Technical Data Sheet
miniLiLi-LC00090

Introduction

The miniLiLi is a chromatography laboratory instrument designed for analytical applications, method development and experimental purposes. As it is optimized for laboratory use, it is also optimized for low solvent consumption.

Solvent consumption: 100-200 $\left[\frac{ml}{h}\right]$.

Injected sample: 1-200 $[mg]$

Cell structure

The rotor of the device has a helical cell design with a lower plate number than the Z cells used in midiLiLi, maxiLiLi or prepLiLi devices. However, it is more cost-effective in terms of method development.

Scale Up

The methods developed on the miniLiLi device can be applied to midiLiLi, maxiLiLi or prepLiLi devices with simple scaling.

The scaling of the flow rate can be calculated from the following formula:

$$Q_{maxi} = Q_{mini} \cdot \left(\frac{V_{maxi}}{V_{mini}}\right)$$

$$Q - flow\ rate \left[\frac{ml}{min}\right]$$

$$V - volume\ [mm^3]$$

The injection volume can be calculated from the following formula:

$$\mathrm{m}_{\mathrm{maxi}} = m_{mini} \cdot \left(\frac{V_{maxi}}{V_{mini}}\right)$$

$$m - mass\ [g]$$

The rotation speed scaling can be calculated using the following formula:

$$n_{maxi} = n_{mini} \cdot \sqrt{\frac{r_{mini}}{r_{maxi}}}$$

$$n - \ rotation\ speed \left[\frac{1}{min}\right]$$

$$r - radius\ of\ rotor\ [mm]$$

Area of use

- Use miniLiLi for method development.
- At the beginning of the development phase, there is usually a limited number of samples available, so that it is possible to develop the purification technology using material and sample saving solutions.
- To produce micro preparations and standards.
- Based on the results obtained on the device, the technological cost estimation can be performed with high accuracy (based on run time and material consumption).

Necessary Chromatography equipment:

- 2 HPLC pumps
- 1 injector (manual or injector pump)
- 1 detector (optional)

Why miniLiLi?

You can convert your existing HPLC system into an LLC system for the price of a few HPLC column.

LiLiChro Ltd.
H-2360 Gyál, Szövetkezet u. 4.
E-mail: info@lilichro.com

MiniLiLi-LC00090		
	Europe	**USA**
Power supply	220V 50 [Hz] 5 [A]	110V 60 [Hz] 10 [A]
Utilized materials	Steel - Stainless:1.4404, AISI 316L PTFE PEEK FFKM	
Flow rate	1-5 [ml/min]	
Column volume	0.030-0.034 [l]	
Loading	1-200 [mg]	
Cell type	Helical	
Material of the inlet pipe	Steel - Stainless:1.4404, X2CrNiMo17-12-2, A4, AISI 316L	
Material of the outlet pipe	PTFE	
Inlet pipe diameter ID/OD	ID=0.008"-0.020" (0.2-0.5 mm); OD=1/16" (1.59 mm)	
Outlet pipe diameter ID/OD	ID=0.032"–0.043" (0.8-1.1 mm); OD=1/16" (1.59 mm)	
Standard inlet and outlet connectors	10/32"	
Stationary phase retention	>80%	
Rotor radius	120 mm	
Rotational speed	0-2000 rpm	
Recommended rotational speed	800 rpm	
Maximum operating pressure	10 MPa (1450 psi)	
Operating pressure	1.5-3 MPa (217- 435 psi)	
Dimensions (W × H × D)	430 x 340 x 530 mm (16.93 x 13.39 x 20.87 inch)	
Weight	25 kg (55.1 lb)	
Solvent compatibility chart	Organic solvents, Water, Compatible with organic acids up to 5%*****, Compatible with organic bases up to 5%*****, Sulfuric acid, Hydrochloric acid, Alkaline hydroxides, not compatible with organometallic reagents	

***After use, it is recommended to flush the column with water**

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