SIMATIC IT Unilab
Your Next Generation LIMS

siemens.com/lims

Answers for industry.
The QC lab has to ensure overall product conformity and quality. SIMATIC IT Unilab bridges the gap between the lab and production.

It supports the shift from off-line analysis to at-line quality checks during production, as defined in the SOPs, with immediate feedback to the plant. This optimizes decision-making and supports corrective action taking and drastically reduces scrap and rework.

The lab is the source of innovation in a company. SIMATIC IT Unilab includes tools for brand-watching and R&D and stability studies. As a core module of SIMATIC IT R&D Suite Unilab helps bridge the gap between the lab and production. It closely interacts with formula management and ELN tools.

This allows scientists to make optimum use of their time, and speed up new product introductions.

Lab information has to be available 24/7 for customers to follow up their analysis. SIMATIC IT Unilab offers functionality to support direct customer interaction, immediate cost calculation for analysis requests and automated invoicing. This reduces the number of entry-errors, decreases administrative workload for the lab staff, and increases customer satisfaction.

Quality

Efficient Quality Management
Industrial QC laboratories need to protect a company’s reputation

Innovation

Efficient time-to-market
R&D laboratories need to bring new products to the market faster

Service

Maximize Lab Efficiency
Independent service labs need to increase customer satisfaction

As a stand-alone system or as an integrated part of SIMATIC IT, in smaller lab environments or as an enterprise LIMS, SIMATIC IT Unilab is one of the world’s leading LIMS solutions – with a top position in the process industry. SIMATIC IT Unilab has proven its reliability at a large number of multinational companies in process industries. In addition, SIMATIC IT Unilab is an asset to a large number of laboratories in the environmental, animal health and water analysis sectors as well as various other industrial environments. SIMATIC IT Unilab is a multi-lab, multi-language enterprise LIMS for QC, service and R&D labs. It includes modules for stability testing, instrument connection, equipment management, personnel qualification management, barcoding, user management, cost calculation, and reporting.
Your Lab in Good Hands

Access definition – User management:
Definition of access and access type is possible per user or user-group
• to applications or functionality
• to data (read/write)
Single sign on for Windows users is possible
Full audit trail of user actions
As access to your LIMS is possible from outside the company’s network, the most innovative and stringent security measures are in place to protect your data.

Adapt your LIMS to your lab requirements through configuration of the application (over 80% of functional configuration can be done by your own staff).
There is no need to modify the standard software itself. No IT staff or vendor involvement is required.
The configuration approach guarantees your full benefit from functional enhancements in future releases.

The browser based approach considerably limits the need for hardware and software handling, as no application rollout is required and any device running a web browser can be used.
Easy network set-up and LIMS integration with other systems based on the flexible and scalable architecture
The back-up and archiving procedures enable the availability of historic data as well as real-time data.
SIMATIC IT Unilab enables fast exchange of quality information all along the production workflow covering multiple sites and involving different departments, making life easier for the various roles within the laboratory and production test environment.

Easy to Use - Easy to consult

**User friendly**
- Dedicated user interface: Only see what you need and what your access level will allow you to use.
- Worklists and guidance through automated workflows
- Easy browsing and searching
- Pre-defined reports
- Direct access for external parties (customers, suppliers and field workers)

**Instrument connections with dynamic connection for data exchange**
- QR-code scanning
- Result verification and validation upon entry
- Automatic analysis request handling based on test-plan
- Cost calculation for analysis requests
- Automated invoicing processes

Lab Manager - Easy Lab Management

**Transparency**
- Centralized collection, management, and storage of all lab data
- Model and manage workflows
- Reporting and dashboards for short and long term lab management
- Detailed management of users and user groups
- Availability of historic data as well as real-time data

**Trending and SQC for decision making support**
- Management by Exception
- Standard operating procedures for offline and atline quality checks
- Equipment and qualification management
- Lab performance analysis
- Management by exception

IT Manager - Easy to maintain

**Future oriented**
- Modular and scalable structure of functionality
- Pay for what you need
- Use what you have (platform, device and browser agnostic)
- Access definition (single sign on for Windows users is possible)

**Service oriented architecture**
- Easy network set-up, easy implementation
- LIMS integration with other systems (interfaces to ERP, MES, PLM)
- Standard lab equipment interfaces

Application Manager - Easy to Configure

**Configurable**
- Standard templates fit 80% of your lab requirements
- Clear graphical user interface for lab configuration
- Minimum hardware and software handling
- Limited Database administration requirements

**Backup and archive procedures**
- Brand-watching and R&D and stability studies
- Reduce IT cost, no application rollout needed anymore
- Reduce downtimes during interventions
- Corporate architecture with multi-lab, multi-language
Leverage Your Lab Activities

**Regulatory Compliance**
- Full workflow management
- Access definition and control
- Secure log-in
- Electronic signatures
- Audit trail and version control
- SOP support (Standard Operating Procedures)
- Instrument data storage
- Lab and quality data archive & backup
- Equipment management
- Personnel qualification management.

**Lab Efficiency**
- Time or event based sample Planning
- Worklists and worksheet management
- Verification and Validation
- Trending and SQC
- Unicode and Multilanguage support
- Multi-time Zone and Multi-site support
- Centralized lab and quality data
- Manages all types of analyses
- Instrument connections
- Automated reporting

A network of Siemens offices and strategic business partners backs up SIMATIC IT Unilab with the relevant skills and know-how, providing a complete range of services, such as training, support, implementation and validation.
# Make Your Lab Work for You

## User Management
Access definition to features and data, based on site, department, user profile or user group.

## Equipment Management
Centralizes all information on each piece of equipment and supports calibration and maintenance, including the required audit trail.

## Management by Exception and Alarm handling
Lab workflow configuration to support automatic validation of in-spec analysis, leaving the lab supervisor the time to focus on off-spec samples.

## Reporting
Advanced web enabled query, data analysis, and reporting tool based on MS SQL Server Reporting Services technology, for data retrieval and manipulation in standard automated, pre-defined, or ad-hoc reports.

## Validation Pack
Illustrates that SIMATIC IT Unilab was developed, encoded, reviewed and tested following a verifiable life cycle and includes a Certificate of Independent Audit.

## Instrument Connection (Device Input Agent)
Through a dynamic connection for data exchange, instruments can interact with LIMS, e.g. to change specifications, log in samples, enter parameter or method results, extract data, validate metrics, etc.

## Qualification Management
Centralizes all information on personnel to ensure appropriate certification and training.

## Cost Calculation Module
Automates the invoicing process for commercial labs by calculating the costs of an analysis based on price catalogs and passing these to accounting.

## Validation
Through a dynamic connection for data exchange, instruments can interact with LIMS, e.g. to change specifications, log in samples, enter parameter or method results, extract data, validate metrics, etc.

## Stability Module
Detects the effect on quality of environmental aspects (temperature, humidity, light) to determine storage conditions, retest periods, and shelf life when new products, ingredients or dosage forms are introduced.

## Worklists & Work instructions
Worklists per user with guidance through automated workflows and instructions on methods and procedures to follow.

## Verification & validation of results
Verification of results against physical constraints and automatic input validation against specifications, set limits or historic data, with notifications in case of deviation.

## Integration & Interoperability
Data from other systems can be transformed using any type of EAI tool into a standardized format that can be imported into Unilab through its service oriented architecture.

## Barcoding, QR-coding
SIMATIC IT Unilab can generate and define barcode labels for faster uploading and tracing of quality data.

## Trending & SQC
Trending from the result window based on constantly updated statistical graphs. This enables to identify and follow quality trends online or via SQC, and to underpin any decisions with factual information.

## Search & Filter
Easy search function including auto-completion, filter in list, text search or time-stamp search.
Capitalize on Quality

SIMATIC IT Unilab will not draw the line at lab efficiency, but will support overall quality, product innovation and production efficiency in the bargain. Much more than a LIMS, it is a full blown Quality Management System. It offers top of the range functionality to handle all lab activities in the most effective and least time-consuming manner.

- Realize the Paperless lab
- Big data handling
- Integration with ERP, MES, PLM
- Integrated quality management
- Reduce IT costs

- Easy implementation and roll-out
- Reduced scrap & rework
- Optimum lab automation
- Greater lab efficiency
- Less lab administration

- Accuracy: less entry-errors
- Eliminated application downtime
- Better decision support
- Cost-efficient compliance
- Cost-efficient innovation

“With the release of Unilab V7, Siemens has done a very nice job of re-imagining the application for a modern platform” said Greg Gorbach, vice president, ARC Advisory Group. “Undoubtedly their customers will like it.”
LIMS in the cloud

Fully web-based. No application downloads or installations are required to start using the software. SIMATIC IT Unilab is completely device, brand, and platform independent.

Accessing data and functionality is possible through any HTML5 web browser (MS Internet Explorer, Apple Safari, Google Chrome, Firefox).

Makes optimum use of hardware already available, through horizontal and vertical scalability of databases allowing users on different sites to share the data available in the (server) database.

Tablet Support thanks to the single page application based responsive web design. Users can easily switch between compact and comfort screen in view of the device used.

Ergonomic screen design displays only the active functions and offers drag&drop and docking features for each user to re-arrange the workscreen and adapt it to his own tasks and preferences.
Among these integrated solutions for paperless manufacturing is the Siemens MOM (Manufacturing Operations Management). This is a holistic solution to model, visualize, and harmonize business processes globally, meeting companies’ growing need for manufacturing IT that can handle product, production, quality and plant data, and share these among the various parts of a manufacturing organization.

Siemens MOM comes complete with Manufacturing Intelligence capabilities. It also provides all links in the chain connecting product development with production. In process industries, it does this through a software platform for R&D, including LIMS, specification, formulation and recipe management. In discrete industries, it connects directly to the engineering world.

The standard based integration with PLM, ERP and Industrial Automation completes the unique offer that creates the flexibility and scalability to maximize manufacturing and market responsiveness.

Increase manufacturing and market responsiveness
- Faster from idea to finished product
- Optimized quality performance
- Operational Intelligence based on process, production and quality data

Manufacturing Operations Management covers:
- Product Specification and Formulation
- Manufacturing Execution Systems
- Advanced Planning & Scheduling
- Enterprise Manufacturing Intelligence
- LIMS for Lab Automation and QA/QC
- Integrated Quality Management
- HMI Software / SCADA
- Distributed Control Systems

The Siemens vision for the digital factory includes the digital enterprise platform, a software platform combining the tools for the digitalization of the complete product and production lifecycle, ranging from product design and definition, over plant design and planning, to production scheduling and execution.
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