

Preparative HPLC System

Versatile  
Preparative HPLC

# LC-*f*orte/R-II

***Compact & Multifunctional!***  
***Suitable for Purification on Lab-scale!***



## Suitable for Purification on Lab-scale

### Features

- LC system designed for both preparative HPLC and flash purification
- User friendly operation with a touch screen
- Intuitive method development by Preview Function
- Multiple functions like recycling, auto-injection and auto-replay as a standard feature
- Compact design installable in fume hoods



## For Purification from Several Milligrams to 10 Grams on Lab-scale

LC-Forte/R-II is useful for lab-scale preparative purifications with HPLC columns, glass columns and flash chromatography columns. It is applicable for various modes such as reversed-phase, normal-phase, chiral and GPC.

### HPLC Columns

For reversed- and normal-phase, chiral and GPC



### Glass Columns

For purification with self-packing columns



### Flash Chromatography Columns

For synthetic reaction products



10 mg

100 mg

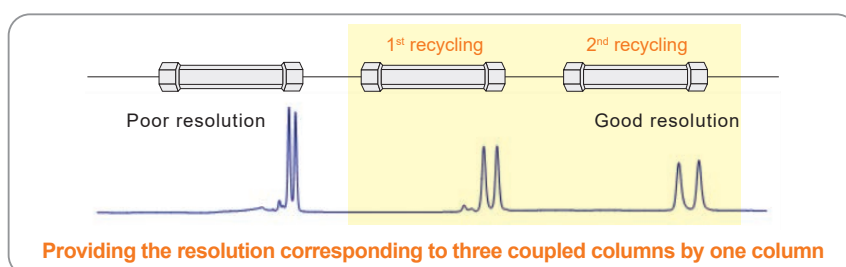
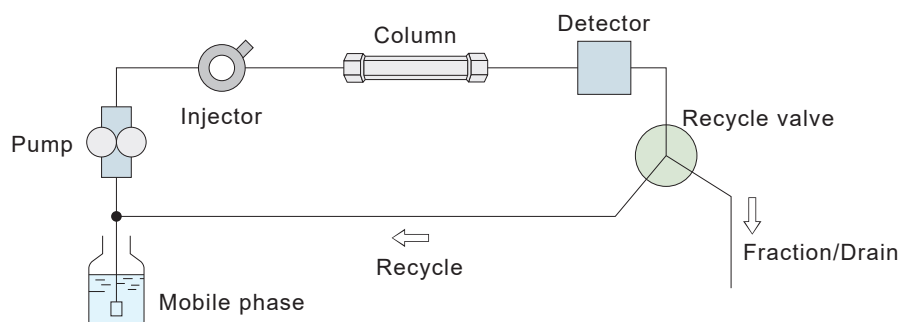
1 g

10 g

Purification scale

## Increasing Separation Efficiency by Recycling

LC-Forte/R-II is equipped with a recycling function. Under recycling chromatographic separation, higher resolution can be achieved on a sample that is hardly separated, because the sample is repeatedly introduced into the column. Desired purity can be achieved without changing mobile phase conditions or columns. The unique flow path for the recycling system adopted in LC-Forte/R-II enables to reduce the extra-column diffusion and achieves the high efficiency preparative separation. Furthermore, consumption of solvent on purification is greatly reduced since no solvent is consumed during recycling.



## Dedicated Software

A wide touch screen (10.4 inch) with the pre-installed software offers friendly navigation for settings and operation of the system. Chromatograms can be displayed on the screen.



## Preview Function for Intuitive Method Development

LC-Forte/R-II is equipped with Preview Function that displays recycling and fractioning positions in the chromatograms acquired from the preliminary study. This function allows you to visually set and check the optimal separation conditions. Thus, it enables efficient and reliable purification by intuitive understanding of the separation methods. It is especially effective for complex conditions such as recycling HPLC that may cause sample loss due to the fraction collection setting errors.



Preview Function enables to find and avoid error setting for fraction collection easily.

Parameter changes

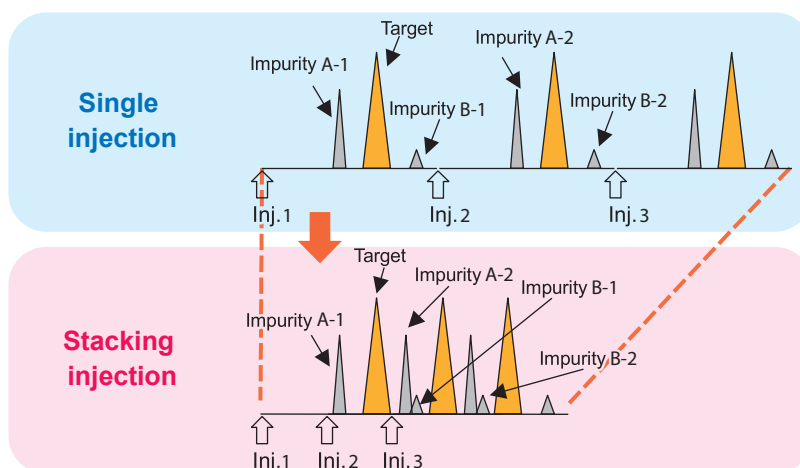


After the change of method parameters, you can check if the new fractionation window works.

## Stacking Injection

With a suction injector LC-Forte/R-II can inject the same sample repeatedly with high precision. Since this makes it possible to perform the preparative purification continuously, LC-Forte/R-II is useful for efficient separation of a large amount of sample volume.

Separation time and solvent consumption can be reduced by injecting the samples with overlapping the elution peaks of the impurities (but not target compounds). Productivity is improved dramatically by using the stacking injection.



# Specifications

## LC-Forte/R-II

	LC-Forte/R-II
Flow rate range	0.1-80 mL/min
Accuracy of flow rate	±2% (over 5 mL/min)
System pressure limit	30 MPa (0.1-50 mL/min) 20 MPa (50-80 mL/min)
LCD touch screen (on main body)	10.4 inch OS : Windows Embedded Standard 7 or Windows 10 IoT
Control	LCD touch screen or interlinked PC
Stacking injection	Suctioned by pump
Manual injection	By accompanying injector loop (5 mL as standard)
Manual/Auto-mode	Operation for injection, recycle and fraction
Auto-replay	Log-expanding auto separation method
Cleanup	Auto-flushing for flow line, column-flushing
Recycle	By switching of electromagnetic-valve
PC control (*optional)	By dedicated software, with LAN connection
Event marking	Any events (start, inject, fraction, etc.)
Timer for pump	Automatically start/stop at the input time
Pressure limiter	Available at any setting values
Display for chromatogram	On LCD
Storage of operation data	7 GB internal memory/flash device or interlinked PC
Port	LAN : 1, USB : 4
Sensor for leaking	Installed
Storage of detector	In the enclosure (ALL IN ONE)
Column holder	Installed as standard
Dimension	270 (W) X 570 (D) X 675 (H) mm
Power supply	AC100-240 V (400 W)
Weight	Approx. 40 kg

## Detector (selectable)

	YUV-3400	YRI-8830
	UV	RI
Wavelength	200-400 nm (3 Variable wavelengths)	-
Source of light	D2 lamp	LED
Sensitivity/noise	1.3 X 10 <sup>-4</sup> AU	1.4 X 10 <sup>-6</sup> RIU
Drift	3.0 X 10 <sup>-3</sup> AU/h	7.9 X 10 <sup>-6</sup> RIU/h
Flow cell	-	8 µL
Saturated concentration	-	Over 4 X 10 <sup>-3</sup> RIU
Measuring method	Single-beam transmissive-type	Deflection
RI range	-	1.00-1.75
Purge process	-	Automatic

\* The standard YUV-3400 is downgradable to other detectors depending on the intended purpose.

## Fraction Collector (optional)

	Forte/FR
Fraction method	Replay, manual, peak (controlled by interlinked PC)
Number of fraction	Max. 65 fractions (standard rack: 21 fractions)
Rack size	φ18 X 65, φ40 X 21 (standard), φ105 X 6, customizable for other size
Dimension	300 (W) x 500 (D) x 300 (H) mm
Power supply	AC100-240 V
Weight	15 kg

## Buffer Rack (optional)

	Forte/RK
Column holder	Installed as standard
Dimension	400 (W) X 500 (D) X 420 (H) mm
Weight	8 kg

## Parts



Before use (installation, operation, maintenance or check-up) of our products, instruction manuals should be carefully read and understood, and safety rules and precautions followed as outlined in the manuals.

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