



POWERED BY  
**SAP NetWeaver®**

# LABS/QM

Middleware to connect SAP™  
PLM / QM® to the laboratory  
instrument level

## Benefits

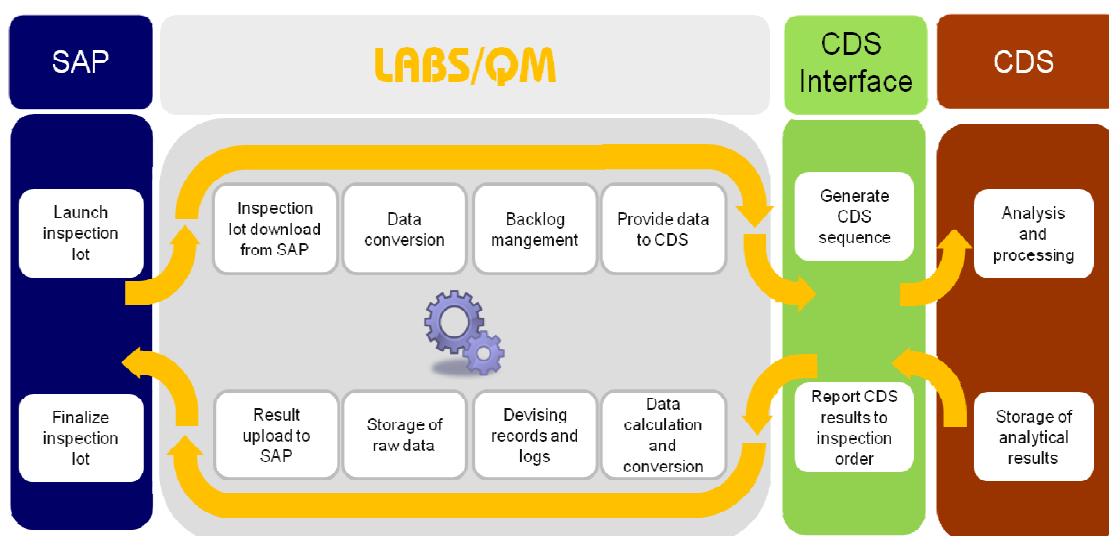
SAP™ ERP is used almost in all chemical/ petrochemical and pharmaceutical companies world-wide. By the use of the PLM QM module a broad variety of functionality is achieved, which formerly was reserved for the traditional Laboratory Information and Management Systems. However, the SAP PLM QM module provides no facilities for a direct link to the level of laboratory equipment; thus, in the legally regulated area this system is limited in acceptance. But now, for the first time, the new Middleware LABS/QM offers the possibility to connect any measuring device or analytical system directly to the SAP™ QM. Therefore, errors caused by manual data entry are entirely excluded, and, in this way a GxP/FDA compliant workflow is achievable. In addition, the Middleware LABS/QM increases the automation level in the laboratory, thus leading to an improved efficiency of the employees, resulting in cutting the costs of the entire laboratory workflow.

## Workflow

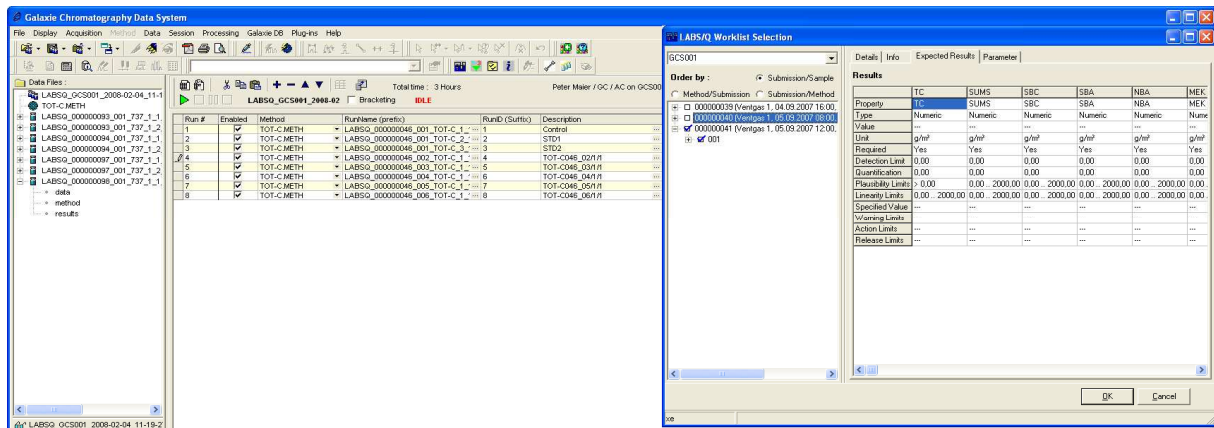
The information on the SAP™ inspection lot is directly converted by the Middleware LABS/QM to a suitable data format for measuring instruments and systems. For example, this information can be used for generating sequences within all common chromatography

data systems, like Agilent Chemstation®, Cerity® and EZChrom Elite®, Dionex Chromeleon®, Jasco Chrompass®, Perkin Elmer Turbochrom® or Totalchrom®, Varian Galaxie®, Waters Millenium32® and Empower2®. In addition, the derived data are suitable as sample information for a variety of further analytical instruments and control software, e.g. for IC, ICP, AAS, IR, NIR, elemental analysers and others.

As well as analytical systems with a complex structure as mentioned above, even simple laboratory devices can be connected directly to the SAP™ QM via the LABS/QM, e.g. scales, gauges, or automatic titrators. After completing the measurement and performing a review within the analytical control software, the results are transferred to the Middleware LABS/QM for additional calculations and conversions, e.g. in consideration of references, blanks, or control samples and others. Thereafter, the analytical data are transferred via the Middleware directly to the inspection lot/test unit of SAP™ QM, where, as usual, the valuation of the results is achieved, thus, completing the treatment of the inspection lot/test unit, reaching the usage decision, and, as a result, the subsequent tasks can be triggered off; e.g. transfer posting of the inventory.



SAP—LABS/QM—CDS Workflow



Direct allocation of a SAP inspection lot via the LABS/QM/CDS-Interface to the Varian Galaxie Chromatography Software™

## Technology

The connection between the Middleware LABS/QM and one or even more SAP™ QM systems is set up via WEB services to the SAP™ WEB server Netweaver® and the standard communication software Exchange Infrastructure (XI). These interfaces are certified also for the LABS/Q® LIMS by SAP AG.

Because of the buffering system for information within the Middleware LABS/QM an Online and Offline operation is possible, thus, enabling an ongoing inspection and documentation in the laboratory over the complete range of 7 days a week and 24 hours a day, even if SAP™ is not available at any time!

## Scale of Functionality

- Unidirectional interface to connect simple laboratory devices
- Bidirectional interface to connect complex measuring instruments or control and calculation software
- Functions for calculations and conversions, e.g. calculation against references and blank readings
- Online / Offline operation
- Upgrades of functionality depending on attached devices and plug-ins for connections
- Statistics
- Automatic generation of inspection certificates, raw data sheets, labels and more
- Storage of raw data

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### Portfolio

|   |  |   |  |   |
|---|--|---|--|---|
|    | LIMS   |  |  |    |
|    | SAP Middleware   |   |  |   |
|    | Synthesis and Recipe Optimization                              |   |  |   |
|   | Dissolution Tests  |   |  |   |
|  | Integration of Recipe Management, LIMS and Recipe Optimization |   |  |   |
|  | Laboratory Cost Calculation                                    |   |  |   |
|  | Quality Control Cards  |   |  |   |
|  | Document Management System                                     |   |  |   |
|  | Method Validation (ICH/USP/FDA/DIN)                            |   |  |  |
|  | Services   |   |  |   |