

# CHIRAL STATIONARY PHASES

Innovative columns from the experts  
in chiral chromatography



## PACKED COLUMNS AND BULK MEDIA

- Compatible with SFC & HPLC
- Scale from Analytical to Prep
- Robust Phases for Long Life

# REFLECT™ Polysaccharide Chiral Stationary Phases

Polysaccharide chiral columns are the most widely used type of chiral stationary phases (CSPs) to separate enantiomers. REFLECT™ chiral columns are rugged polysaccharide phases suitable for a wide range of chiral compounds. Unique, proprietary phase coverage provides excellent peak shape and improved resolution versus leading chiral phases. High resolution greatly improves preparative loading, leading to greater productivity and higher purity separations. Combined with attractive pricing and rapid delivery, REFLECT™ chiral columns deliver the performance and productivity you expect. REFLECT™ columns are available packed with immobilized and coated CSPs.

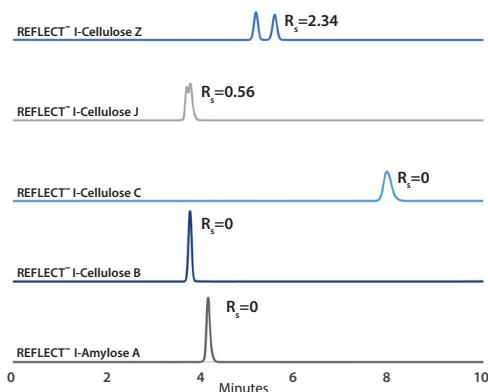
## REFLECT™ Immobilized Polysaccharide CSPs

- Highly efficient media with excellent peak shape and loading capacity
- Rugged immobilized phase for long column lifetimes
- Compatible with a broad range of solvents and separation modes (NP, RP, Polar Organic, SFC)
- Fully scalable from 3 - 20µm



### BROAD SELECTIVITY

#### Methyl p-tolyl Sulfoxide

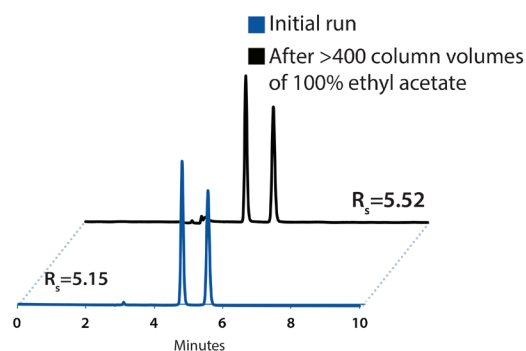


Column Sizes: 5 µm, 25 cm x 4.6 mm  
 Mobile Phase: (80/20) Hexane/Ethanol  
 Flow Rate: 1.5 mL/min  
 Detection: UV 254 nm

Optimize separations with a range of immobilized polysaccharide chiral phases

### EXCELLENT STABILITY

#### Hydrobenzoin



Column: REFLECT™ I-Amylose A, 5 µm, 25 cm x 4.6 mm  
 Mobile Phase: (70/30) Hexane/Ethanol; 400 CVs Ethyl Acetate  
 Flow Rate: 1.0 mL/min

No loss of resolution after over 400 column volumes of ethyl acetate

## REFLECT™ Phase Characteristics

Column	Selector	Equivalent Competitive Column	USP	Particle Size	PH Range
REFLECT™ I-Amylose A	Amylose tris(3,5-dimethylphenylcarbamate)	CHIRALPAK® IA, IA-3; LUX® i-Amylose 1	L99	3, 5, 10, 20 µm	2 - 8*
REFLECT™ I-Cellulose B	Cellulose tris(3,5-dimethylphenylcarbamate)	CHIRALPAK® IB, IB-3, CHIRALPAK® IB N, IB N-3	N/A		
REFLECT™ I-Cellulose C	Cellulose tris(3,5-dichlorophenylcarbamate)	CHIRALPAK® IC, IC-3; LUX® i-Cellulose 5	L119		
REFLECT™ I-Cellulose J	Cellulose tris(4-methylbenzoate)	CHIRALPAK® IJ, CHIRALPAK® IJ-3	N/A		
REFLECT™ I-Cellulose Z	Cellulose tris(3-Chloro-4-Methylcarbamate)	Similar to CHIRALCEL® OZ and LUX® Cellulose-2	N/A		
REFLECT™ C-Amylose A	Amylose tris(3,5-dimethylphenylcarbamate)	CHIRALPAK® AD, AD-H, AD-3; LUX® Amylose-1	L51		
REFLECT™ C-Cellulose B	Cellulose tris(3,5-dimethylphenylcarbamate)	CHIRALCEL® OD, OD-H, OD-3; LUX® Cellulose-1	L40		

\*Operating at the upper limit may shorten the column life.

# REFLECT™ Polysaccharide Chiral Stationary Phases

REFLECT™ coated amylose and cellulose chiral columns are high performance polysaccharide phases suitable for a wide range of chiral compounds in normal phase HPLC and SFC modes.

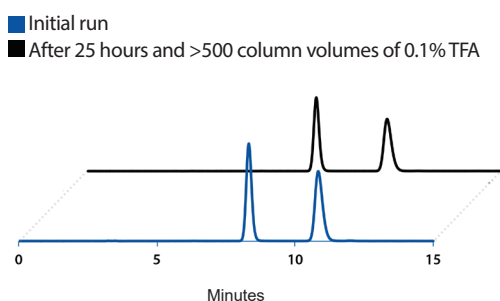


## REFLECT™ Coated Polysaccharide CSPs

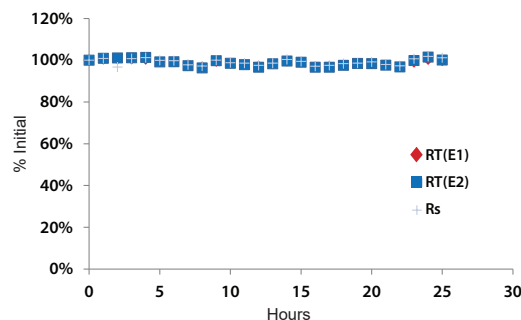
- High performance media delivers excellent peak shape and resolution
- Compatible with a wide range of solvents and separation modes (normal phase HPLC and SFC)
- Fully scalable from 3 - 20µm
- Fast delivery—all sizes, shipped anywhere in the world

### EXCELLENT STABILITY

#### Ketolorac



Compound: Ketolorac  
Column: REFLECT™ C-Amylose A 5 µm, 25 cm x 4.6 mm  
Mobile Phase: (70/30/0.1) Hexane/Ethanol/TFA



Flow Rate: 1.5 mL/min for 25 hours = >500 CVs  
Detection: UV 314 nm  
Catalog #: 1-580204-300

No loss of resolution after 25 hours and over 500 column volumes (CVs) of 0.1% trifluoroacetic acid

No loss of retention or resolution after 25 hours of analysis time in 0.1% TFA

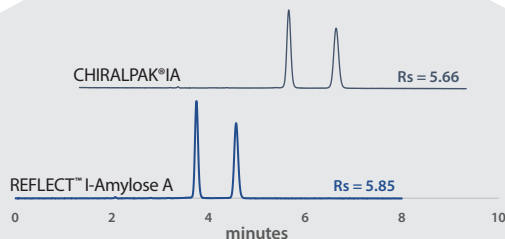
## The REFLECT™ Guarantee

Rely on Guaranteed Performance  
Try REFLECT™ chiral columns risk free!

If a REFLECT™ analytical column ( $\leq 4.6$ mm ID) does not provide equivalent or better separation as compared to a competing column of the same particle size, phase type, and dimensions, return the column within 45 days for a full refund.

Contact Us to Learn More  
[chromsales@registech.com](mailto:chromsales@registech.com)

REFLECT™ I-Amylose A  
provides equivalent  
separation of Hydrobenzoin



Compound: Hydrobenzoin  
Column Size: 5 µm, 25 cm x 4.6 mm  
Mobile Phase: (80/20) Hexane/Ethanol

Flow Rate: 1.5 mL/min  
Detection: UV 220 nm  
REFLECT™ I-A Catalog #: 1-591204-300

# REFLECT™ Ordering Information



Particle Size	Column Dimensions	I-Amylose A Catalog#	I-Cellulose B Catalog#	I-Cellulose C Catalog#	I-Cellulose J Catalog#	I-Cellulose Z Catalog#	C-Amylose A Catalog#	C-Cellulose B Catalog#
3 µm	50 x 2.1 mm	1-591109-300	1-592109-300	1-593109-300	1-594109-300	1-595109-300	1-580109-300	1-590109-300
	100 x 2.1 mm	1-591110-300	1-592110-300	1-593110-300	1-594110-300	1-595110-300	1-580110-300	1-590110-300
	150 x 2.1 mm	1-591111-300	1-592111-300	1-593111-300	1-594111-300	1-595111-300	1-580111-300	1-590111-300
	50 x 3 mm	1-591101-300	1-592101-300	1-593101-300	1-594101-300	1-595101-300	1-580101-300	1-590101-300
	100 x 3 mm	1-591106-300	1-592106-300	1-593106-300	1-594106-300	1-595106-300	1-580106-300	1-590106-300
	150 x 3 mm	1-591105-300	1-592105-300	1-593105-300	1-594105-300	1-595105-300	1-580105-300	1-590105-300
	50 x 4.6 mm	1-591107-300	1-592107-300	1-593107-300	1-594107-300	1-595107-300	1-580107-300	1-590107-300
	100 x 4.6 mm	1-591102-300	1-592102-300	1-593102-300	1-594102-300	1-595102-300	1-580102-300	1-590102-300
	150 x 4.6 mm	1-591103-300	1-592103-300	1-593103-300	1-594103-300	1-595103-300	1-580103-300	1-590103-300
	250 x 4.6 mm	1-591104-300	1-592104-300	1-593104-300	1-594104-300	1-595104-300	1-580104-300	1-590104-300
5 µm	50 x 2.1 mm	1-591212-300	1-592212-300	1-593212-300	1-594212-300	1-595212-300	1-580212-300	1-590212-300
	100 x 2.1 mm	1-591213-300	1-592213-300	1-593213-300	1-594213-300	1-595213-300	1-580213-300	1-590213-300
	150 x 2.1 mm	1-591215-300	1-592215-300	1-593215-300	1-594215-300	1-595215-300	1-580215-300	1-590215-300
	50 x 3 mm	1-591211-300	1-592211-300	1-593211-300	1-594211-300	1-595211-300	1-580211-300	1-590211-300
	100 x 3 mm	1-591214-300	1-592214-300	1-593214-300	1-594214-300	1-595214-300	1-580214-300	1-590214-300
	150 x 3 mm	1-591216-300	1-592216-300	1-593216-300	1-594216-300	1-595216-300	1-580216-300	1-590216-300
	50 x 4.6 mm	1-591201-300	1-592201-300	1-593201-300	1-594201-300	1-595201-300	1-580201-300	1-590201-300
	100 x 4.6 mm	1-591202-300	1-592202-300	1-593202-300	1-594202-300	1-595202-300	1-580202-300	1-590202-300
	150 x 4.6 mm	1-591203-300	1-592203-300	1-593203-300	1-594203-300	1-595203-300	1-580203-300	1-590203-300
	250 x 4.6 mm	1-591204-300	1-592204-300	1-593204-300	1-594204-300	1-595204-300	1-580204-300	1-590204-300
	250 x 10 mm	1-591205-300	1-592205-300	1-593205-300	1-594205-300	1-595205-300	1-580205-300	1-590205-300
	150 x 21.1 mm	1-591210-300	1-592210-300	1-593210-300	1-594210-300	1-595210-300	1-580210-300	1-590205-300
	250 x 21.1 mm	1-591206-300	1-592206-300	1-593206-300	1-594206-300	1-595206-300	1-580206-300	1-590206-300
	150 x 30 mm	1-591209-300	1-592209-300	1-593209-300	1-594209-300	1-595209-300	1-580209-300	1-590209-300
	250 x 30 mm	1-591207-300	1-592207-300	1-593207-300	1-594207-300	1-595207-300	1-580207-300	1-590207-300
	250 x 50 mm	1-591208-300	1-592208-300	1-593208-300	1-594208-300	1-595208-300	1-580208-300	1-590208-300
10 µm	50 x 4.6 mm	1-591301-300	1-592301-300	1-593201-300	1-594301-300	-	1-580301-300	1-590301-300
	100 x 4.6 mm	1-591302-300	1-592302-300	1-593302-300	1-594302-300	-	1-580302-300	1-590302-300
	150 x 4.6 mm	1-591303-300	1-592303-300	1-593303-300	1-594303-300	-	1-580303-300	1-590303-300
	250 x 4.6 mm	1-591304-300	1-592304-300	1-593304-300	1-594304-300	-	1-580304-300	1-590304-300
	250 x 10 mm	1-591305-300	1-592305-300	1-593305-300	1-594305-300	-	1-580305-300	1-590305-300
	150 x 21.1 mm	1-591310-300	1-592310-300	1-593310-300	1-594310-300	-	1-580310-300	1-590310-300
	250 x 21.1 mm	1-591306-300	1-592306-300	1-593306-300	1-594306-300	-	1-580306-300	1-590306-300
	250 x 30 mm	1-591307-300	1-592307-300	1-593307-300	1-594307-300	-	1-580307-300	1-590307-300
	250 x 50 mm	1-591308-300	1-592308-300	1-593308-300	1-594308-300	-	1-580308-300	1-590308-300
20 µm	250 x 4.6 mm	1-591404-300	1-592404-300	1-593404-300	1-594404-300	-	1-580405-300	1-580505-300

Bulk Media and Guard Columns are also available. Contact us for details or to place an order.

**For a Customized Quote, Contact a Regis Chromatography Representative**  
[chromsales@registech.com](mailto:chromsales@registech.com)

# **WHELK-O<sup>®</sup> 1** *Pirkle-Type Chiral Stationary Phases*

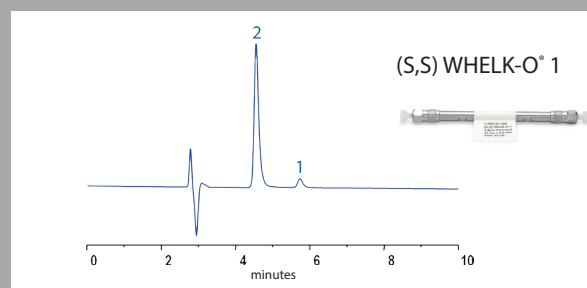
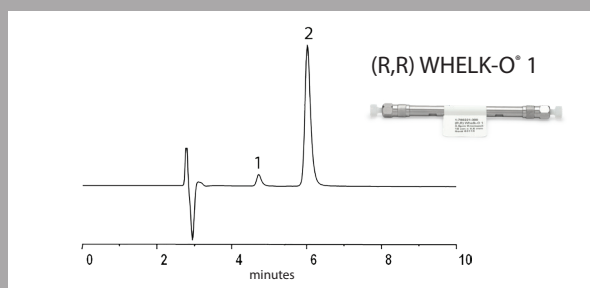
*1-(3,5-dinitrobenzamido)-1,2,3,4-tetrahydrophenanthrene*

Excellent method development column for a wide range of compound classes. Proprietary WHELK-O<sup>®</sup> 1 columns are covalently bonded for long life and broad mobile phase compatibility, and offer alternative selectivity to polysaccharide chiral column phases. WHELK-O<sup>®</sup> 1 columns are available in analytical and preparative sizes.

- Excellent method development column with applicability to a wide range of compound classes
- Broad range of particle sizes and dimensions for analytical to preparative scale separations
- High loading capacity for excellent scalability in preparative applications
- Choice of (R,R) or (S,S) configuration allows inversion of peak elution order
- 1.8  $\mu\text{m}$  fully porous particles for high efficiency, fast separations in both UHPLC & UHPSFC



## INVERSION OF ELUTION ORDER ON (R,R) AND (S,S) WHELK-O<sup>®</sup> 1



WHELK-O<sup>®</sup> 1 columns are available in both (R,R) and (S,S) configurations, allowing enantiomer elution order to be inverted. This can be beneficial in preparative and process scale applications.

## Chiral Handbook

For HPLC and SFC Separations

The second edition Chiral Handbook from Regis Technologies provides nearly 400 pages of information related to chiral separations, including over 950 chiral applications using a variety of chiral column types, HPLC and SFC method development guides, column selection advice, and frequently asked questions.

**Download or Request a Copy**

[registech.com/request-chiral-handbook-for-hplc-sfc-separations/](http://registech.com/request-chiral-handbook-for-hplc-sfc-separations/)

Includes over 950 HPLC and SFC chiral applications





# WHELK-O® 1 Ordering Information



Particle Size	Column Dimensions	WHELK-O®1 (S,S) Catalog#	WHELK-O® 1 (R,R) Catalog#
1.8 µm	50 x 2.1 mm	1-780163-300	1-780263-300
	20 x 3 mm	1-780167-300	1-780267-300
	50 x 3 mm	1-780165-300	1-780265-300
	50 x 4.6 mm	1-780162-300	1-780262-300
	100 x 2.1 mm	1-780164-300	1-780264-300
	100 x 3 mm	1-780166-300	1-780266-300
	100 x 4.6 mm	1-780161-300	1-780261-300
	150 x 4.6 mm	1-780122-300	1-780222-300
	3.5 µm	50 x 2.1 mm	1-780128-300
100 x 2.1 mm		1-780129-300	1-780229-300
150 x 2.1 mm		1-780130-300	1-780230-300
20 x 3 mm		1-780127-300	1-780227-300
50 x 3 mm		1-780126-300	1-780226-300
100 x 3 mm		1-780125-300	1-780225-300
150 x 3 mm		1-780124-300	1-780224-300
50 x 4.6 mm		1-780120-300	1-780220-300
100 x 4.6 mm		1-780121-300	1-780221-300
150 x 4.6 mm		1-780122-300	1-780222-300
250 x 4.6 mm		1-780123-300	1-780223-300
5 µm		50 x 2.1 mm	1-780155-300
	100 x 2.1 mm	1-780154-300	1-780254-300
	150 x 2.1 mm	1-780106-300	1-780206-300
	30 x 4.6 mm	1-780153-300	1-780253-300
	50 x 3 mm	1-780159-300	1-780259-300
	100 x 3 mm	1-780160-300	1-780260-300
	50 x 4.6 mm	1-780152-300	1-780252-300
	100 x 4.6 mm	1-780151-300	1-780251-300
	150 x 4.6 mm	1-780105-300	1-780205-300
	250 x 4.6 mm	1-780101-300	1-780201-300
10 µm	50 x 2.1 mm	1-786902-300	1-786903-300
	50 x 4.6 mm	1-786906-300	1-786907-300
	100 x 4.6 mm	1-786908-300	1-786909-300
	150 x 4.6 mm	1-786251-300	1-786252-300
	250 x 4.6 mm	1-786615-300	1-786615-300
	300 x 4.6 mm	-	1-786517-300
16 µm	250 x 4.6 mm	1-786351-300	1-786361-300

Particle Size	Column Dimensions	WHELK-O®1 (S,S) Catalog#	WHELK-O® 1 (R,R) Catalog#
5 µm	250 x 10 mm	1-780102-300	1-780202-300
	100 x 21.1 mm	1-780110-300	-
	150 x 21.1 mm	1-780109-300	1-780209-300
	250 x 21.1 mm	1-780107-300	1-780207-300
	150 x 30 mm	1-780108-300	1-780208-300
	250 x 30 mm	1-780103-300	1-780203-300
	150 x 50 mm	1-780114-300	-
	250 x 50 mm	1-780104-300	1-780204-300
	10 µm	150 x 10 mm	-
250 x 10 mm		1-786625-300	1-786525-300
150 x 21.1 mm		1-786617-300	1-786518-300
250 x 21.1 mm		1-786635-300	1-786535-300
250 x 30 mm		1-786702-300	1-786708-300
250 x 50 mm		1-786703-300	1-786709-300
16 µm	250 x 4.6 mm	1-786351-300	1-786361-300

Bulk media is also available for select phases. Contact us for details or to place an order.

## Guard Cartridge Kits

Particle Size	Dimensions	WHELK-O®1 (S,S) Catalog#	WHELK-O® 1 (R,R) Catalog#
3.5 µm	10 x 3 mm (3/pkg)	1-780131-300	1-780231-300
5 µm	10 x 3 mm (3/pkg)	1-780100-300	1-780200-300
*Guard Holder	-	1-801010-300	1-801010-300

\*Guard column holder and cartridge kits sold separately.

## Chiral Applications Database

### HPLC and SFC Chiral Applications

Browse our on-line library of 950+ chiral applications using a broad range of Regis HPLC and SFC columns.

Visit [registech.com/chiral-database](http://registech.com/chiral-database)

### Contact Us

Contact a Regis Chromatography Sales Representative for a personalized quote  
[chromsales@registech.com](mailto:chromsales@registech.com)





# WHELK-O® 1 CORE Superficially Porous CSP

1-(3,5-dinitrobenzamido)-1,2,3,4-tetrahydrophenanthrene

WHELK-O® 1 chiral stationary phase is bonded to 2.7 µm core-shell particles for faster, highly efficient separations without increasing system back-pressure. Rapid screening of chiral samples can be performed in a fraction of the time, improving throughput by greater than 3X.

- Fast chiral screening and method development
- Narrow peak widths improve sensitivity and resolution
- Compatible with a broad range of solvents for NPLC, RPLC and SFC
- Available in (R,R) and (S,S) configurations allowing for peak elution order to be inverted
- Fast delivery-all sizes, anywhere in the world



Hear what our customers are saying about WHELK-O® 1 Core

**"The Whelk-O 1 Core column worked really well for improving peak shape!"**  
-Scientist II, Analytical R&D, AbbVie

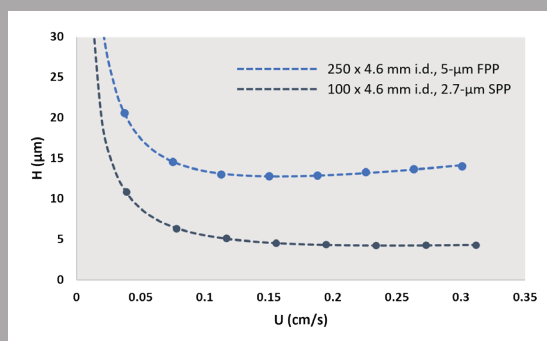


## What is Core-shell Technology?

Core-shell particles have a solid silica core, enveloped by a homogenous porous shell. This reduces band broadening and improves efficiency, largely due to more rapid analyte mass transfer – from the mobile phase through the stationary phase and back again. This is because diffusion only occurs in the porous, outer layer of the particle rather than the entire particle. The result is reduced analysis times and higher column efficiencies without generating extreme back-pressures.

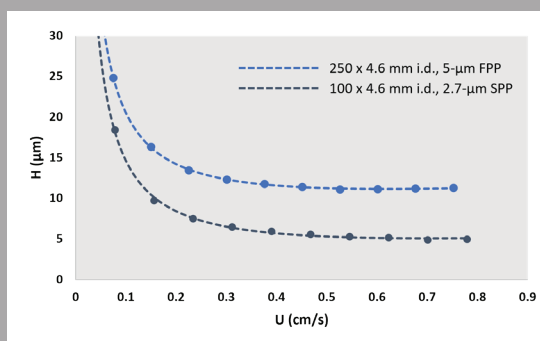
## WHELK-O® 1 CORE PROVIDES HIGHER COLUMN EFFICIENCIES WHEN COMPARED TO SIMILARLY-SIZED FULLY POROUS PARTICLES

HPLC Performance Curves for Naphthalene



Column 1: WHELK-O® 1 FPP, 5 µm, 25 cm x 4.6 mm  
Column 2: WHELK-O® 1 SPP, 2.7 µm, 25 cm x 4.6 mm  
Mobile Phase: (50/50) Water/Acetonitrile  
Temperature: 30° C

SFC Performance Curves for Naphthalene

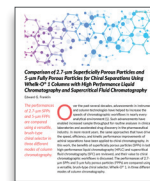


Column 1: WHELK-O® 1 FPP, 5 µm, 25 cm x 4.6 mm  
Column 2: WHELK-O® 1 SPP, 2.7 µm, 25 cm x 4.6 mm  
Mobile Phase: (95/5) Carbon Dioxide/Methanol  
Temperature: 40° C  
Back Pressure Regulator: 150 BAR

## Technical Article

Read our article **"Comparison of 2.7 µm Superficially Porous Particles and 5 µm Fully Porous Particles for Chiral Separations using WHELK-O® 1 Columns"**.

Visit [registech.com/download/chiral-chromatography-ebook/](http://registech.com/download/chiral-chromatography-ebook/) to download the article



# WHELK-O® 1 Core Ordering Information

## Analytical Columns

Particle Size	Column Dimensions	WHELK-O® 1 Core (S,S) Catalog#	WHELK-O® 1 Core (R,R) Catalog#
2.7 µm	50 x 2.1 mm	1-780171-300	1-780271-300
	100 x 2.1 mm	1-780172-300	1-780272-300
	150 x 2.1 mm	1-780173-300	1-780273-300
	50 x 3 mm	1-780177-300	1-780277-300
	100 x 3 mm	1-780178-300	1-780278-300
	150 x 3 mm	1-780179-300	1-780279-300
	50 x 4.6 mm	1-780174-300	1-780274-300
	100 x 4.6 mm	1-780175-300	1-780275-300
	150 x 4.6 mm	1-780176-300	1-780276-300

## Guard Cartridge Kits

Particle Size	Dimensions	WHELK-O® 1 Core (S,S) Catalog#	WHELK-O® 1 Core (R,R) Catalog#
2.7 µm	10 x 3 mm (3/pkg)	1-780180-300	1-780280-300
*Guard Holder	-	1-801010-300	1-801010-300

\*Guard column holder and cartridge kits sold separately.

### Technical Support

Have a question about a chiral separation?  
Contact our team of chiral experts today!  
[techsupport@registech.com](mailto:techsupport@registech.com)

## AZYP Superficially Porous Chiral Stationary Phases

AZYP's chiral phase chemistries offer a wide range of selectivities for your most challenging chiral separations. All phases are bonded to 2.7 µm superficially porous particles for faster, high-efficiency separations.

- Complementary selectivity to polysaccharide and Pirkle-type chiral phases
- Fast chiral screening and method development
- Narrow peak widths improve sensitivity and resolution
- Compatible with a broad range of solvents for NPLC, RPLC and SFC




## AZYP Ordering Information

Particle Size	Dimensions	CDSHell-RSP Catalog#	LarihcShell-P Catalog#	NicoShell Catalog#	TeicoShell Catalog#	VancoShell Catalog#
2.7 µm	50 x 2.1mm	1-880251-300	1-880291-300	1-880271-300	1-880261-300	1-880281-300
	100 x 2.1mm	1-880252-300	1-880292-300	1-880272-300	1-880262-300	1-880282-300
	150 x 2.1mm	1-880253-300	1-880293-300	1-880273-300	1-880263-300	1-880283-300
	50 x 4.6mm	1-880254-300	1-880294-300	1-880274-300	1-880264-300	1-880284-300
	100 x 4.6mm	1-880255-300	1-880295-300	1-880275-300	1-880265-300	1-880285-300
	150 x 4.6mm	1-880256-300	1-880296-300	1-880276-300	1-880266-300	1-880286-300
	50 x 3.0mm	1-880257-300	1-880297-300	1-880277-300	1-880267-300	1-880287-300
	100 x 3.0mm	1-880258-300	1-880298-300	1-880278-300	1-880268-300	1-880288-300
	150 x 3.0mm	1-880259-300	1-880299-300	1-880279-300	1-880269-300	1-880289-300



# PIRKLE-TYPE *Chiral Stationary Phases*

Pirkle-type chiral stationary phases can be used for HPLC or SFC applications and are compatible with both normal and reversed-phase solvents. All Pirkle-type CSPs are covalently bonded, therefore, the columns can tolerate all commonly used mobile phase combinations and are very durable. All of the Pirkle-type CSPs are available in both enantiomeric forms.

<b><math>\pi</math>-Electron Acceptor / <math>\pi</math>-Electron Donor Phases</b>	WHELK-O <sup>®</sup> 1 WHELK-O <sup>®</sup> 2 ULMO	
<b><math>\pi</math>-Electron Acceptor Phases</b>	DACH-DNB Pirkle 1-J $\alpha$ -Burke 2	

## Ordering Information

Particle Size	Column Dimensions	WHELK-O <sup>®</sup> 2 (S,S) Catalog#	WHELK-O <sup>®</sup> 2 (R,R) Catalog#	$\alpha$ -Burke 2 (R,R) Catalog#	$\alpha$ -Burke 2 (S,S) Catalog#	ULMO (S,S) Catalog#	ULMO (R,R) Catalog#	Dach-DNB (R,R) Catalog#	Dach-DNB (S,S) Catalog#
5 $\mu$ m	50 x 2.1 mm	-	-	1-731602-300	1-731603-300	1-787548-300	1-787248-300	1-788246-300	1-788247-300
	150 x 2.1 mm	-	-	-	-	1-787549-300	1-787249-300	1-788901-300	1-788900-300
	50 x 4.6 mm	-	-	1-731613-300	1-731614-300	1-787550-300	1-787250-300	1-788248-300	1-788249-300
	100 x 4.6 mm	-	-	1-731625-300	1-731626-300	1-787551-300	1-787251-300	1-788252-300	1-788251-300
	150 x 4.6 mm	-	-	1-735150-300	1-735250-300	1-787552-300	1-787252-300	1-788150-300	1-788250-300
	250 x 4.6 mm	-	-	1-735035-300	1-735037-300	1-787553-300	1-787253-300	1-788101-300	1-788201-300
	250 x 10 mm	-	-	1-735235-300	1-735237-300	1-787554-300	1-787254-300	1-788102-300	1-788202-300
	250 x 21.1 mm	-	-	1-735236-300	1-735238-300	1-787555-300	1-787255-300	1-788105-300	1-788205-300
	250 x 30 mm	-	-	-	-	1-787556-300	1-787256-300	1-788104-300	1-788204-300
	250 x 50 mm	-	-	-	-	1-787557-300	1-787267-300	-	-
10 $\mu$ m	150 x 2.1 mm	1-786953-300	1-786952-300	-	-	-	-	-	-
	50 x 4.6 mm	-	1-000366-400	-	-	-	-	-	-
	100 x 4.6 mm	1-786910-300	1-786911-300	-	-	-	-	-	-
	150 x 4.6 mm	1-786447-300	1-786446-300	-	-	1-787020-300	1-787021-300	1-788253-300	1-788254-300
	250 x 4.6 mm	1-786415-300	1-786315-300	-	-	1-787300-300	1-787400-300	1-788400-300	1-788301-300
	250 x 10 mm	1-786425-300	1-786325-300	-	-	1-787301-300	1-787401-300	1-788401-300	1-788302-300
	250 x 21.1 mm	1-786435-300	1-786335-300	-	-	1-787102-300	1-787202-300	1-788103-300	1-788203-300
	250 x 30 mm	1-786721-300	1-786727-300	-	-	1-787701-300	1-787707-300	1-788707-300	1-788701-300
250 x 50 mm	1-786722-300	1-786728-300	-	-	1-787702-300	1-787708-300	1-788708-300	1-788702-300	
16 $\mu$ m	250 x 4.6 mm	1-786455-300	-	-	-	1-787500-300	1-787600-300	-	1-788601-300
	250 x 10 mm	-	-	-	-	1-787501-300	1-787601-300	-	-
	250 x 21.1 mm	-	-	-	-	1-787502-300	1-787602-300	-	-
	250 x 30 mm	1-786305-300	-	-	-	-	-	-	-
	250 x 50 mm	1-786304-300	-	-	-	-	-	-	-

Particle Size	Column Dimensions	$\beta$ -Gem 1 (S,S) Catalog#	$\beta$ -Gem 1 (R,R) Catalog#	Pirkle 1-J (3R,4S) Catalog#	Pirkle 1-J (3S,4R) Catalog#	D-Leucine Catalog#	L-Leucine Catalog#	D-Phenylglycine Catalog#	L-Phenylglycine Catalog#
5 $\mu$ m	150 x 4.6 mm	1-731020-300	1-731019-300	1-731013-300	1-731014-300	1-731015-300	1-731016-300	1-731017-300	1-731018-300
	250 x 4.6 mm	1-731029-300	1-731043-300	1-731044-300	1-731045-300	1-731054-300	1-731041-300	1-731021-300	1-731024-300
	250 x 10 mm	1-731229-300	1-731243-300	1-731244-300	1-731245-300	1-731254-300	1-731241-300	1-731221-300	1-731224-300
	250 x 21.1 mm	-	-	1-731344-300	1-731345-300	1-731354-300	1-731341-300	1-731331-300	-

\* ULMO columns based on Exsil silica are also available. Call to Inquire.

Guard Columns and Bulk media are also available for select WHELK-O<sup>®</sup> 2 phases. Call to Inquire.

# CHIROSIL<sup>®</sup> Crown-Ether Stationary Phases

(+) or (-)-(18-Crown-6)-tetracarboxylic acid

CHIROSIL<sup>®</sup> columns are ideal for the separation of chiral compounds containing primary amines, including amino acids and their derivatives. CHIROSIL<sup>®</sup> columns are available in 5- and 10 μm particle sizes.



- CHIROSIL<sup>®</sup> columns are proven for the separation of amino acids and compounds containing primary amines
- CHIROSIL<sup>®</sup> ME columns are preferred where greater retention and capacity are needed
- Covalent bonding provides excellent durability
- Columns available in both enantiomeric forms, which allows for the inversion of peak elution order

## CHIROSIL<sup>®</sup> Ordering Information

### Columns

Particle Size	Column Dimensions	CHIROSIL RCA (+) Catalog #	CHIROSIL SCA (-) Catalog #	CHIROSIL ME RCA (+) Catalog #	CHIROSIL ME SCA (-) Catalog #
5 μm	100 x 3 mm	1-799010-300	1-799107-300	-	-
	100 x 4.6 mm	1-799008-300	1-799108-300	-	-
	150 x 4.6 mm	1-799001-300	1-799101-300	1-788001-300	1-788009-300
	250 x 4.6 mm	1-799002-300	1-799102-300	1-788002-300	1-788010-300
10 μm	150 x 4.6 mm	-	-	1-788005-300	1-788013-300
	250 x 4.6 mm	1-799014-300	1-799114-300	1-788006-300	1-788014-300

### Guard Cartridge Kits

Particle Size	Dimensions	CHIROSIL RCA (+) Catalog #	CHIROSIL SCA (-) Catalog #
5 μm	10 x 3 mm (3/pkg)	1-799200-300	1-799100-300
*Guard Holder	-	1--801010-300	1-801010-300

\*Guard column holder and cartridge kits sold separately.

## Ask the Chiral Expert

Our technical experts can recommend a selection of columns for a screening kit based on your needs. Contact us at [techsupport@registech.com](mailto:techsupport@registech.com).



**For a Customized Quote, Contact a Regis Chromatography Expert Today!**  
[chromsales@registech.com](mailto:chromsales@registech.com)

## Chiral Method Development Poster HPLC and SFC Separations

Regis' Chiral HPLC and SFC method development poster provides method development guidance from our chiral experts, column selection recommendations, and other valuable chiral chromatography resources.

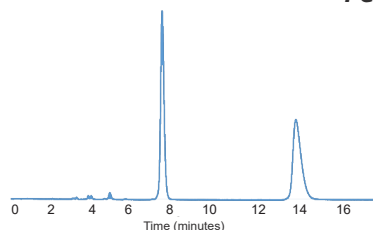
This free resource is available in digital or print.



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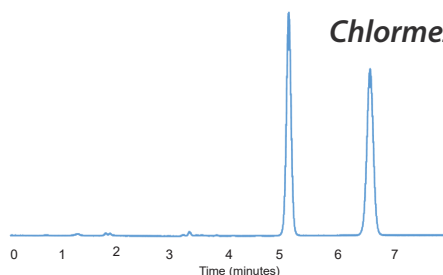
**REFLECT™ APPLICATIONS**

*Fenoxaprop-ethyl*



**Column:** REFLECT™ I-Cellulose J, 5 µm, 250 x 4.6 mm  
**Mobile Phase:** (80/20) Hexane/Ethanol  
**Flow Rate:** 1.5 mL/min  
**Detection:** UV 254 nm  
**Catalog #:** 1-594204-300

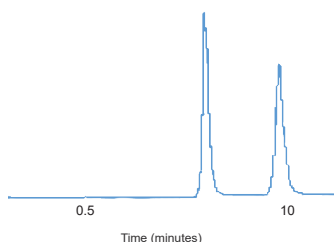
*Chlormezanone*



**Column:** REFLECT™ C-Cellulose B, 5 µm, 250 x 4.6 mm  
**Mobile Phase:** 100% Ethanol  
**Flow Rate:** 1.0 mL/min  
**Detection:** UV 220 nm  
**Catalog #:** 1-590204-300

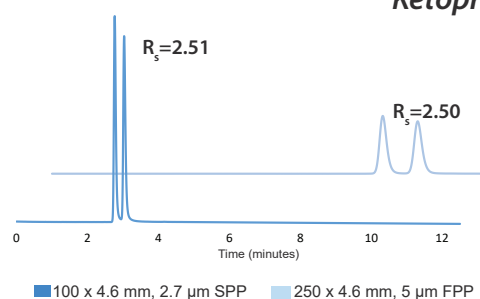
**WHELK-O® 1 APPLICATIONS**

*Abscisic Acid*



**Column:** (S,S) WHELK-O® 1, 5 µm, 250 x 4.6 mm  
**Mobile Phase:** (75/25) Hexane/IPA + 0.1% Acetic Acid  
**Flow Rate:** 1.5 mL/min  
**Detection:** UV 254 nm  
**Catalog #:** 1-780101-300

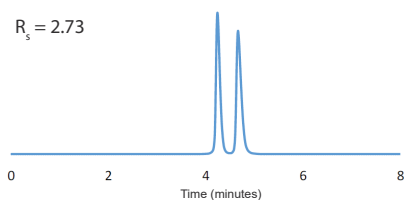
*Ketoprofen*



**Columns:** (R,R) WHELK-O® 1 Core, 100 x 4.6 mm, 2.7 µm  
(R,R) WHELK-O® 1 250 x 4.6 mm, 5.0 µm  
**Mobile Phase:** 90/10/0.1 Hexane/Ethanol/Acetic Acid  
**Flow Rate:** 1.5 mL/min  
**Detection:** 254 nm  
**Catalog #:** (R,R) WHELK-O® 1 Core, 1-780275-300,  
(R,R) WHELK-O® 1, 1-780201-300

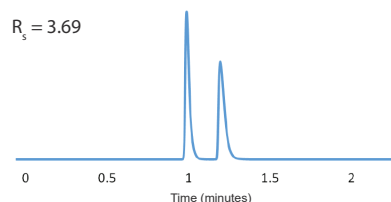
**AZYP APPLICATIONS**

*Methamphetamine*



**Column:** AZYP VancoShell, 2.7 µm, 100 x 4.6 mm  
**Mobile Phase:** (100/0.1/0.05) Methanol/Acetic Acid/  
Triethylamine  
**Flow Rate:** 1.0 mL/min  
**Detection:** UV 220 nm  
**Catalog #:** 1-880285-300

*Nicotine*



**Column:** AZYP NicoShell, 2.7 µm, 100 x 4.6 mm  
**Mobile Phase:** (100/0.2 wt %) Methanol/  
Ammonium Formate  
**Flow Rate:** 1.5 mL/min  
**Detection:** UV 230 nm  
**Catalog #:** 1-880275-300

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