

MAX LIMS Interface

Using LabWare LIMS with MAX for quality control.

The LabWare LIMS (Laboratory Information Management System) has been the industry's most technically advanced Laboratory Information Management System since its introduction to the market, and it continues to hold that position today. The MAX LIMS Interface makes it possible to use LabWare LIMS in conjunction with MAX for quality control.

The MAX LIMS Interface is based on the following principles:

- Interfacing of MAX to LabWare LIMS is done by XML files for outbound messages. Interfacing from LabWare LIMS to MAX is done by a User Exit.
- The integration runs as a background process and can periodically during the day (few seconds) or once a day check the MAX tables for XML messages to process.
- Lot or Serial Control is required in MAX for quality controlled parts to generate a quality cycle in Labware LIMS.
- A Labware LIMS quality request will only be generated for tested parts i.e. parts that have the inspection required flag set on the inventory tab of the part master window in the Bill of Materials module.
- If during the extraction of outbound messages or loading of inbound messages an error occurs an email can be sent to a specific person or mailing group and the failed message will also be held in an 'error' folder. Log files are also created with the extract, load and error information of the messages.

The screenshot shows the SAP Part Master window for Part ID 13510. The 'Inventory' tab is active. Key fields include: Part ID (13510), Desc (Metal, SST Sht Stock(LOT)), Type (B - Normal MRP Purch. Part), Default Stock ID (RMI), and Last Trans (5-2-2015). The 'Inspection Required' checkbox is checked. Under the 'Lot/Serial Tracking' section, 'Lot Control', 'S/N Control', and 'Multi Receipts' are checked, while 'Lot SFC' and 'S/N SFC' are unchecked.

The MAX LIMS Interface can transfer the following MAX Data to LabWare LIMS:

- Part Master
The complete data for a Part Number is extracted for parts which are newly added or changed (Modification Date). The extract of the Part Master runs once a day as part of the Daily Schedule. Parts can also manually be extracted.
- Shop Order
The complete data for a Shop Order including the Order Bill and Job Progress is extracted. The extracted Shop Orders can be restricted by the Shop Order Status (3-Released, 4-Completed, 5-Closed, 6-Canceled). The extract Order Master runs periodically during the day. Shop Orders can also manually be extracted.

The MAX LIMS Interface can create a quality cycle in LabWare LIMS for the following actions in MAX:

- Purchase Order Receipt
The Purchase Order Receipt Quality Cycle checks periodically during the day for new lot transactions in the Lot Tracking History for generating a LabWare LIMS XML request.
- Shop Order Receipt
New Shop Order Receipts can be processed periodically during the day or consolidated and processed once a day.
 - ▶ Process Shop Order Receipts periodically during the day
The Shop Receipt Quality Cycle checks constantly during the day for new Shop Order receipts (blank UDF Key) in the Lot Tracking History for generating a LabWare LIMS XML request.
 - ▶ Consolidate Shop Order Receipts per Order Number and Lot Number per day
The Shop Receipt Quality Cycle checks once a day during the Daily Schedule for new Shop Order receipts (blank UDF Key) in the Lot Tracking History for generating a LabWare LIMS XML request. All the Lot Tracking History records with the same Order Number and Lot Number are consolidated and one LabWare LIMS XML Request is generated, the total quantity is included in the LabWare LIMS XML Request.

In the Shop Order Receipt XML message for LabWare LIMS the issued source lots can be included. Source lots which should be included in the XML message can be identified by starting the Part Number with a specified string. The issued source part will only be taken into account if the total issued quantity (positive and negative issues) is greater than zero i.e. if all of the material from one lot is returned (negative issue) this lot will not be included in the source lot information.

- Expiration Date
The Expiration Date Quality Cycle checks if the Expiration date of each lot in the system is older or equal to the current date taking into account a number of days before expiration.. The lot is put in quarantine in MAX if the lot is expired, an XML message is created for LabWare LIMS and an notification email message is sent to specific person or mailing group. The Expiration Date Quality Cycle runs during the Daily Schedule at night.

LabWare LIMS User Exit

When LabWare LIMS changes the status of a lot this is notified to MAX through a user exit generate by LabWare LIMS. The user exit will be triggered on LabWare LIMS for all batch status changes i.e. to approve a batch (remove Qflag) and to un approve a batch (turn on the Q flag). If the user exit cannot be processed successfully because the part or part lot does not exist in MAX then an error email is sent and a log file entry. An MAX client does not have to be installed on the LabWare LIMS client or on the LabWare LIMS server for the user exit to be run.