



WinLIMS – Instrument Interface

WinLIMS Instrument Interfaces help you reduce the often-tedious tasks of data entry

- Do you generate a lot of data?
- Do you want to reduce manual data entry?
- Wouldn't automated data entry be more efficient for you and your lab?

Instrument Types

Because instrument manufacturers do not provide common communication or data formats it is up to QSI to provide a tool (the WinLIMS Bridge) that allows integration regardless of the capabilities of the various instruments that you depend on to acquire data on a day-to-day basis. Instruments can be classified into three general classes that identify the communication mechanism. These are:

- Dumb Instruments (pH meters, balances, ion meters, gauges, etc.)
- Smart Instruments
- Bi-Directional Instruments

Dumb Instruments

Dumb instruments such as balances or pH meters are usually highly used, but don't provide a way to associate the required reference to their associated record within the database (e.g. the unique sample identifier and parameter name); they simply provide electronic output via an RS232 or USB port. This means that WinLIMS must provide both a communication acquisition and software front-end that provides these missing pieces. Although this is quite simple within a traditional LAN environment, it becomes more complicated in a web environment where these pieces must be able to communicate with a remote server across the Internet (or your corporate intranet). Fortunately, QSI has the technical expertise to make this a simple task, despite its complexity, by using the WinLIMS Bridge option that includes web services that can communicate with desktop applications.

The WinLIMS desktop application interacts with the local PCs communication port to acquire the data from the instrument and provides a user interface that retrieves the sample information from WinLIMS via a web service to allow the user to associate the data acquired from the instrument with the sample and associated parameter (analyte, characteristic, etc.).

As data is acquired, it is passed to the WinLIMS database via the web service to add convenience, reliability and efficiency.

The screenshot shows the WinLIMS Serial Bridge application interface. At the top, there's a 'Results' section with a 'WinLIMS Serial Bridge' title. Below that, there are search filters for 'Device List' (a dropdown menu), 'Find Samples' (a button), 'From Date' (5/19/2018), 'To Date' (5/24/2018), and a 'Get Samples' button. The main area is divided into 'Fast Find' and 'Sample Parameters' sections. The 'Fast Find' section includes dropdowns for 'SAMPLE ID', 'SAMPLE STATUS', 'ORDER NO' (181440001), 'Batch Run ID', and 'Result Status' ([NULL]). There are also buttons for 'Search', 'Clear', 'Acquire', and 'Sort By' (SAMPLE_ID). The 'Sample Parameters' section has a 'METHOD NAME' dropdown (pH) and a 'Parameters' list. Below this is a table with the following data:

Result	Sample Id	Test	Parameter	Status	Lo	Hi	Entered By	Modified Reason
6.88	181440002	pH	pH	e	6.50	7.10	wayne	
6.72	181440003	pH	pH	e	6.50	7.10	wayne	
6.56	181440004	pH	pH	e2	6.50	7.10	wayne	
6.48	181440005	pH	pH	e12	6.50	7.10	wayne	
6.69	181440006	pH	pH	e	6.50	7.10	wayne	
	181440007	pH	pH		6.50	7.10		
	181440008	pH	pH		6.50	7.10		
	181440009	pH	pH		6.50	7.10		
	181440010	pH	pH		6.50	7.10		
	181440011	pH	pH		6.50	7.10		

At the bottom of the interface, there's a 'Last Value' section with a 'Captured Data' input field and an 'Egt' button.

