

SampleManager™ LIMS: SampleManager IDI



To fully leverage modern Enterprise Resource Planning (ERP) solutions, organizations require automated access to all aspects of their business – including the laboratory – and are increasingly integrating their SAP R/3 deployment with LIMS (Laboratory Information Management System). This expedites data flow between the laboratory and the manufacturing functions, streamlines data handling, and integrates data collection and reports.

SampleManager IDI (Inspection Data Interface) from Thermo Electron is a solution to integrate the laboratory with the enterprise for comprehensive quality management support throughout the supply chain. Certified by SAP AG, SampleManager IDI was developed to address the needs of large-scale production facilities where integration with ERP systems has become a business requirement. SampleManager IDI interfaces SampleManager LIMS with SAP's Quality Management (QM) module of its R/3 ERP system. This helps provide consistent quality information to the entire organization, enhancing operational efficiencies.

SampleManager LIMS is designed to serve as the corporate standard across the enterprise. With proven, dependable technology and reliable services at its core, corporations can be assured of smooth, predictable enterprise deployments and consistent post-implementation performance that will minimize downtime and maximize productivity.

Efficient Quality Planning and Inspection Management

To remain competitive, companies need to deliver consistent product and service quality on a worldwide basis. They must be able to ensure tight quality control throughout their business processes, in compliance with strict regulatory controls – from material delivery through production, packaging and distribution, to worldwide customer service. Faced with the challenges of having to achieve higher productivity, faster time-to-market and a greater return on investment, companies have placed their Quality Management departments under increasing pressure to deliver quality-related information to an enterprise-wide information system.

Integrating Your Plant and Your Laboratory

SAP's R/3 QM offers comprehensive capabilities for maintenance and management of quality master data. R/3 users can plan all the inspection operations, characteristics, instructions, equipment and test parameters that are needed for quality testing.

Product Specifications

Production operations and the inspection function in the production process are becoming more inter-dependent or are in many cases being combined completely.

With SAP for example, this seamless integration enables operators to directly enter quality characteristics and results during production in the interactive process instruction sheet.

For physical and quality tests, as well as chemical and instrument calibration tests, where comprehensive sample management (sample lifecycle tracking, sample change history) is required, quality inspections can be conducted using SampleManager. In this case, SAP's QM generates the quality inspection lot record, selects the corresponding inspection plan and inspection data and downloads it to SampleManager for inspection purposes.

SampleManager IDI provides comprehensive functionality for inspection point processing, while also allowing inspection points to be created within the LIMS, via configurable table-driven SAP objects, and sent to SAP QM. Through the use of the SAP objects and user-driven mapping procedures, SampleManager IDI ensures the LIMS user has easy access to only the information they require, while ensuring it is both accurate and in a format that allows flexibility and can be easily understood.

Once the quality manager enters inspection results in SampleManager and the parameters are checked, they can be automatically sent to the R/3 system for further processing. Either SampleManager or QM can be used for usage decisions: scrap/store product, deliver, etc.

Managing Quality Over Time

R/3 QM and SampleManager offer powerful functions for quality analysis and reporting. The R/3 QM Information Management System offers both standard analysis (ABC analysis, cross inspection lot analysis and comparison), as well as flexible analysis. SampleManager users can complement these with sub-sample analyses or sample turnaround time analyses. By using the Statistical Quality Control module within SampleManager, any key parameter can be assessed historically with results showing the significance (if any) of any change. In addition, R/3 QM's integration with the Logistics



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Description	Identity	Internal name	P	Sap length	Sap name	Sap...	S	Sap versio
Record type for request record	QAIVC	RECORD_TYPE	Y	3	SATZART	1	Y	2
Number of the inspection lot	QAIVC	LOT_NO	Y	12	PRUEFLOS	2	Y	2
Operation sequence in task list	QAIVC	OP_SEQUENCE	Y	6	PLNFL	3	Y	2
Operation number	QAIVC	OP_NO	Y	4	VORNMR	4	Y	2
Plant of the inspection lot	QAIVC	PLANT	Y	4	WERK	5	Y	2
Inspection type	QAIVC	INSPECTION_TYPE	Y	8	ART	6	Y	2
Origin of the inspection lot	QAIVC	ORIGIN	Y	2	HERKUNFT	7	Y	2
Creation date of the inspection lot	QAIVC	INSP_CREATED	Y	8	ENSTEDAT	8	Y	2
User who created the data record	QAIVC	CREATED_BY	Y	12	ERSTELLER	9	Y	2
User who changed the data record	QAIVC	MODIFIED_BY	Y	12	AENDERER	10	Y	2
Change date of the data record	QAIVC	DATE_MODIFIED	Y	8	AENDERDAT	11	Y	2
Indicator : Make usage decision in subsystem	QAIVC	SUBSYS_DECIDES	Y	1	KZNEUSUBSYS	12	Y	2
Catalog type for usage decision	QAIVC	CATALOG_TYPE	Y	1	WKATART	13	Y	2
Plant of selected set for usage dec.	QAIVC	SEL_SET_PLANT	Y	4	VWERKS	14	Y	2
Selected set for usage decision	QAIVC	SELECTED_SET	Y	8	VAUSWAHLMG	15	Y	2
Catalog	QAIVC	PPVEKATART	Y	1	PPVEKATART	16	Y	2
Plant of Selected set for Inspection Point Valuat	QAIVC	PPVEWERK	Y	4	PPVEWERK	17	Y	2
Select Set for inspection point valuation	QAIVC	PPVEMENGE	Y	8	PPVEMENGE	18	Y	2
Code Group for Inspection Point Valuation	QAIVC	PPVECODGRA	Y	8	PPVECODGRA	19	Y	2
Code for Inspection Accept	QAIVC	PPVECODEA	Y	4	PPVECODEA	20	Y	2
Code group for Inspection Point Valuation	QAIVC	PPVECODGR	Y	8	PPVECODGR	21	Y	2
Code for inspection Point Valuation (Reject)	QAIVC	PPVECODER	Y	4	PPVECODER	22	Y	2
Task list type	QAIVC	TASK_LIST_TYPE	Y	1	PLNTY	23	Y	2
Key of task list group	QAIVC	TASK_LIST_KEY	Y	8	PLNMR	24	Y	2
Task list usage	QAIVC	TASK_LIST_USAGE	Y	3	PPLVERW	25	Y	2
Task list group counter	QAIVC	TASK_LIST_GCNT	Y	2	PLNAL	26	Y	2
Version counter for task list	QAIVC	TASK_LIST_VCNT	Y	8	ZAEHL	27	Y	2
Short text of the task list	QAIVC	TASK_LIST_SHORT	Y	40	PLANKTEXT	28	Y	2
Start of validity for task list header	QAIVC	VALID_FROM	Y	8	DATUV	29	Y	2
Start date of the inspection	QAIVC	START_DATE	Y	8	BASTDATUM	30	Y	2

Information Management System provides management with the entire logistics picture, enabling cross-analysis and comparison of quality data with other logistics data for better problem analysis.

R/3 and QM: Tight Integration of Quality Processes

Due to the integration of QM with other R/3 applications, quality results are automatically made available for other business processes in the organization. Inspection results can be automatically taken over as batch characteristic values and used for classification – providing efficient management and traceability of batches.

Technology and Service

QM is an integral part of the R/3 System, backed by SAP's comprehensive range of services: competent requirements analysis and technical consulting for project planning and realization, specialist training programs for your employees, and 24-hour support.

QM links to complementary LIMS applications through the standard interface QM-IDI. It is to this standard that SampleManager links through SampleManager IDI. Significantly, when SAP customers upgrade to a new version or customize their R/3 system, there is no requirement for re-coding of SampleManager LIMS itself. Instead a simple reconfiguring of the SAP objects in SampleManager IDI is required. SampleManager is a 3-tier, client/server LIMS,

operating under Microsoft® Windows® 2000, Windows® 2003 Server, and XP. For added flexibility, it is also possible to connect a single SampleManager deployment to multiple SAP servers.

Summary

Modern enterprise LIMS now play a pivotal role in the integration and distribution of scientific information in global corporations. With the development of SampleManager IDI, Thermo has enabled reliable quality-related laboratory data to be available rapidly to all stakeholders throughout the enterprise. As a result, earlier and better-informed decisions can be made leading to quality control improvements and more effective deployment of resources. Ultimately by using SampleManager in tandem with SampleManager-IDI, organizations can establish a clear competitive edge through faster time to market, and a higher and earlier return on investment.

Simple configuration of table-driven SAP objects in SM-IDI eliminates the need for recoding SampleManager LIMS when a new version of SAP R/3 is deployed

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