

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 chiral column materials are characterized by an extremely high enantioselectivity and loadability.

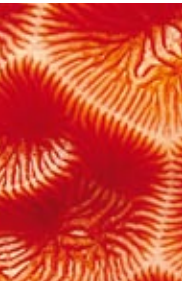
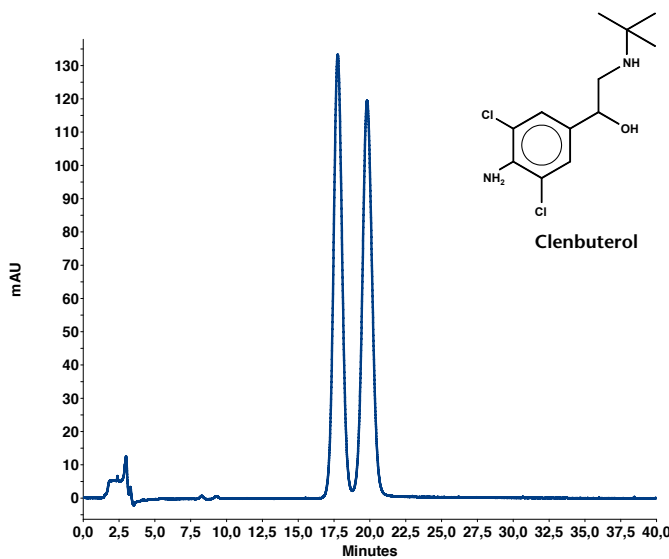
Eluent flexibility – While other CSPs are typically used in normal phase mode only, Eurocel columns can be used in normal phase mode, reversed phase mode and polar organic mode, without any loss in selectivity. Switching between different eluent types requires only short equilibration times.

Silica gel:	ultra pure, third generation
Particle size:	3 µm, 5 µm, 10 µm, 20 µm
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

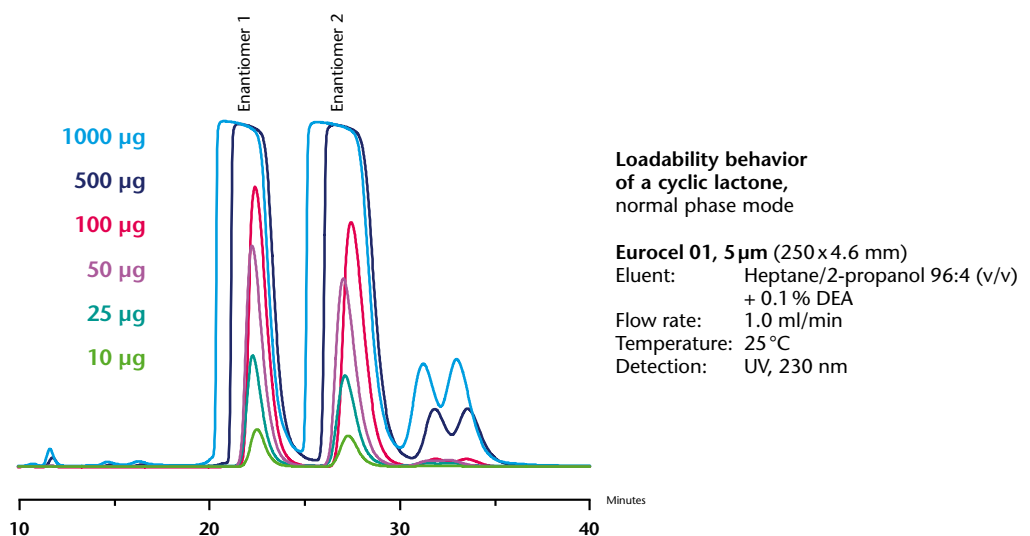
Available in a wide range of dimensions for analytical, preparative, simulated moving bed and supercritical fluid applications, Eurocel columns are the perfect choice for even the most challenging enantioseparation tasks.

Stability Eurocel chiral columns exhibit exceptionally robust performance for large numbers of injections. 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 over a pH range from 2 to 8 can be used with all Eurocel columns.

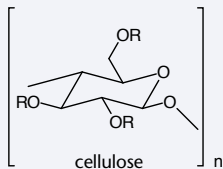
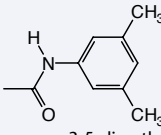
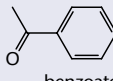
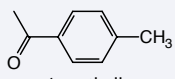
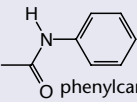


High loadability KNAUER Eurocel chiral columns offer high loadability for easy and cost effective upscaling. All Eurocel CSPs are available in 3 μm, 5 μm, 10 μm, and 20 μm particle sizes.



Chiral column family

Selectivities The available Eurocel chiral columns offer a proven set of different selectivities, allowing for separations of a wide range of chiral compounds. With all Eurocel chiral materials providing great eluent flexibility, high loadability, and exceptional stability the process of method development can be substantially simplified.

CSP	Polysaccharide	Modification (R = ...)	Application
Eurocel 01		 3,5-dimethylphenylcarbamate	alkaloids, tropines, amines, beta blockers
Eurocel 02	"	 benzoate	small aliphatic and aromatic compounds
Eurocel 03	"	 4-methylbenzoate	aryl methyl esters, aryl methoxy esters
Eurocel 04	"	 phenylcarbamate	cyclopentenones

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

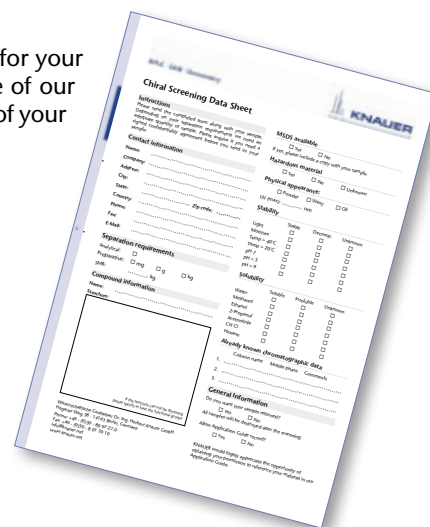
Eurocel stationary phases are particularly enantioselective for organic and organometallic species. The peak elution order will depend on the Eurocel modification used and the physicochemical properties of the eluting substance.

To be sure you get the most suitable Eurocel column for your application, we recommend that you take advantage of our free column screening service by submitting a sample of your analyte.

Range of applications KNAUER Eurocel chiral columns are typically used for separations of

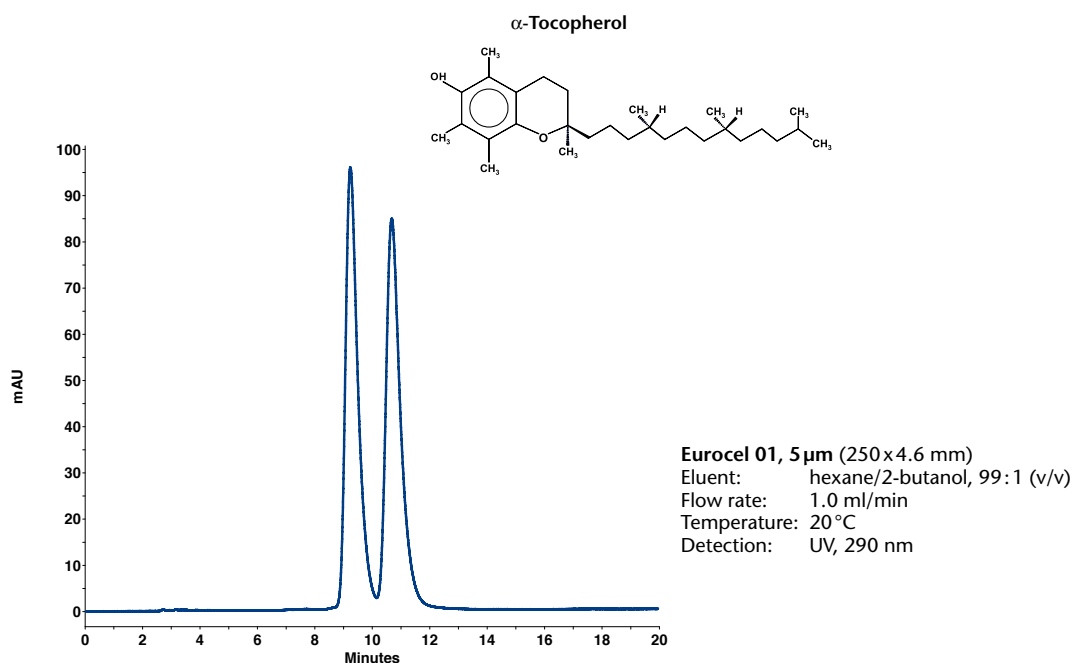
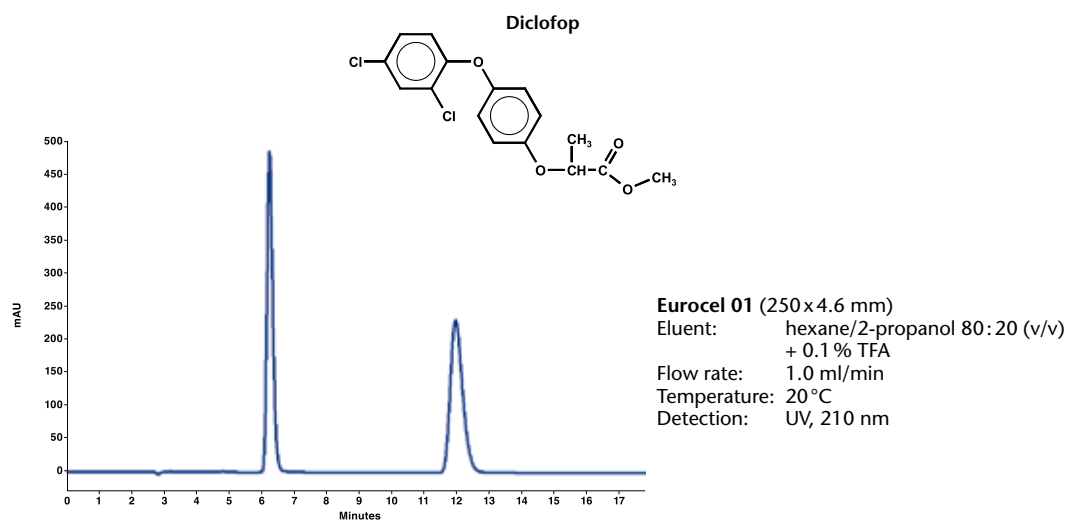
- pharmaceutical active compounds
- chiral compounds in foodstuffs, dyes, preservatives
- chiral catalysts and bioorganic racemates

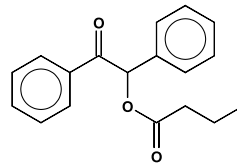
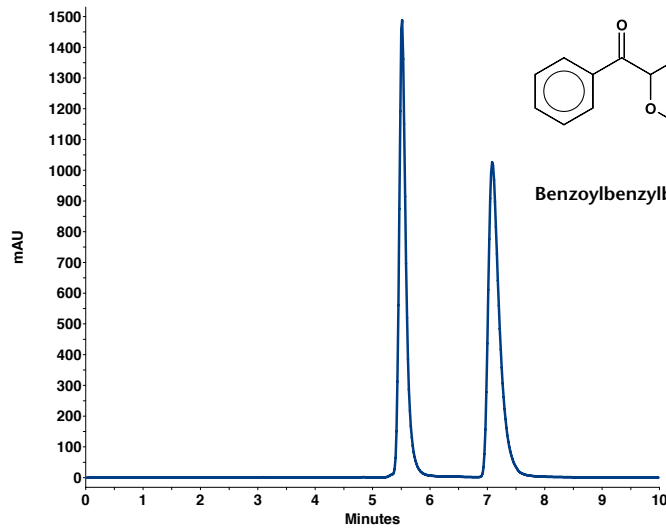
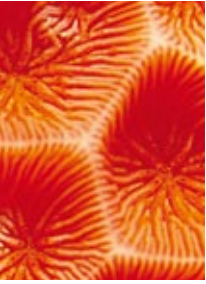
Please also refer to our chiral applications available on our website.



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. When switching eluent types, an appropriate solvent intermediate such as 2-propanol is recommended to achieve short equilibration times.

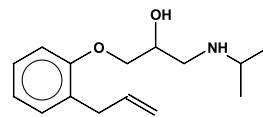
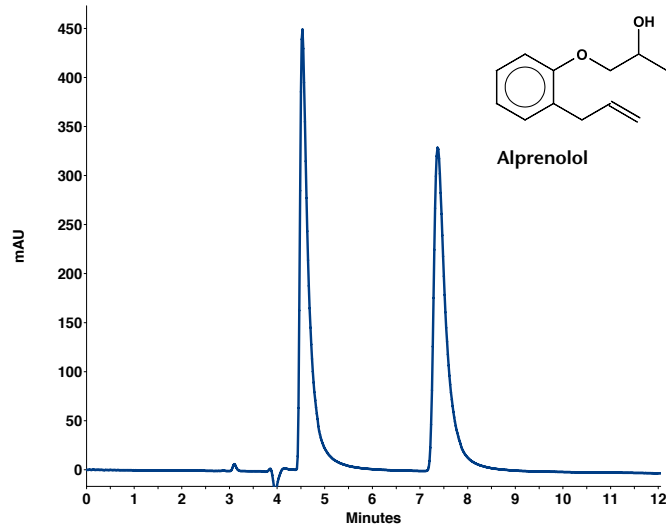
Temperature is also a very important parameter for chiral separations. Eurocel columns can be operated reproducibly between 4 and 40 °C. In general, lower column temperatures will improve enantioselectivity.





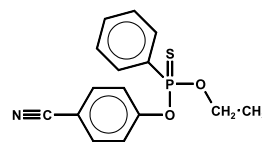
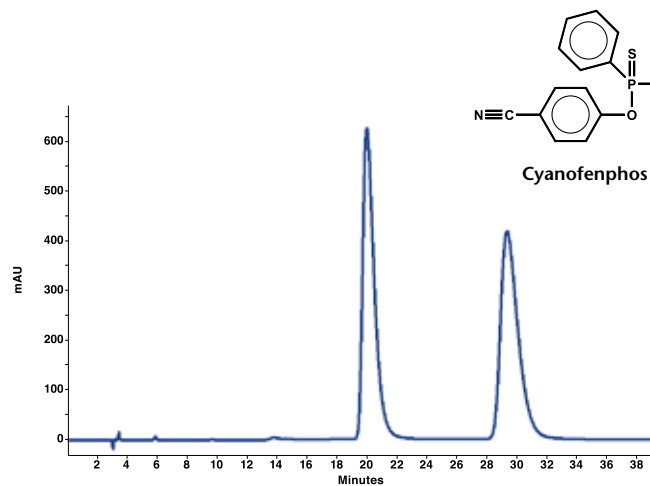
Benzoylbenzylbutyrate

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



Alprenolol

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



Cyanofenphos

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

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.

Technical support In addition to telephone technical support, KNAUER also offers:



- method development service to create and optimize a separation method for your application
- free column screening service to help you find the optimal chiral column for your separation task
- preparative-scale separation service for simulated moving bed chromatography and other sample purification applications

Check <http://www.knauer.net/applications> for chiral HPLC and SFC applications.

Find our informative Eurocel chiral column FAQ at http://www.knauer.net/eurocel_column_care

Ordering information

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

► The first 3 digits of the Order No. comprise the column dimensions.	Analytical columns	2 mm ID	4.6 mm ID	8 mm ID	20 mm ID
	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.

Wissenschaftliche Gerätebau
Dr. Ing. Herbert Knauer GmbH
Hegauer Weg 38
14163 Berlin, Germany



Your local distributor:

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Phone: +49-(0)30-80 97 27-0
Telefax: +49-(0)30-8 01 50 10
E-Mail: info@knauer.net
Internet: www.knauer.net