

Introduction

The midiLiLi is a chromatography laboratory instrument specifically recommended for the preparation of laboratory preparations. It is more cost effective and a good alternative for those who have been working with flash columns or preparative silica gels.

Solvent consumption: 120-2400 $\left[\frac{ml}{h}\right]$.

Injected sample: 0.1-10 $[g]$

Cell structure

The rotor of the device has a special z-cell design, which results in a higher plate number than the miniLiLi device and therefore a better separation capacity.

Scale Up

Methods developed on miniLiLi/midiLiLi devices can be applied to 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:

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

$$m - mass\ [g]$$

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

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

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

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

Speed Correlation Between Machines				
	miniLiLi 600 [rpm]	miniLiLi 800 [rpm]	miniLiLi 1000 [rpm]	miniLiLi 1250 [rpm]
midiLiLi [rpm]	600	800	1000	1250

Area of use

- To learn about and introduce chromatography technology, enabling laboratories to use modern purification techniques.
- Purification of preparations for synthetic laboratories.
- For the preparation of standards and larger quantities of sample materials.
- To replace the flash chromatography method.

Necessary Chromatography equipment:

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

Why midiLiLi?

midiLiLi is a compact preparative chromatography system with a wide range of variation possibilities.

midiLiLi-LC00190		
	Europe	**USA**
Power supply	230V 50 [Hz] 5 [A]	120V 60 [Hz] 10 [A]
Utilized materials	Steel - Stainless:1.4404, AISI 316L PTFE PEEK FFKM	
Flow rate	2-40 [ml/min]	
Column volume	0.140 [l]	
Loading	**0**.1-10 [g]	
Cell type	Z	
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	>80-90%	
Rotor radius	120 mm	
Rotational speed	0-2000 rpm	
Recommended rotational speed	800 rpm	
Maximum pressure	10 MPa (1450 psi)	
Operating pressure	0.5-1.5 MPa (72- 217 psi)	
Dimensions (W × H × D)	430 x 340 x 530 mm (16.93 x 13.39 x 20.87 inch)	
Weight	32 kg (70.5 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**