Advancing R&D and QA/QC productivity, protecting data

Many of today’s chemical manufacturers seek to increase their competitiveness by speeding time-to-market with differentiated products. Enhancing R&D and QA/QC productivity and protecting valuable data are two important ways in which the chemical enterprise can achieve these goals.

To accomplish this, Taminco selected an Agilent OpenLAB Chromatography Data System (CDS) EZChrom Edition Client/Server solution with central file storage. With Agilent Professional Services Organization project management services, the system was deployed rapidly with a high level of user acceptance. Using the OpenLAB solution, Taminco’s R&D and QA/QC labs have boosted productivity and esprit de corps, streamlined processes, enhanced collaboration with IT, and ensured data security.

“We chose Agilent’s distributed CDS to enable our scientific staff to review and reprocess data more efficiently, from their desks, without tying up the client workstations in the lab. Once the solution was installed we found that we are also able to optimize our IT processes for managing software and data backups.”

ANNELIES CALLEWAERT, RESEARCH ANALYST, TAMINCO
Benefits realized

- Enhanced productivity and morale: staff can reprocess, review, and share data and methods from their offices or any other location on the network, without locking-out other users.
- Streamlined processes: client workstations are kept up-to-date with correct software revisions and master methods, easily and efficiently.
- Eliminated risk of data loss: data and methods are secure with central storage, and backup.
- Better utilization of IT processes and best practices frees scientific staff to focus on analytical work.
- Accelerated six-month system implementation with Agilent project management services.

The Solution: OpenLAB CDS EZChrom Edition
Client/Server with central file storage

Upgrading the standalone ChemStations to a networked OpenLAB CDS EZchrom Client/Server system with central file storage was the ideal solution. Shown conceptually in Figure 1, its OpenLAB Shared Services Server provides central system administration and central project-based data file storage. All servers and instrument controllers are placed in server rooms, freeing up laboratory space.

The OpenLAB CDS application software resides on a powerful central Microsoft Windows 2008 R2 Terminal Server, which can be reached from any client PC or like device. From any networked device, users can access the OpenLAB system to acquire, review and reprocess data from any instrument, eliminating the need to coordinate workstation access among staff.

“OpenLAB CDS is like a Fast Lane Pass at a theme park. There is no more queuing up in front of the local GC workstation. Efficiency, reliability and flexibility--that’s what we like.”

EVELIEN STRUYVELT, R&D ANALYST, TAMINCO

Situation: challenges and needs

Together, Taminco’s R&D and QA/QC operations rely on approximately 35 Agilent GC and LC systems. Prior to implementing their OpenLAB solution, these instruments were controlled by standalone Agilent ChemStations. In the R&D lab, there were more staff requiring ChemStation access than standalone workstations available. Thus, scientists spent excessive time and effort coordinating with each other to schedule access to reprocess and review their chromatography data.

Taminco’s R&D and QA/QC departments frequently work together. For example, the R&D charter includes developing methods for transfer to QA/QC where they are subsequently used to monitor processes and product quality. The system chosen had to meet the needs of both departments.

In addition, both departments are subject to European Union (EU) employee health and safety workplace regulations that require staff to be able to complete their work without spending their entire shift in the laboratory. To be compliant, Taminco had tried specialized software to provide users with access to the ChemStations at their desks. Unfortunately, while in use, this remote access software blocked local laboratory ChemStation access, so no new samples could be run.

To address these challenges and needs, a solution that would provide shared software and data access was required.
Enhanced productivity and morale

Because scientists can now reprocess, review, and share data and methods from their offices or any other location on the network, without time-consuming coordination, morale is markedly enhanced. And, as new analytical staff joins the organization, central method storage makes it far easier to ensure the correct methods are being used without modification.

Improved data security

Prior to the OpenLAB solution, the scientists and analysts backed-up their own data. R&D data and methods were kept on local PCs and manually backed-up on CDs at the scientists’ discretion. R&D performed backups infrequently, as it was time consuming. Because of their ISO 9000 processes and need to support any investigation of product quality that could potentially arise, the QA/QC lab backed-up their data annually and archived it for five years. With secure central storage of data and methods and IT managed backups, the OpenLAB CDS deployment has virtually eliminated the risk of data loss.

“We were very satisfied with Agilent’s project management services. Every detail was managed as we moved forward so we never had to worry. We began implementing the OpenLAB solution at the end of October and finished in April, so it took almost 6 months. If we had to do it ourselves, without project management services, it would have locked up internal resources and would have taken much more time.”

ANNELIES CALLEWAERT, RESEARCH ANALYST, TAMINCO
**Better IT utilization**

**streamlined processes**

Before upgrading to OpenLAB CDS EZChrom Edition, the ChemStations were isolated from the IT department and ran various revisions of software and operating systems. Maintenance of the multiple systems by lab staff was tedious and time consuming.

With the networked solution’s central system administration capabilities, R&D and QA/QC now better access IT department services and best practices, freeing staff to focus on analytical work. Networked workstations are kept up-to-date with the correct software revisions and data is backed up easily and efficiently by IT. Due to the IT department’s involvement in selecting and implementing the OpenLAB solution, the relationship between the R&D and QA/QC and IT has grown. The IT department now knows much more about the software used in the lab and thus can better contribute to its management.

“This is a solution that every IT person will like. It is straightforward, easy to install and extend, and a good disaster recovery solution.”

**HERWIG KEIRSEBILCK, GLOBAL IT SUPPORT, TAMINCO**

To learn more about the OpenLAB software suite visit:

**www.agilent.com/chem/openlab**