

BUSINESS CASE STUDY

PDR-Separations  **LLC**

DALP, AutoMDS, AutoPREP
Real-Time Spectral Deconvolution

All Liquid Modes
and Scales

A fast-response purification lab supporting medicinal chemistry inside a large pharmaceutical company

PROBLEM

The lab was struggling to process material quickly enough using 2 mid-scale preparative HPLC purification systems. Each system included 3 200 mL/min SD1 pumps (2 for eluent mixing and 1 for injection).

GOALS/SOLUTIONS

The company's lab manager needed to increase throughput and make systems easier to setup and use.

After discussions with PDR-Separations the company decided to have PDR-Separations reconfigure the 2 systems to operate with PDR-Separations' AutoPREP automation software and Collection modules.

The reconfigured systems now run automated methods that allow all parameters to be changed while a method is running so close stacking of maximum volume injections can be tweaked as equilibrium is reached over first few hours of operation.

This feature is very beneficial to reduce solvent consumption while running high flow rates and reducing run times. Systems now run 24/7 and throughput has increased noticeably.

BENEFITS/ACHIEVEMENTS

The results were impressive, samples are processed faster and more deterministically. Staff has more time for other tasks because PDR-Separations' lab automation software is easy to use and does not require much attention.

By operating the automated systems 24/7 the Lab now processes 8 times more material, staff is no longer overloaded, is able to do research, attend meetings and write reports.

The combination of a new operating procedure, much better automation software, and enabling automation hardware required a few months to adapt but everyone is much happier now, including upper management.

The cumulative benefit of improved procedures with better automation software and automation hardware was significant resulting in a much better ROI than expected.