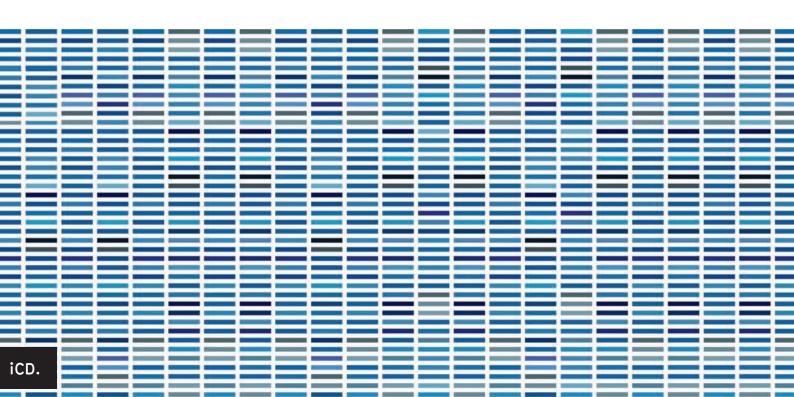
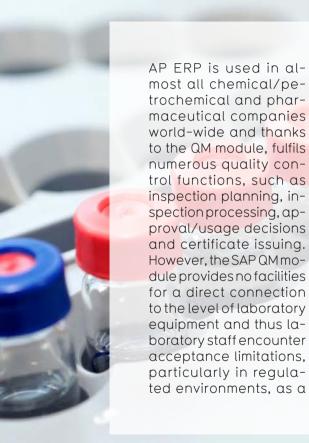
# LABS Suite LABS/QM Middleware



LABS/QM Middleware to connect lab instruments to SAP



great deal of effort must be expended to manually re-create the measurement data that is already electronically available in the measuring instruments. Naturally this can result in errors as well as the incomplete transfer of the data.

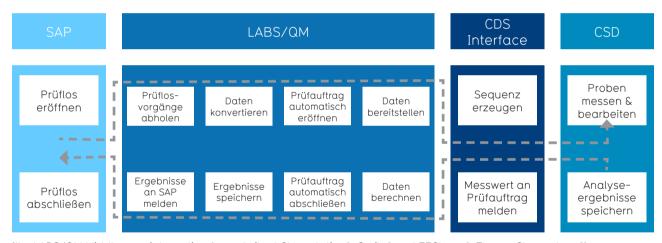
The LABS/QM Middleware provides the option to communicate information from the SAP inspection lot to any measuring instruments or systems and to automatically transfer the results expected by the SAP QM. This means that errors caused by manual data entry are entirely excluded, and a GxP/FDA compliant workflow is achievable.

The measurement data for all measurements can be centrally archived and evaluated, ensuring central, vertical integration. In addition, the LABS/QM Middleware increases the automation level in the laboratory, significantly contributing to improved efficiency and employee acceptance, and to the resulting increase in quality and reduction of costs for the entire laboratory workflow.

## WORK FLOW

The information on SAP inspection lots is directly converted by the LABS/QM Middleware and provided in a suitable data format for the appropriate measuring instruments and systems. Using the Lab Exe-cution System (LES)

function, additional inspection steps can be added in LABS/QM to the SAP scope of inspection. For example, this information can be used for generating sequences for all common chromatography data systems.



Ill.: LABS/QM Middleware integration (e. g. Agilent Chemstation®, Cerity® und EZChrom®, ThermoChromeleon®)

In addition to complex measurement systems (e.g. chromatography or GC/ MS), even simple laboratory instruments, such as scales, gauges or automatic titrators, can be connected directly to SAP QM via LABS/QM. After completing the measurement and performing a review within the analytical control software. the measured values are transferred to the LABS/QM Middleware for additional calculations and conversions. e.g. taking references, blank or control samples, etc. into consideration. Internal quality control based on OOS, OOT and OOE is possible. Thereafter, the analytical data expected by the SAP QM is transferred via the middleware directly to the inspection lot/test unit of SAP QM, where the evaluation of the results is performed. The processing of the inspection lot/test unit can then be completed, the usage decision made and the appropriate follow-up measures, such as transfer posting of the warehouse stock, initiated.

### Funktionsumfang

- »Unidirectional interface for simple laboratory instruments
- »Bidirectional interface for complex measuring instruments or control and evaluation software
- » Calculation and conversion functions, e.g. taking into account standards, blank value measurements
- »Online/offline operation
- »Function enhancements and connectable plug-ins specifically for the measuring instrument
- »Statistical evaluations
- » Automated generation of in-spection journals, raw data sheets, labels, etc.
- »Storage of raw data

#### Technology

The LABS/QM Middleware is linked with one or more SAP QM systems via WEB Services for the SAP WEB server Netweaver and its SAP process integration SAP PI (the further development of the exchange infrastructure, SAP XI). These interfaces have been certified by SAP, in association with the LABS Suite. By configuring the connection, both online and offline operation is possible on the LABS/QM Middle-ware page. This will ensure that laboratory instruments can be constantly used 24/7 for inspection and documentation even if SAP QM is not available.



The LABS Suite was most recently re-certified in 2015. Furthermore, iCD. has been an SAP development partner since 2015. LABS/QM is also available in the SAP store (store.sap.com)

- »Laboratory staff can work with measuring instruments (and their software), without learning how to use SAP or LABS/QM.
- » SAP inspection lots are "directly" transferred to the instruments, preventing errors due to manual transfer.
- »LABS/QM receives the measurement data, independently performs calculations and automat-ically communicates the results to the appropriate SAP inspection lot.
- » Measurement data can be checked and evaluated in LABS/QM. Depending on the outcome, the results are automatically transferred to SAP or checked once again.
- » Results (raw data, interim results) are stored in the LABS/QM database.
- » If SAP is not available, all laboratory data is temporarily stored in LABS/QM.

## Benefits

#### We look forward to hearing from you!

iCD. has been well-known internationally for outstanding laboratory software solutions and associated consulting services since 1986.

More than 300 large and medium-sized businesses from different fields, some operating globally, trust in our software solutions.

You can have confidence in our expertise.

We will support you through every phase of your project to ensure that you successfully implement the best possible LIMS solution for your company.

