



WinLIMS – Inventory Management & Sample Prep

If you answer YES to any of the following questions, the WinLIMS Inventory Management & Sample Prep (IMSP) is just the feature you need:

- Do you need to keep track of your chemicals and other consumables?
- Do you need to print labels for chemicals to positively identify them?
- Would you like to know when your chemicals and reagents are running low or past expiration?
- Do you need to trace the reagents used for sample preparation?

The WinLIMS Inventory Management & Sample Prep (IMSP) module provides a repository for all of your laboratory chemicals and supplies and provides the means of providing inventory control as materials are received and consumed within the laboratory. When used in conjunction with the powerful LIMS Events feature, staff members can be notified when materials fall below reorder levels and when chemicals and reagents exceed their expiration dates. The system can even be expanded to interface with your purchasing system should you desire to automate the entire management process.

Materials & Inventory

The materials and consumables that are used by the laboratory are defined within the system with the complete descriptive information. You can define the metadata such as chemical properties, MSDS sheets and any germane information.

Material Inventory

The screenshot displays the 'Manage Inventory' interface for 'Formic acid'. The top section shows material details: Physical State (Liquid), Melting Point (8.40), Solubility, Specific Gravity (1.21), Current Qty (2999.14), Inventory Units (mL), HMIS Fire (2), HMIS Health (3), NFPA Flammability (2), Reorder Qty (500.00), CAS Number (64-18-6), Molecular Wt, Boiling Point (100.00), Flash Point, Odor (Pungent, Irritating), pH, and Status (Active). A callout box points to the 'Current Qty' field with the text: 'The Inventory Current Qty is the sum of all of the Current Lot Qty values where the current date is less than the Associated Expiration Date(s)'. Below this is the 'Manage Inventory - Details Level 1' section, which includes a 'Manage Inventory Shipment Receipt History' table.

Supplier Name	Lot#	Expiration Date	Unit	Current Lot Qty	Amount Received	Storage Location	Status	Received On	Ordered On	PO#	Invoice#	Received By	Ordered By
<input type="checkbox"/> Science Lab	180501.15	10/11/2020	mL	1999.14	2000.00	Storage Shelf# 02	Active	5/11/2018	5/6/2018	180506.03	180511.01	jeff	craig
<input type="checkbox"/> Science Lab	180520.01	3/29/2021	mL	1000.00	1000.00	Storage Shelf# 04	Active	5/25/2018	5/18/2018	180518.10	180525.08	matt	craig

The material inventory page also displays the individual shipments that have been received. The records will include key information such as the supplier, lot number, amount received, current amount on-hand as well as the expiration dates of each. The materials inventory manages the overall quantity of the material that is on-hand by incrementing the value as new shipments of the material are received and decrementing the materials as they are used by the organization. You can also define a reorder quantity which can be used to issue notifications to the appropriate staff members whenever the current quantity of material on-hand falls below the reorder quantity.



Material Receipt

The information associated with each material receipt is recorded using the information you define as being pertinent. By default the system provides the ability to record the material, supplier, lot#, amount received, expiration date, storage location and status. Other metadata information is optional so these data categories can be added as required.

Material Receipt

Material Receipt using : [QBE]							
Material	Formic acid	Supplier Id	Sciencelab	Supplier Name	Science Lab		
Lot#	180520.01	Units	mL	Amt Received	1000.00	Expiration Date	3/29/2021
Material Form	Liquid	PO#	180518.10	Ordered By	craig	Ordered On	5/18/2018
MSDS		Storage Location	Storage Shelf# 04	Received By	matt	Received On	5/25/2018
Current Lot Qty	1000.00	Adjusted Lot Qty		Invoice#	180525.08	Compound Id	1124
Part Number	SLF1387	Status	Active				

As materials are received the overall quantity of the material represented will be incremented to ensure proper reconciliation of the material.

Sample Preparation and Mixed Reagents

Details that are associated with the creation of mixed reagents and sample preparation is also recorded within WinLIMS. The information recorded within this page ensures that only valid materials and equipment are used during the preparation process. In addition, the information is cross-referenced with the samples that are affected by the preparation to provide full traceability to confirm that samples were properly prepared.

The preparation page includes basic background information such as the staff member who performed the preparation, when the preparation was performed, the methodology that was used and preparation notes. Optionally, you can also require a secondary review and approval of the procedure.

The individual ingredients are selected from a list that is validated based on the available quantity and expiration date. The amount used is also recorded and when the ingredient is committed, the amount identified is decremented at both the individual lot level as well as the overall material quantity level.

If desired, the equipment that is used during preparation can also be selected from a valid list based on availability and proper calibration. Any settings or other information can be recorded to provide a complete record of the preparation process.

Finally, the samples that are affected by the preparation can also be selected within the sample preparation page. It is also possible that the preparation is specific to a specific test. This means that the same 'split' sample may be associated with multiple sample and/or reagent preparations. In order to simplify the association process, the 'split' samples can be related to the preparation using other pages within the system such as the analytical worklist.

The methodology of cross-referencing the samples with the preparation and/or reagents is dependent on the specific workflow of your laboratory so it can be applied anywhere in the system that will provide the fastest and most accurate association. Once the sample (or sample and test combination) have been associated with a sample preparation batch, full tractability ensures your conformance with all quality and regulatory standards.



The general configurability of WinLIMS allows you to design the pages and underlying database to record the metadata that is important to you. This means that you can add and remove objects (database fields) on each page to determine how the user should interact with the page. For example; a field can be defined as a lookup, a text or a checkbox. You can also determine if a value is required for each field, which users are permitted to assign a value, if a value can be changed once entered, etc.

Sample Preparation Details

Sample Preparation using : [QBE]

Prep Batch# 12 Prep Method AOAC 2007.1 Prep Method# 2007.1 Status A
Prepped On 5/15/2018 Prepped By wayne Approved On 5/15/2018 Approved By jeff
Entered On 5/16/2018 Entered By wayne Prep Batch Id 1026
Description: Pesticide Residue in Foods by Acetonitrile Extraction
Prep Notes

Sample Preparation - Detail Level 1

Preparation Ingredients/Chemicals

Status	Reagent Name	Reagent Lot#	Amount	Units	Entered On	Entered By	Reagent Id
<input type="checkbox"/> Committed	Sodium acetate anhydrous	180501.01	15.00	mL	5/15/2018 12:00	wayne	64
<input type="checkbox"/> Committed	Acetonitrile	170306.01	150.00	mL	5/15/2018 12:00	wayne	38
<input type="checkbox"/> Committed	Sodium acetate anhydrous	180501.01	1.50	g	5/15/2018 12:00	wayne	64
<input type="checkbox"/> Committed	Magnesium sulfate anhydrous	180429.03	0.15	g	5/15/2018 12:00	wayne	65
<input type="checkbox"/> Committed	Primary Secondary Amine	180501.08	0.05	g	5/15/2018 12:00	wayne	66
<input type="checkbox"/> Committed	Triphenyl phosphite	180501.08	0.10	g	5/15/2018 12:00	wayne	67
<input type="checkbox"/> Committed	Formic acid	180501.08	0.86	mL	5/15/2018 12:00	wayne	68
<input type="checkbox"/> Committed	Toluene	180501.08	0.50	mL	5/15/2018 12:00	wayne	69

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Preparation Equipment/Instruments

Eqpt Name	Serial#	Entered On	Entered By	Eqpt Type	Eqpt Id
Balance-01	20140003	5/15/2018 12:00:00	wayne	Balance	3
Pipette-03	1707300022	5/15/2018 12:00:00	wayne	Pipette	62

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The individual Material Receipt and Inventory records are decremented based on the Amount recorded during Sample Preparation

There are more features that are best reviewed through an on-line demonstration. Call QSI to arrange one.