PREP SFC basic

Preparative Separations on Small Columns

PREP SFC basic

The new Prep SFC basic from Sepiatec is a compact and easy-to-use chromatography system for preparative separations on analytical and semi-preparative 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 basic system is equipped with two 400 bar high-pressure pumps with 20 ml pump heads. The total flow – at a modifier portion of 40 % – amounts to 33 ml/min. This way, chromatography columns with inner diameters ranging from 4 to 10 mm, and a length of up to 250 mm may 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 basic system is available alternatively with 6 or 9 gas-liquid-separators.

As fractions are collected in unpressurized 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 basic together with the integrated computer and 10" touch-screen amount to only 53 x 55 x 80 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 basic system includes:

- a high pressure pump for CO_2
- a high pressure pump for organic modifiers
- a back-pressure regulator
- a syringe pump for sample injection
- a UV detector
- an integrated computer with 10" touch-screen
- 4 USB connectors (2 of them located at the front panel), Ethernet and HDMI-connector
- the Prep SFC control software
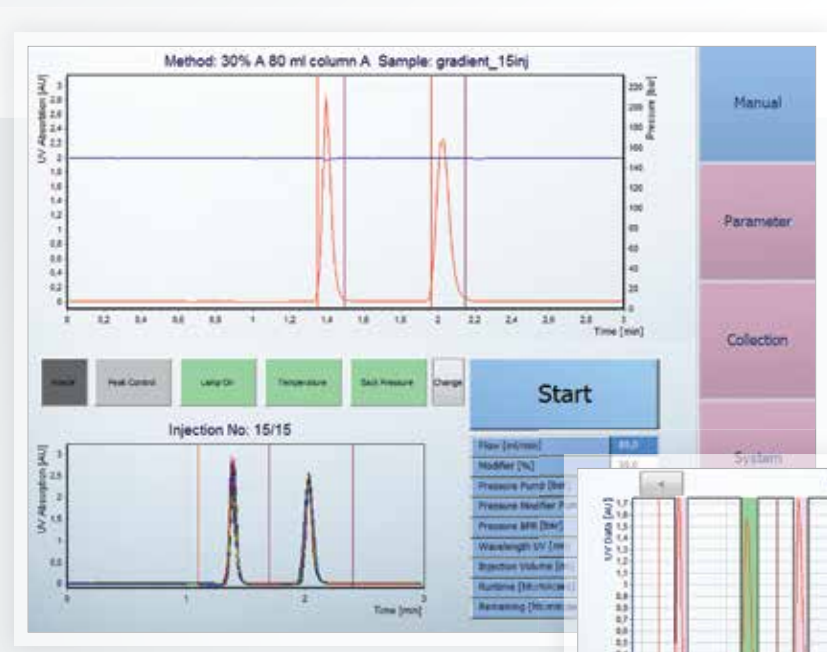
Run method screen with online view

Collection screen with fractionation conditions

PREP SFC basic SOFTWARE AND OPTIONAL EQUIPMENT

The Prep SFC basic system is completely controlled by the Prep SFC control software, offering simple intuitive service due to a structured menu system. All of the settings required for separations are available on 5 screens. The software contains functions like stack injection with automatic suggestion for stack time, and allows optimization of the fractionating parameters still in the course of the run.

Optional equipment for the Prep SFC basic system:

- Column selection valve for switching between 2 columns
- Solvent selection valve for the modifier pump, max. 4 solvents
- Additional 3 gas liquid separators for collecting up to 8 fractions

In addition to the Prep SFC basic model Sepiatec offers the Prep SFC 100 and the Prep SFC 360 systems. The Prep SFC 100 is designed for the use of columns with inner diameters of 2 to 3 cm. The Prep SFC 360 is suitable to run columns with inner diameters of up to 5 cm.

As the Prep SFC control software is used for all of these items, up-scaling of separations on all of the Sepiatec Prep SFC systems is easily possible.

TECHNICAL DATA

PREP SFC basic

Operating mode	1 analytical or semi-preparative column
Solvents	CO_2 and organic solvents
Number of modifier solvents	1 standard, max. 4 solvents with optional selection valve
Total flow rates	Up to 33 ml/min at a modifier portion of 40 %
CO_2 pump	20 ml pump head, 400 bar
Modifier pump	20 ml pump head, 400 bar
Operating pressure	Up to 300 bar, adjustable online backpressure control
Injection	Total loop with syringe pump
Columns	4 to 10 mm ID, up to 250 mm length
Column oven	Up to 70 °C, integrated heating module, injection valve and UV flow cell
Detection	UV detector, wavelength 190 to 500 nm
Fraction collection	1 to 5 fractions or optional 1 to 8 fractions
Software	Prep SFC control software
System controller	Integrated PC, 10" TFT touch-screen
Connections	4 USB ports, Ethernet, HDMI
Dimensions	53 x 55 x 80 cm (W x D x H)

SE_SFC BASIC_EN_1015

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