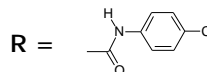
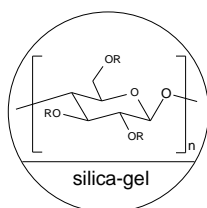


INSTRUCTION MANUAL FOR CHIRALCEL® OF COLUMNS

Please read this instruction sheet completely before using this column

Column description:

Packing composition: Cellulose tris (4-chlorophenylcarbamate) coated on 10µm silica-gel.



Shipping solvent: n-Hexane / 2-propanol solvent mixture (90:10 v/v)

This column has been pre-tested before packaging. Test parameters and results, as well as the Column Lot Number, are included on a separate (enclosed) page.

CAUTION

The entire HPLC system including the injector and the injection loop must be flushed with a solvent compatible with the column and its storage solvent prior to connecting. Many of the solvents commonly used in HPLC eluents such as acetone, chloroform, DMF, dimethylsulfoxide, ethyl acetate, methylene chloride and THF may DESTROY the chiral stationary phase if they are present, even in residual quantities, in the system.

If an auto-sampler is used, then the solvent employed to flush this unit between injections should also be changed and the relevant solvent lines flushed.

Operating restrictions

250 x 4.6 mm ID Analytical column	
Flow rate direction	As indicated on the column label
Typical Flow rate •	~ 1ml/min Do not exceed 1.5ml/min
Pressure limitation ,	Should be maintained < 30 Bar (~430 psi) <i>f</i> for maximum column life Do not exceed 50 Bar (~700 psi)
Temperature	0 to 40°C

- The maximum flow rate depends on the mobile phase viscosity (mobile phase composition), and should be adjusted in accordance with the pressure upper's limit (i.e. 50 Bar).

Examples	Column 250 x 4.6mm ID
Alkane/2-propanol mixtures ~ 90:10	1.0 to 1.5 ml/min
mixtures ~ 50:50	~ 0.5 ml/min

The back pressure value that should be taken into account is the one generated by the column itself. This value is measured by calculating the difference between the pressure of [LC system + column] and the pressure of the LC system free of the column.

f Ideal value for maximum column life, but stable up to 50 Bar.

Operating procedure

M Please contact CHIRAL TECHNOLOGIES EUROPE for further assistance before trying any solvents not mentioned below.

A - Mobile phases

	Alkane $\text{\textcircled{C}}$ / 2-propanol	Alkane $\text{\textcircled{C}}$ / Ethanol
CHIRALCEL [®] OF 250 x 4.6 mm ID	100/0 to 50/50	NOT ALLOWED

$\text{\textcircled{C}}$ Alkane: n-hexane or iso-hexane or n-heptane. Some small selectivity differences may sometimes be found.

B – Additives

For basic samples or acidic samples, it is necessary to add a modifier into the mobile phase in order to achieve the chiral separation

Basic Samples Require Basic modifiers	Acidic Samples Require Acidic modifiers
DEA TEA	TFA CH ₃ COOH HCOOH
< 0.5% Typically 0.1%	< 0.5% Typically 0.1%

Column care / Maintenance

- q The use of a guard column is highly recommended for maximum column life.
- q Samples should be dissolved in the mobile phase and should be filtered through a membrane filter of approximately 0.5 μ m porosity.
- q The mobile phase should be displaced with Storage Solvent (Hexane / 2-propanol 9:1) when stored for more than one week.
- q When washing is required, use Hexane / 2- Propanol 50:50 (v/v) at an appropriate flow rate for 3 hours.

Important Notice

⚠ STRONGLY BASIC solvent modifiers or sample solutions MUST BE AVOIDED, because they are likely to damage the silica gel used in this column.

⚠ **This instruction sheet is not applicable to any other DAICEL columns.**

⚠ If you have any questions about the use of this column, or encounter a problem, please contact **CHIRAL TECHNOLOGIES EUROPE** for assistance (cte@chiral.fr)

Operating this column in accordance with the guidelines outlined here will result in a long column life.

For more detailed information, refer to our catalogue also available on our website <http://www.chiral.fr> or contact [Chiral Technologies Europe](#).

**CHIRALCEL[®], CHIRALPAK[®] and CROWNPAK[®] are registered trademarks of
DAICEL CHEMICAL INDUSTRIES, LTD.**

TABLE OF DAICEL CHIRAL COLUMNS

Type of Adsorbent	Column Trade Name	Phase Type		Particle Size		
		Normal Phase	Reversed phase	5 μm	10 μm	
Immobilized Amylose Carbamate	CHIRALPAK® IA	W	W	W		
	CHIRALPAK® AD	W			W	
Amylose Carbamates	CHIRALPAK® AD-H	W		W		
	CHIRALPAK® AD-RH		W	W		
	CHIRALPAK® AS	W			W	
	CHIRALPAK® AS-H	W		W		
	CHIRALPAK® AS-RH		W	W		
Immobilized Cellulose Carbamate	CHIRALPAK® IB	W	W	W		
	CHIRALCEL® OD	W			W	
Cellulose Carbamates	CHIRALCEL® OD-H	W		W		
	CHIRALCEL® OD-R		W		W	
	CHIRALCEL® OD-RH		W	W		
	CHIRALCEL® OC	W			W	
	CHIRALCEL® OF	W			W	
	CHIRALCEL® OG	W			W	
Cellulose Esters	CHIRALCEL® OJ	W			W	
	CHIRALCEL® OJ-H	W		W		
	CHIRALCEL® OJ-RH		W	W		
	CHIRALCEL® OA	W			W	
	CHIRALCEL® OB	W			W	
	CHIRALCEL® OB-H	W		W		
	CHIRALCEL® OK	W			W	
	CHIRALCEL® CA	W		NA	NA	
Immobilized Quinine & Quinidine Carbamates	CHIRALPAK® QD-AX	W	W	W		
	CHIRALPAK® QN-AX	W	W	W		
Crown Ether	CROWNPAK® CR(+)		W	W		
	CROWNPAK® CR(-)		W	W		
Ligand Exchange	CHIRALPAK® MA(+)		W	3 μm		
	CHIRALPAK® WH		W		W	
Polymethacrylate	CHIRALPAK® OP(+)	W			W	
	CHIRALPAK® OT(+)	W			W	



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