art portfolio of specialty and commodity chemicals. Its products are manufactured in facilities spanning across 22 countries and regions and used for a wide range of applications and industries.

In 2018, the development of a new, state-of-the-art laboratory in Nanjing, China prompted Sasol to embark on a digital transformation journey, selecting the STARLIMS R&D/Quality Manufacturing Informatics Platform as its technology of choice. Through Sasol's work with STARLIMS, Sasol has achieved enhanced productivity, standardized data management, and significantly reduced risks from data errors.

BUSINESS CHALLENGES

Prior to adopting the STARLIMS R&D/Quality Manufacturing Informatics Platform, Sasol faced challenges with fragmented, decentralized data. Laboratory managers relied heavily on manual and paper-based records to manage lab resources, business processes, and quality control. The management model also depended on team members to record and process data, a strategy that quickly became unsustainable during critical moments.

Without proper resources or systems, lab efficiency slowed to accommodate the heavy workload of retrieving data for analysis. Sasol also faced increasingly stringent regulations that demanded a mature solution to track and verify results, which is needed to obtain regulatory approval and/or maintain compliance.

The construction of a new factory in 2018 triggered a rapid influx of data volume, making the management of the business even more complex. This served as a catalyst for the team to reevaluate their technical needs. Sasol decided it was time to digitize its quality management and informatics systems so that it could ensure the continuity of its existing operations, while seamlessly adapting to its expanding business. With the need for its existing systems, including a Manufacturing Execution System (MES), to be integrated with its informatics data, the company decided to further optimize processes and improve efficiency, prioritizing data traceability and visualization, automation, and connectivity with enterprise systems in its pressing search for an informatics system.



"We love the STARLIMS system's flexibility."

Lab Engineer, Sasol

WHY SASOL CHOSE STARLIMS

The decision to move forward with STARLIMS was based on several key factors. The platform's united solution aligned with Sasol's user requirements and seamlessly integrated with Sasol's existing systems, including the MES system. STARLIMS' strong capabilities in local implementation and after-sales support in China provided Sasol with the assistance needed to drive adoption and transform the business.

Sasol embarked on a search for an informatics solution that would address these challenges and streamline its lab operations. Through multiple rounds of discussions, Sasol evaluated its user requirements based on broad and detailed perspectives, centering around the key aspects of its laboratory management. The company sought a high-performing system aligned with its user requirements that also provided local support in China.



RESULTS

With resounding positive feedback from its laboratory managers, STARLIMS has helped Sasol significantly streamline laboratory processes, in turn reducing manual effort and improving overall work efficiency. Sasol has achieved many benefits since onboarding STARLIMS, including:

Standardized Data Management & Traceability

STARLIMS supports the standardization of data management practices, improving data integrity. With visual alerts and reminders for values exceeding control limits, STARLIMS significantly reduces Sasol's risk of analytical data input errors. The system's robust data traceability also makes it easier to track and verify data and results, which is a crucial component in trying to achieve regulatory compliance.

Connectivity & Integration

STARLIMS integration with Sasol's MES allows for product information to be collected from a canning system, which improves data consistency and eliminates the need to verify that the product labels match Certificate of Analysis (CoA) reports.

Automation

By automating lab processes with STARLIMS, Sasol has improved its lab operations on multiple different levels. For example, the system automates the generation of CoA reports with color-coded alerts for outlier data, reducing the risk of data output errors. Additionally, the automated return of qualification status enables timely inventory updates, greatly optimizing their sample storage management and enhancing efficiency across all functions.

“The utilization of the system has become increasingly smooth, and different departments actively provide suggestions for system optimization, such as the automated label printing requirement from our logistic department, which we plan to implement soon.”

Logistics Team Member, Sasol

To this day, the system continues to be optimized and expanded to align with Sasol's fundamental objectives. With STARLIMS as a trusted partner, Sasol's commitment to innovation for a better world remains unwavering, driven by enhanced efficiency and reduced risk in its laboratory operations.

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