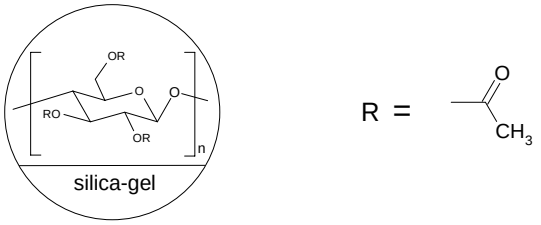
INSTRUCTION MANUAL FOR CHIRALCEL® OA

250 x 4.6 mm ID analytical column

Please read this instruction sheet completely before using this column

Column description:

Packing composition: Cellulose triacetate 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 used 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 ①	~ 1ml/min Do not exceed 1.5ml/min
Pressure limitation ②	Should be maintained < 30 Bar (~430 psi)③ for maximum column life Do not exceed 50 Bar (~700 psi)
Temperature	0 to 40°C

① 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**
Alcane/Alcohol mixtures ~ 90:10	1.0 to 1.5 ml/min
100% EtOH	~ 0.5 ml/min
100% 2-propanol	~ 0.2-0.3 ml/min

② The back pressure value that should be taken into account is that 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.

③ Ideal value for maximum column life, but stable up to 50 Bar.

Operating procedure

A - Mobile phases

	Alcane❶ / 2-propanol	Alcane❶ / Ethanol❷
CHIRALCEL® OA 250 x 4.6 mm ID	100/0 to 0/100	100/0 to 0/100

❶ Alcane: n-hexane or iso-hexane or n-heptane. Some small selectivity differences may sometimes be found.

❷
- The retention is generally shorter with Ethanol than with 2-propanol.
- The retention is generally shorter with a higher alcohol content.
- The use of other alcohols such as 1-propanol, 1-BuOH, 2-BuOH etc...is possible, but effectiveness cannot be guaranteed. Do not use mobile phases containing more than 15% of these alcohols.

Please contact CHIRAL TECHNOLOGIES EUROPE for more assistance before trying any unusual solvents

B – Modifiers

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_3COOH HCOOH
< 0.5% Typically 0.1%	< 0.5% Typically 0.1%

Column care / Maintenance

- The use of a guard column is recommended for maximum column life.
- Samples should be dissolved in the mobile phase and should be filtered through a membrane filter of approximately 0.5µm porosity.
- The mobile phase should be displaced with Storage Solvent (Hexane / 2-propanol 9:1) when stored for more than one week.
- When washing is required, use pure Ethanol 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 question about the use of this column, or encounter problems in its use please contact CHIRAL TECHNOLOGIES EUROPE for assistance (cte@chiral.fr)

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

CHIRAL TECHNOLOGIES EUROPE
Pure simplicity

TABLE OF DAICEL CHIRAL COLUMNS

Type of Adsorbent	Column Trade Name	Phase Type		Particle Size	
		Normal Phase	Reversed phase	5 µm	10µm
Amylose Carbamate	CHIRALPAK® AD	◆			◆
	CHIRALPAK® AD-H	◆		◆	
	CHIRALPAK® AD-RH		◆	◆	
	CHIRALPAK® AS	◆			◆
	CHIRALPAK® AS-H	◆		◆	
	CHIRALPAK® AS-RH		◆	◆	
Cellulose Carbamate	CHIRALCEL® OD	◆			◆
	CHIRALCEL® OD-H	◆		◆	
	CHIRALCEL® OD-R		◆		◆
	CHIRALCEL® OD-RH		◆	◆	
	CHIRALCEL® OC	◆			◆
	CHIRALCEL® OF	◆			◆
	CHIRALCEL® OG	◆			◆
Cellulose Ester	CHIRALCEL® OJ	◆			◆
	CHIRALCEL® OJ-H	◆		◆	
	CHIRALCEL® OJ-RH		◆	◆	
	CHIRALCEL® OA	◆			◆
	CHIRALCEL® OB	◆			◆
	CHIRALCEL® OB-H	◆		◆	
	CHIRALCEL® OK	◆			◆
	CHIRALCEL® CA	◆		NA	NA
Crown Ether	CROWNPAK® CR(+)		◆	◆	
	CROWNPAK® CR(-)		◆	◆	
Ligand Exchange	CHIRALPAK® MA(+)		◆	3 µm	
	CHIRALPAK® WH		◆		◆
Polymethacrylate	CHIRALPAK® OP(+)	◆			◆
	CHIRALPAK® OT(+)	◆			◆

Columns packed with 20µm material dedicated to preparative scale applications (50 & 100mm I.D.) are also available from Chiral Technologies Europe.
For more detailed information, refer to our catalogue also available on our website: http://www.chiral.fr or contact Chiral Technologies Europe.