

Euroline

► Eurocel[®] chiral columns

Your reliable partner for chiral separations

KNAUER's Eurocel line of chiral stationary phases (CSP) was designed to tackle a wide range of chiral separation tasks. Based on a premium quality silica gel matrix coated with a derivatized cellulose polysaccharide, the Eurocel line of chiral column materials are characterized by an extremely high enantioselectivity and loadability.

Derivatization of the cellulose OH-groups results in supramolecular helical polymer structures, combining polar and π - π interactions with inclusion complexation to effect a potent selectivity.

While other CSPs are typically used in normal phase mode only, Eurocel columns can be used in normal phase mode, reversed phase mode and polar organic mode, without any loss in selectivity. Available in a wide range of dimensions for analytical, preparative, simulated moving bed and supercritical fluid applications, Eurocel columns are the perfect choice for even the most challenging enantioseparation tasks.

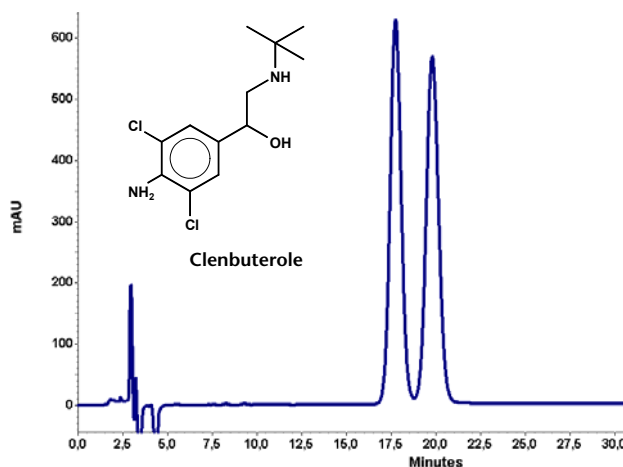
Silica gel	ultra pure, third generation
Particle size	3 μ m, 5 μ m, 10 μ m, 20 μ m
Particle shape	spherical
Pore size	1000 Å
Polysaccharide form	derivatized cellulose, coated
Modification (chiral selector)	Eurocel 01: 3,5-dimethylphenylcarbamate Eurocel 02: benzoate Eurocel 03: 4-methylbenzoate Eurocel 04: phenylcarbamate

Stability

Eurocel chiral columns exhibit exceptionally robust performance, provided that an appropriate solvent intermediate such as 2-propanol is used when switching between mobile phase modes. In addition, switching between different eluent types requires very short equilibration times.

Eurocel CSPs also feature a particularly narrow particle size and pore size distribution, as well as outstanding mechanical stability with a pressure limit of 300 bar.

Eluent modifiers such as mineral and organic acids, buffer salts or amines between a pH range of 2 to 8 can be used with all Eurocel columns.

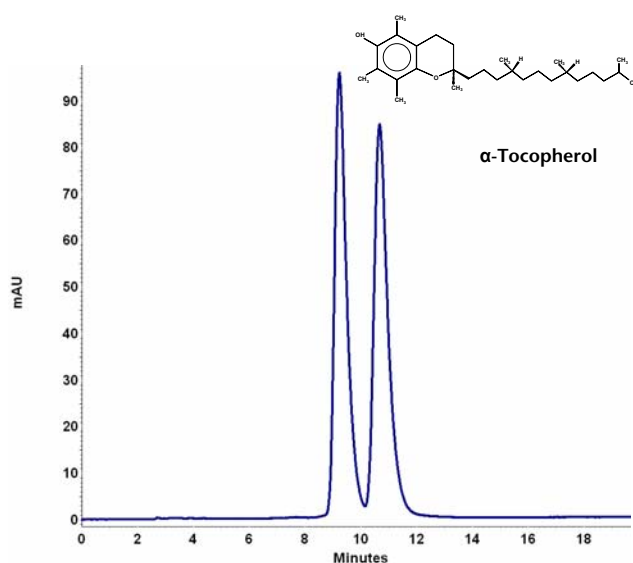


Eurocel 04, 5 μ m (250 x 4.6 mm), Eluent: acetonitrile/water 25:75 (v/v) + 0.1 % DEA, Flow: 1.0 ml/min, Temp.: 20°C, Detection: UV, 215 nm

Handling guidelines

Eurocel columns are compatible with most typical HPLC solvents. As with any CSP based on modified cellulose, some HPLC solvents can damage this type of column, even when in low concentrations. To ensure optimal performance, detailed column handling guidelines are provided with every column.

Temperature is also a very important parameter for chiral separations. Eurocel columns can be operated reproducibly between 4 and 40°C. In general, lower column temperatures will improve enantioselectivity.




Eurocel 01, 5 μm (250 x 4.6 mm), Eluent: hexane/2-butanol, 99:1 (v/v), Flow: 1.0 ml/min, Temp.: 20°C, Detection: UV, 290 nm

Application Areas

Eurocel stationary phases are particularly enantioselective for organic and organometallic species. The peak elution order will depend on the Eurocel modification used and the physicochemical properties of the eluting substance. To be sure you get the most suitable Eurocel column for your application, we recommend you take advantage of our free column screening service by submitting a sample of your analyte.

Please also refer to our Chiral Application Journal, available as a PDF on our website.

HPLC · SMB · Osmometry


Chiral Screening Data Sheet

Instructions: Please send the comparator form along with your sample. Depending on your separation requirements we need an adequate quantity of sample. Please inquire if you need a confidentiality agreement signed before you send us your sample.

Contact Information:

Name: _____
 Company: _____
 Address: _____
 City: _____ Zip code: _____
 State: _____ Country: _____
 Phone: _____ Fax: _____
 e-mail: _____

Separation Requirements:

Analytical: mg g kg
 Preparative: mg g kg
 SMB: _____ kg

Compound Information:

Name: _____
 Structure:

Please specify at least the functional groups if the structure is unknown

Physical Appearance:

Powder Waxy Oil
 UV (max): _____ nm

Stability:

Stable	<input type="checkbox"/>	Decomp.	<input type="checkbox"/>	Unknown	<input type="checkbox"/>
Light	<input type="checkbox"/>	Moisture	<input type="checkbox"/>		<input type="checkbox"/>
Temp < 40°C	<input type="checkbox"/>	Temp > 40°C	<input type="checkbox"/>		<input type="checkbox"/>
pH < 7	<input type="checkbox"/>	pH > 7	<input type="checkbox"/>		<input type="checkbox"/>
pH < 6	<input type="checkbox"/>	pH > 8	<input type="checkbox"/>		<input type="checkbox"/>

Solubility:

Water	<input type="checkbox"/>	Soluble	<input type="checkbox"/>	Unsoluble	<input type="checkbox"/>	Unknown	<input type="checkbox"/>
Methanol	<input type="checkbox"/>	Ethanol	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
n-Propanol	<input type="checkbox"/>	Acetonitril	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
CH ₂ Cl ₂	<input type="checkbox"/>	Hexan	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

Already known Chromatographic Data:

Column name	Mobile phase	Comments
1.		
2.		
3.		

General Information:

Do you want your sample returned? Yes No
 All samples are destroyed after the screening.

Application Guide Recommendation:

Yes No
 Knaauer would highly appreciate the opportunity of obtaining your permission to reference your material in our Application Guide.

MSDS Available:

Yes No

Visit www.knaauer.net for details on complete HPLC systems, HPLC columns, and osmometers.

KNAUER Column Hardware

We design and manufacture HPLC column hardware ranging from 2 mm ID to 62 mm ID under strict quality control. A specially treated inner surface ensures consistent column packing and high column stability. An easily exchangeable integrated precolumn is available upon request.



Technical support

In addition to telephone technical support, KNAUER offers two more ways to help you achieve the best results. Take advantage of our method development service to create and optimize a separation method for your application. Our free column screening service will help you find the optimal chiral column for your separation problem.

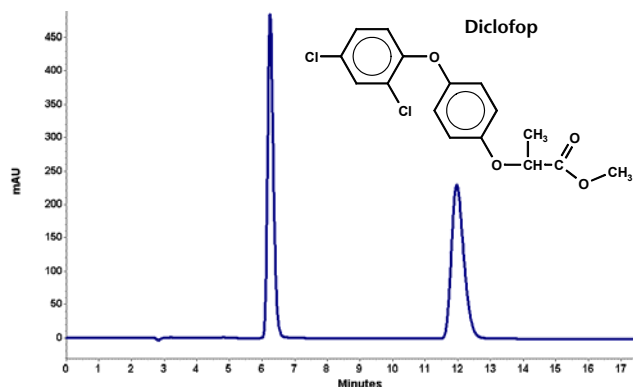
KNAUER also offers a preparative-scale separation service for simulated moving bed chromatography and other sample purification applications. Please visit our website to download our Chiral Applications Journal, describing more than 40 HPLC and SFC enantiomorphs.



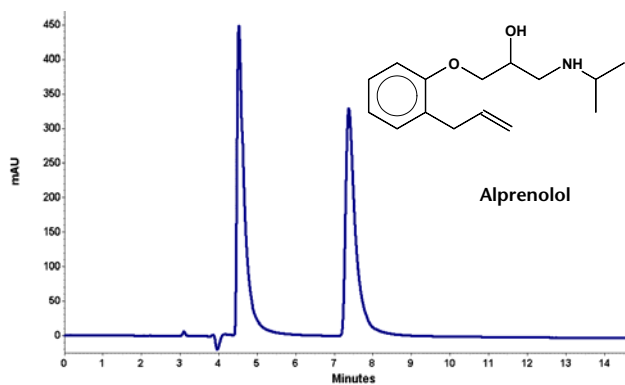
On our website you will also find an informative FAQ for Eurocel chiral columns:

http://www.knauer.net/eurocel_column_care

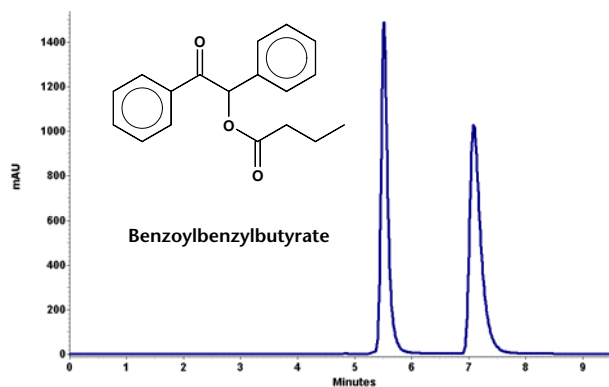
Applications



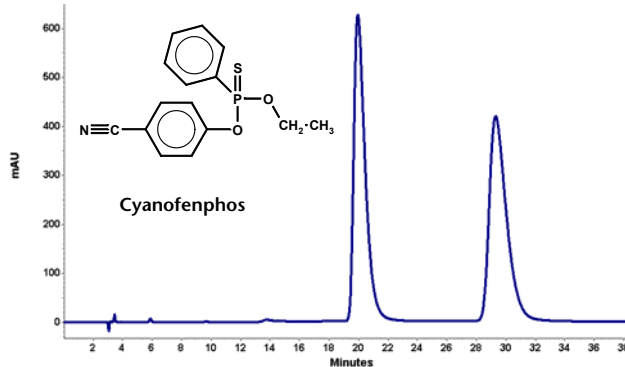
Eurocel 01 (250 x 4.6 mm), Eluent: hexane/2-propanol 80:20 (v/v) + 0.1 % TFA, Flow: 1.0 ml/min, Temp.: 20°C, Detection: UV, 210 nm



Eurocel 01 (250 x 4.6 mm), Eluent: hexane/2-propanol 80:20 (v/v) + 0.1 % DEA, Flow: 1.0 ml/min, Temp.: 25°C, Detection: UV, 220 nm



Eurocel 01, 5 µm (250 x 4.6 mm), Eluent: hexane/2-propanol 90:10 (v/v), Flow: 1.0 ml/min, Temp.: 20°C, Detection: UV, 244 nm



Eurocel 03, 5 µm (250 x 4.6 mm), Eluent: hexane/2-propanol 80:20 (v/v) + 0.1 % TFA, Flow: 1.0 ml/min, Temp.: 20°C, Detection: UV, 234 nm

Ordering Information

	Packing material	3 µm	5 µm	10 µm	20 µm
▶ The last 7 digits of the Order No. comprise the stationary phase	Eurocel 01	...M370ECG	...M370ECJ	...M370ECN	...M370ECS
	Eurocel 02	...M390ECG	...M390ECJ	...M390ECN	...M390ECS
	Eurocel 03	...M400ECG	...M400ECJ	...M400ECN	...M400ECS
	Eurocel 04	...M480ECG	...M480ECJ	...M480ECN	...M480ECS

	Analytical columns	2 mm ID	4.6 mm ID	8 mm ID	20 mm ID
▶ The first 3 digits of the Order No. comprise column dimensions	150 mm length	15B...	15E...	n.a.	15J...
	250 mm length	25B...	25E...	25G...	25J...

All analytical column types from 2 mm ID up to 4.6 mm ID are available with integrated precolumns upon request. Preparative columns are available in 16 mm ID up to 62 mm ID.

Technical data are subject to change without notice.

Visit www.knauer.net for details on complete HPLC systems, HPLC columns, and osmometers.

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