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 processes material quickly enough using CounterCurrent Chromatography (CCC) and the HPLC-centric staff was reluctant to use CCC.

GOALS/SOLUTIONS

The company's lab manager needed to increase throughput for CounterCurrent Chromatography (CCC) purifications.

After discussions with PDR-Separations the company decided to have PDR-Separations reconfigure the company's Dynamic Extractions Spectrum dual CCC (analytical and semi-prep) system and install a larger 1L CCC from JCT, both to be operated with PDR-Separations' automation software and hardware modules.

The DE Spectrum dual CCC with 2 Agilent analytical pumps and DAD now runs automated method screening sequences, written by PDR-Separations, using PDR-Separations AutoMDS software and Gradient Mixer module.

The Gradient Mixer module mixes upper and lower phases as needed. The DE Spectrum CCC can be changed automatically from analytical to semi-prep configuration to purify small amounts using PDR-Separations AutoPREP software with Injector/Collector and Valve Control modules.

A new 1L CCC from JCT was installed and runs automated purification methods using PDR-Separations' AutoPREP software with an Injector/Collector module inside a hood with pressurized upper and lower phase cylinders for extended operations.

BENEFITS/ACHIEVMENTS

Material is now processed faster and more deterministically.

PDR-Separations' automation software is easy to use, does not require much attention, and is common to both systems.

Overall results show the lab now processes 6 times more material and staff is much happier. The combination of a new automated operating procedure, easy to use software, and enabling hardware treats the CCC as a column so operation is not much different from HPLC.

Staff feels more comfortable with CCC because now it is not necessary to understand CCC details to use CCC.

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