

PREP SFC 50

Preparative Separations on Small Columns





PREP SFC 50 SYSTEM

The Prep SFC 50 from Sepiatec is a compact and easy-to-use chromatography system for preparative separations on small columns by means of supercritical fluid chromatography (SFC).

The system offers the comprehensive benefits of SFC technology, such as faster separations, lower costs due to reduced consumption of organic solvents, as well as being more environmentally friendly at increased safety.

The Prep SFC 50 is equipped with two 400 bar high-pressure pumps with 30 ml pump heads. The total flow – at a modifier portion of 40 % - amounts to 50 ml/min. This way, chromatography columns with inner diameters ranging from 4 to 16 mm, and a length of 250 mm can be used.

The column oven, containing the chromatography columns together with the injection valve and the UV flow cell, is heatable up to 70° C so that a uniform temperature is ensured. The Prep SFC 50 system is available with 8 gas-liquid-separators.

As fractions are collected in unpressurised state, not only safety is increased, but also handling is simplified, and limitations with respect to the size of fraction volumes do not exist. This option proves to be extremely convenient when working with stack injections.

As the dimensions of the Prep SFC 50 together with the integrated system controller and 15.6" touch screen amount to only 56 x 60 x 88 cm (W x D x H) this system requires a minimum of space in the laboratory. A separate computer or monitor is not necessary.

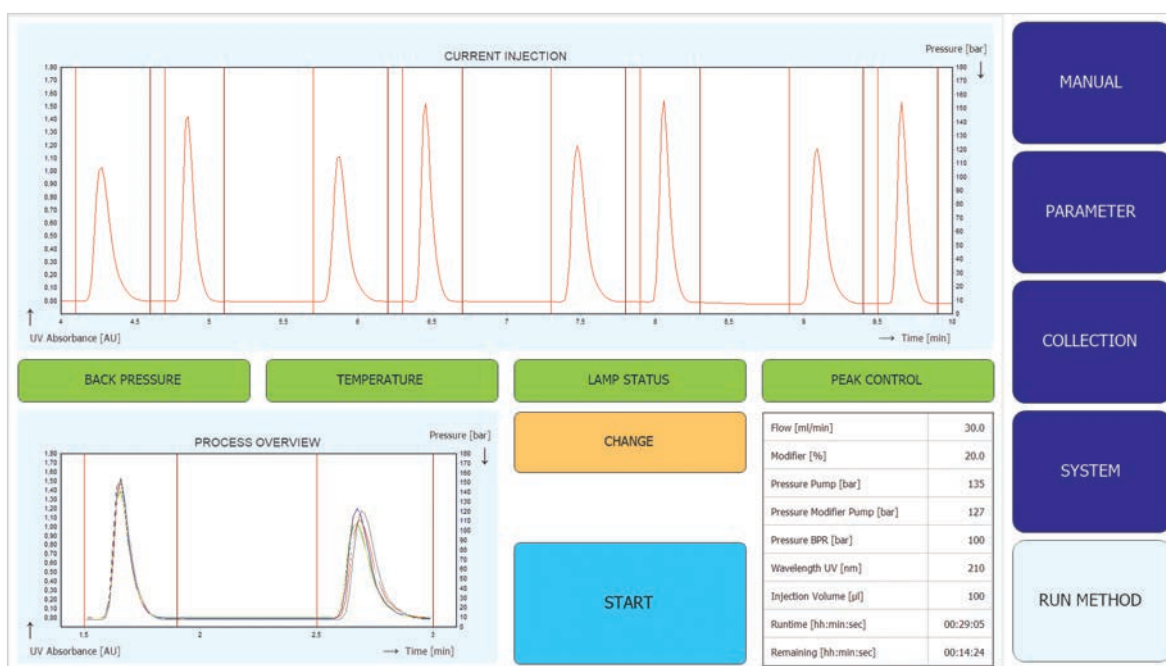
The equipment of the Prep SFC 50 system includes:

- a high pressure pump for CO₂
- a high pressure pump for modifiers
- an adjustable back pressure regulator
- a syringe pump for sample injection
- a UV detector
- an integrated system controller
- a 15.6" touch screen
- USB connectors, Ethernet and HDMI connector
- the Prep SFC control software

PREP SFC 50 SYSTEM WITH MASS SPECTROMETER

As an option Sepiatec's Prep SFC 50 system can be combined with Advion's expression CMS. The expression CMS is a very compact mass spectrometer featuring the latest single quadrupole technology. The system as a whole, consisting of Prep SFC 50 and expression CMS, allows users to perform mass-directed-, mass-confirmed- and UV-controlled fractionation. The exact molecular weights of the separated substances are quickly and

reliably measured, and even UV-inactive targets can be fractionated. The expression CMS mass spectrometer is operated and the data obtained are displayed using the Prep SFC control software. The expression CMS software allows users to perform a wide range of assessments. The compact size of the Prep SFC 50 and the expression CMS means that they can be installed together in a standard laboratory fume hood.



PREP SFC 50 SOFTWARE

The Prep SFC 50 system is controlled entirely by means of the Prep SFC control software which offers a clear menu structure enabling simple and intuitive operation. All input options are presented on just a few screens. The Prep SFC control software includes a sequence editor for

inputting separation parameters for different samples, functions such as stack injection with automatic suggestions for stack times, multiple options for fractionation and on-the-fly editing for changing parameters during the course of a run.

TECHNICAL DATA

PREP SFC 50

Operating mode	1 analytical or semi-preparative column
Suitable columns	4 to 16 mm ID, max. 250 mm in length
Solvents	CO ₂ and organic solvents
Number of modifier solvents	1 standard, max. 4 with optional solvent selection valve
Total flow rate	50 ml/min at a modifier portion of 40 %
CO ₂ pump	30 ml pump head, 400 bar
Modifier pump	30 ml pump head, 400 bar
Add-on pump	10 ml pump head, 400 bar (optional)
Operating pressure	Up to 300 bar, back pressure regulator online adjustable
Injection	Partial loop with syringe pump
Column oven	Ambient temperature to 70° C, 2 columns standard, 6 columns with optional valves
UV detector	Wavelength range 190 to 500 nm
Other detectors	DAD, ELSD or mass spectrometer optional
Number of fractions	1 to 8 fractions, unlimited volumes, pressure-less collection
Software	Prep SFC control software
System controller	Integrated controller, Windows 10
Screen	15.6" touch screen, 16:9 format
Connections	3 USB ports, Ethernet, HDMI
Dimensions	56 x 60 x 88 cm (W x D x H)