

SFC-PICLab Analytic

Analytical and Method Development Station

- New, reduced footprint
- Analytical
- Method Development
 - Automated Screening
 - Automated column selection
- MS detection available
- Upgrades to Small-scale preparative (Hybrid 20)
 - Extended Flow to 20 ml / min
 - 6 fractions



The SFC-PICLab Analytic was designed as a versatile system to fill several important functions in the laboratory. It was primarily developed as a fully automated method development system, suitable for development of both analytical and preparative methods, but equally is an analytical SFC system, used for fraction analysis or for more routine analysis. Additionally, as an option, the system can be upgraded to the SFC PICLab Hybrid 20 semi-preparative unit. The user-friendly software has an intuitive interface which allows data acquisition and processing, automated screening for rapid method development and mobile phase and flow gradients with integrated column and co-solvent selection.



Maximum retention reproducibility is ensured under all conditions, whether isocratic or gradient, by adding the co-solvent to the system at a constant 50 bar pressure to give reliable, stable solvent composition regardless of changes in the operating pressure. Any one of six co-solvents may be selected as part of the separation method and step gradients from one co-solvent to another may also be programmed to flush strongly retained components and to develop fast separation methods.

The column oven, which has sub-ambient capability, holds up to 10 analytical columns, mounted on a selection valve which is controlled by the software through the separation method. This, in combination with the six co-solvents and PIC Solution's proprietary software, makes for a powerful method development package.

Sample injection is through the 60 vial autosampler which can accept 2.5 and 10 ml vials.

Software

Software for the SFC-PICLab Analytic system has been designed specifically to ease the development of separation methods. Screening sequences can be set up in moments by selection of columns and modifier from the libraries while a method builder helps in setting up the parameters for elution, injection, detection etc. Finally, the methods are sorted to minimize time spent in column re-equilibration.

At the end of a sequence run, a search function allows selection of results using specific samples or separation conditions (column, mobile phase). The selected method development screening results are displayed on-screen, 12 chromatograms at a time with scrolling capacity for 60 experiments. A simple double click sends any chromatogram to a comparison window, allowing easy evaluation of the “best” result.

Separations of multiple samples with appropriate solvents and columns are controlled through a sequence table, conveniently set up by choosing a method (which includes the column and co-solvent selection), sample vial and number of injections for each line.

For the “one-off” sample, the unit can be controlled directly from the main window.

Run time can be modified on the fly and sequence lines can be added or edited during a run.

Data is acquired at 4 wavelengths simultaneously with a DAD while full DAD functions (spectra, 3-D chromatograms, chromatogram at any wavelength) are available post-run. Full integration capability, both automatic and manual is available with chromatogram overlay. Reports are printed in PDF format. The report parameters may be customized to include only the data you need.



Specifications

Maximum Flow Rate	10 ml/min
Maximum co-solvent flow rate	10 ml/min
Co-solvent selection	Up to 6 solvents
Max Pressure	350 bar
Column Size	4.6 and 10 mm id
Column Selection	Up to 10 columns
Temperature	15 to 60°C
Injection	Autosampler (60 vials)
Detection	DAD UV (4 simultaneous wavelengths) External input for 2 nd detector