lab2lab

automated sample transport and management

ttplabtech

natural innovators

does your research need rapid access to analytical instrumentation?

lab2lab: an automated sample transport and management system for connecting remote laboratories and analytical instrumentation regardless of their location within research facilities.

lab2lab

Today's scientists need easy and rapid access to analytical instrumentation which is often located in a dedicated instrumentation room separate from the research laboratory. lab2lab provides on demand, reliable, secure and rapid microtube transfer between research and analytical instrumentation laboratories, allowing automated sample analysis using a wide range of analytical equipment.

linking analytical equipment to your research laboratories with lab2lab increases accessibility and total analytical capacity.

what is it?

lab2lab is a pneumatic tube transport system that has been developed using the same pneumatic technology successfully employed by TTP Labtech in its comPOUND® and comPILER® sample storage systems. Using the scientist's electronic laboratory notebook (ELN), samples for analysis are assigned a reference number and the required analytical procedure is logged. The sample is then sent via a bench-top sender to the instrument, or instruments, of choice via a router. Samples may be sent directly to the receiver connected to the instrument for analysis or they may be held in a buffer, depending on priority. At the receiver, the microtube is transferred directly to the autosampler of the analytical instrument. Once analysed, samples can either be sent for further analysis, to a manual collection point or to a waste point for discarding. lab2lab provides a reliable, secure and rapid means of transporting sample microtubes around research facilities.

secure and simple transport

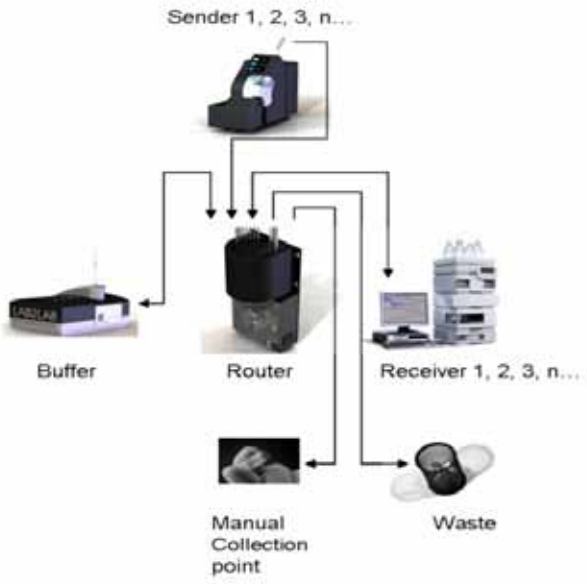
Every microtube is 2D DataMatrix bar-coded for tracking through the lab2lab system. Each microtube submitted has a corresponding set of electronic instructions to inform the lab2lab system which analytical methods are to be used, enabling it to choose the appropriate instrument. A reference code (e.g. ELN number, LIMS reference etc.) is used to return the analytical data directly back to the scientist. Typically, the time from submission of a sample to data being returned to a scientist is less than 5 minutes.

flexibility

lab2lab is configurable and can suit any laboratory setup. A network of flexible tubing connects the laboratories to analytical instrumentation. Any combination of stations may be connected to the system, providing almost unlimited analytical possibilities to the scientist.

compatibility

lab2lab is compatible with Waters Acquity UPLC (MassLynx), Agilent 11/1200 (ChemStation) and Bruker BioSpin (TopSpin), Tecan Freedom Evo and the entire TTP Labtech sample management product range, including comPOUND, comPILER and comPANION. Additional instruments can be easily integrated into this system.



lab2lab application areas

lab2lab offers effective sample management and processing.

medicinal chemistry

It is essential for medicinal chemists to have rapid and easy access to analytical equipment at all stages during chemical compound synthesis and reaction monitoring. Analytical equipment such as HPLC, LCMS, GC/MS and UPLC are regularly used to characterise and ensure the integrity of chemical intermediates during a series of reaction steps and to analyse chemical composition after final purification.

linking drug discovery disciplines

Drug discovery is a multi-disciplinary process and the ability to facilitate interactions between biologists and chemists is important for the success of drug development. lab2lab has the potential to enhance the laboratory management process between laboratories, linking scientists across these different disciplines, connecting synthesis to purification, then to compound management and biological assay.

compound QC

Using lab2lab, your compound collection can be sent automatically to analytical instrumentation for overnight analysis without delaying the compound screening process, thereby maximising equipment usage. Problematic compounds can then be discovered and withdrawn from the screening programme. Increased levels of confidence can be gained from returned analytical data and estimated lifetimes can be assigned to compounds.

purity, concentration and testing

Rapid analysis of drug formulations for concentration verification and analysis of purity saves money and time, ensuring consistency and quality of product.

new: aequus

providing a simple solution to non-contact solvent level monitoring, aequus enhances the laboratory automation process.

aequus is a novel non-contact monitoring system specifically designed for the automated monitoring of system fluids for analytical instruments. It allows laboratory managers to easily keep track of solvents used in the everyday running of analytical equipment without the need for manual inspections.

The easy to read display keeps you informed of solvent levels. In addition, clear warnings and alarms help to protect analytical equipment from running out of essential solvents or waste overflow. aequus is an independent monitoring system, overcoming the potential user induced errors observed at times with the measuring systems incorporated within some instruments.

system components

lab2lab

Sender:	Deployed on the laboratory bench, the Sender allows scientists to submit single or multiple samples for analysis.
Receiver:	The Receiver transfers the microtube directly to the autosampler of an analytical instrument or liquid handler.
Router:	The Router manages the flow of sample microtubes between the laboratories and the instruments. It incorporates a 2D DataMatrix bar-code reader to track samples.
Buffer:	The Buffer provides temporary storage for microtubes so they can be scheduled to visit more than one instrument or be held if all instruments are busy. It works with standard 96 well SBS racks and is compatible with a range of liquid handling robots.
Manual collection / waste bin:	Samples that have been analysed are sent to waste or can be collected by the scientist if required.
Transport tubing:	The flexible tubing used to transport microtubes between stations is easy to fit and can be routed with other building services. Samples can travel horizontally, vertically, with or against gravity and distances of up to 1000 m are all possible.

aequus

Sensors:	Up to 12: 6 for supply monitoring and 6 for waste monitoring.
Display:	Colour touch screen LCD for local indication of vessel levels and contents.
Interface:	Ethernet enabled interface for sensors and display with relay alarm monitoring.
Software:	Built in web server, Windows 7 Application with charting and trending and remote interface for lab automation.
Accessories	Brackets for mounting to common analytical instrumentation and standard lab vessels.

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