LUX™
SIMPLIFIED CHIRAL SEPARATIONS

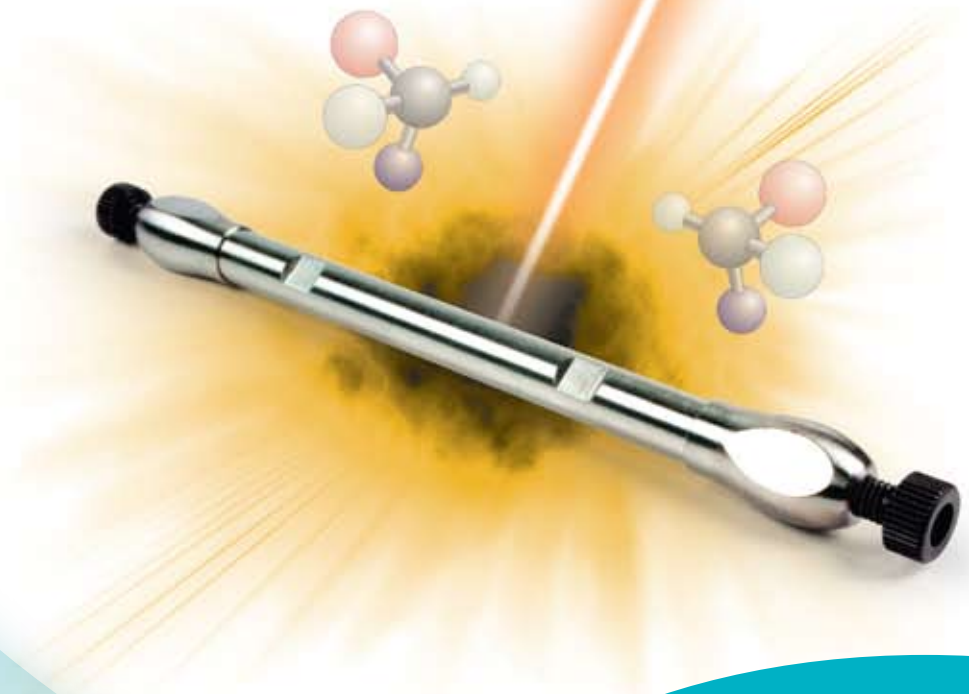
Complete Chiral Solutions

HPLC · SFC · Process

Amylose-2: Unique chlorinated phase widens the range of enantioselectivity

Cellulose-2: Novel chlorinated phase improves your chiral screen success rate

Cellulose-1: Very cost-effective alternative to *CHIRALCEL® OD-H®



phenomenex®
. . . breaking with tradition℠



Simplify chiral separations, from analytical to process scale. All at sensible cost!

Lux™ chiral columns and media simplify the separation process in three ways:

- Unique and traditional phases that increase the success rate of your chiral screen
- Complete compatibility in Normal Phase, Polar Organic, SFC, and Reversed Phase methods – no switching columns!
- Availability in 3 µm and 5 µm packed columns as well as 20 µm bulk media for process scale purification

Chirality can be complex, but its separation shouldn't be.

guarantee

If you are not completely satisfied with Lux™ analytical columns, send in your comparative data to a similar product within 45 days and KEEP THE COLUMN FOR FREE.

Choosing the Right Chiral Stationary Phase

Features	Lux™ Cellulose-2	Lux™ Cellulose-1	Lux™ Amylose-2
Broad chiral recognition	●	●	●
For screening of new chiral compounds	●	●	●
Cellulose backbone	●	●	
Amylose backbone			●
High loading capacity	●	●	●
Scalable 3 µm and 5 µm media	●	●	●
Process media- 20 µm	●	●	†
Low MS bleed	●	●	●
Pressure stable up to 300 bar	●	●	●
pH stable 2-9	●	●	●
Stable in NP, Polar Organic, SFC and RP conditions	●	●	●
Novel selectivity	●		●
Cost-effective, guaranteed alternative to *CHIRALCEL® OD-H®		●	
Satisfaction guaranteed	✓	✓	✓

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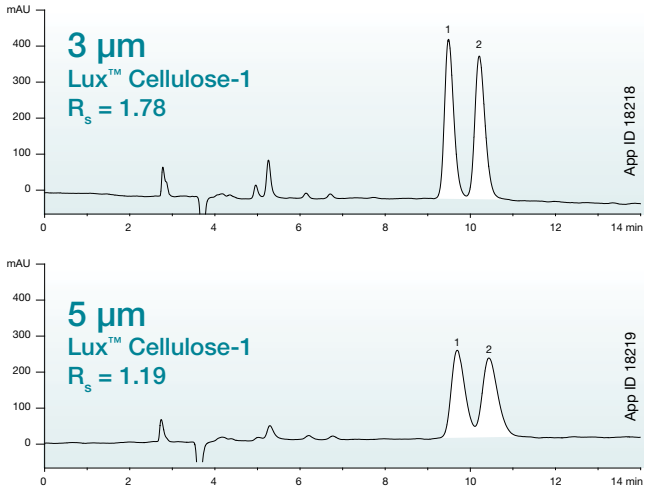
Disclaimer
†Please inquire for 20 µm Lux Amylose-2 media. Comparative separations may not be representative of all applications. Subject to Phenomenex Standard Terms & Conditions, which may be viewed at www.phenomenex.com/TermsAndConditions.

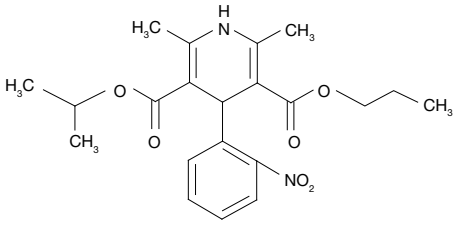
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3 µm High Efficiency for Improved Resolution

Lux™ 3 µm phases offer unmatched efficiencies for improved resolution of difficult separations.

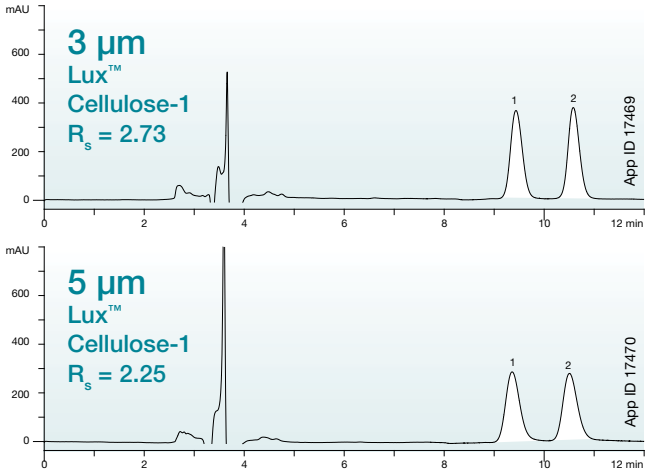
Nisoldipine

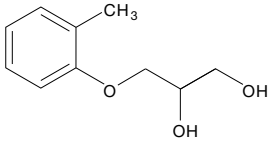




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane / 0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

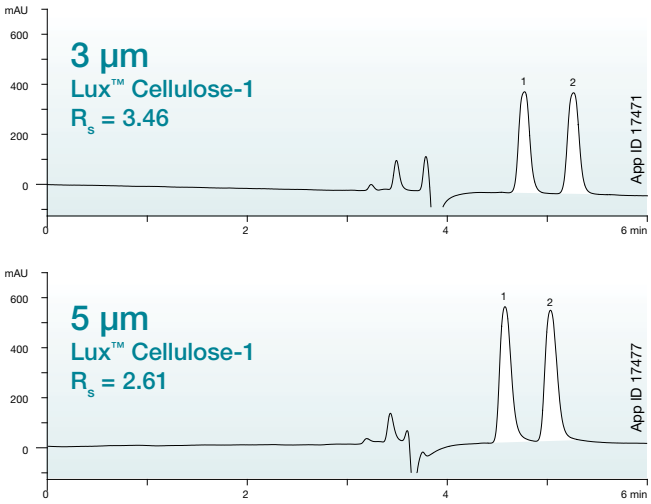
Mephenesin

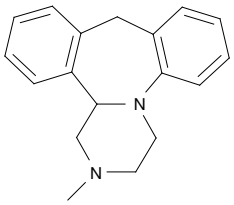




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane / 0.1 % Diethylamine in Isopropanol (80:20)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Mianserin



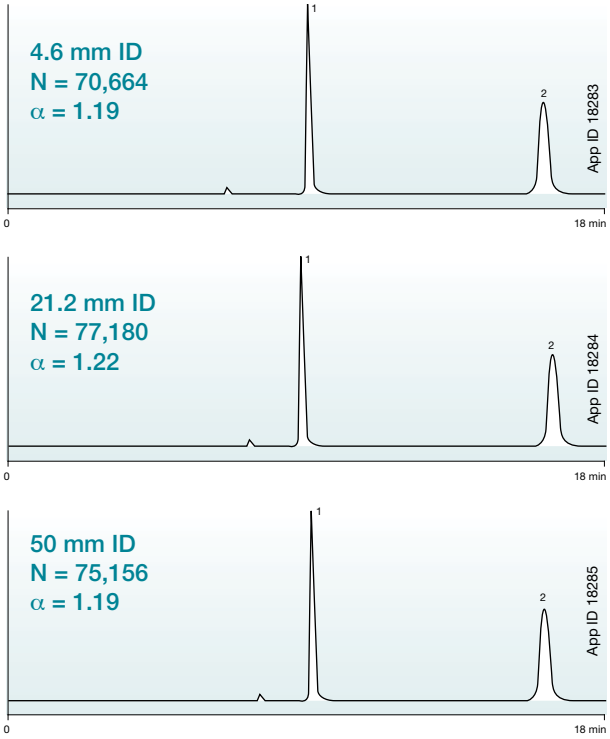


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetonitrile / 0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Higher Purity Preparative Separations

With award-winning Axia™ technology, analytical-like efficiency is achieved in a preparative column format.

High Efficiency *trans*-Stilbene Oxide from Analytical to Preparative



Column: Lux™ 5 µm Cellulose-2
Dimensions: 250 x 4.6 mm
Mobile Phase: Hexane / Isopropanol (90:10)
Detection: UV @ 220 nm
Temperature: Ambient

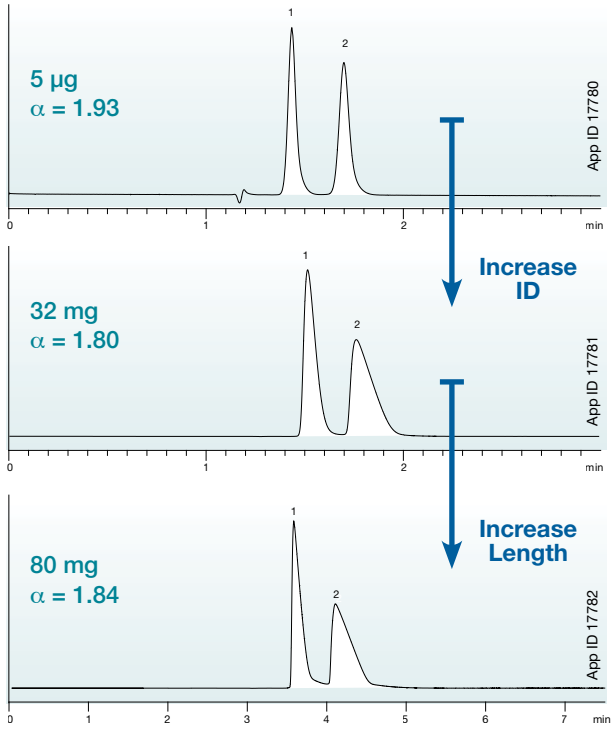
Column: Lux™ 5 µm Cellulose-2
Dimensions: 250 x 21.2 mm
Mobile Phase: Hexane / Isopropanol (90:10)
Detection: UV @ 220 nm
Temperature: Ambient

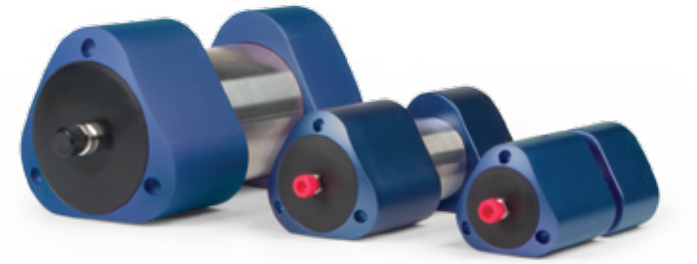
Column: Lux™ 5 µm Cellulose-2
Dimensions: 250 x 50 mm
Mobile Phase: Hexane / Isopropanol (90:10)
Detection: UV @ 220 nm
Temperature: Ambient

2006 R&D 100 Award Recipient

We invite you to view the award winning high efficiency packing process at:
www.phenomenex.com/info/Axia

Direct Scale Up of Methylcarbamol on Lux™ Cellulose-1





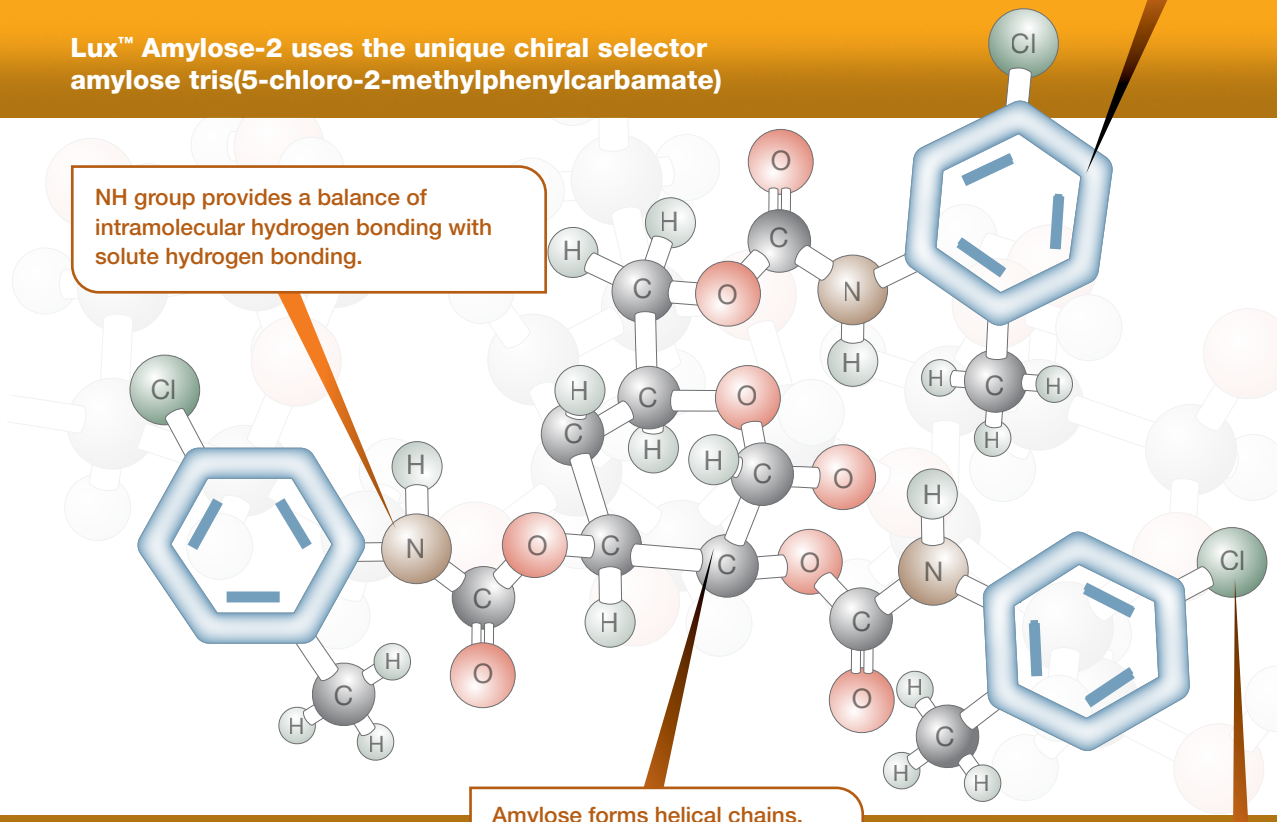
Dimensions: 100 x 4.6 mm
Mobile Phase: Methanol / Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient
Injection: 5 mg in 2 µL

Dimensions: 100 x 21.2 mm
Mobile Phase: Methanol / Isopropanol (90:10)
Flow Rate: 20 mL/min
Detection: UV @ 254 nm
Temperature: Ambient
Injection: 32 mg in 640 µL

Dimensions: 250 x 21.2 mm
Mobile Phase: Methanol / Isopropanol (90:10)
Flow Rate: 20 mL/min
Detection: UV @ 254 nm
Temperature: Ambient
Injection: 80 mg in 1600 µL

Amylose-2

Lux™ Amylose-2 uses the unique chiral selector amylose tris(5-chloro-2-methylphenylcarbamate)



Unique Selectivity = More Possibilities

This ***unique*** chlorinated phase widens the range of enantioselectivity

Lux™ Amylose-2

The chiral selector is an amylose tris(5-chloro-2-methylphenylcarbamate)

The selectivity of Lux™ Amylose-2 is an excellent complement to your chiral screen. Using a unique derivitization, it offers a broad range of enantioselectivity, previously unavailable commercially.

Studies show that for a set of 14 racemates of varying properties, the 5-chloro-2-methylphenylcarbamate derivative of amylose was the only phase to separate all 14 compounds with acceptable selectivity, compared to 11 other chiral amylose phases.[1]

Lux™ Amylose-2 provides a balanced ratio of free NH groups to intermolecular hydrogen bonded NH groups, which contributes to the high chiral recognition abilities of this phase.[1]

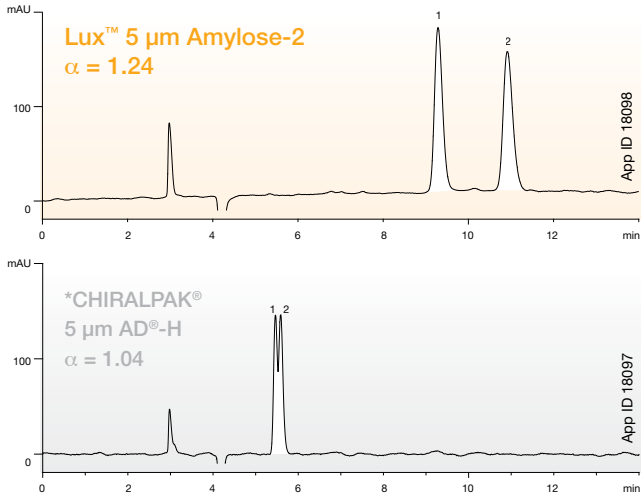
Research has also supported that ortho substitutions of methyl or chloro groups on amylose phenylcarbamate derivatives have strong chiral resolving power.[1]

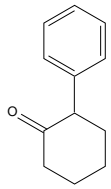
1. Bezhan Chankvetadze, Eiji Yashima, Yoshio Okamoto, J. Chromatography A, 694 (1995) 101-109

Lux™ Amylose-2 vs. *CHIRALPAK® AD®-H

Lux™ Amylose-2 offers novel selectivity, improving chances of chiral resolution during multiple column screening processes.

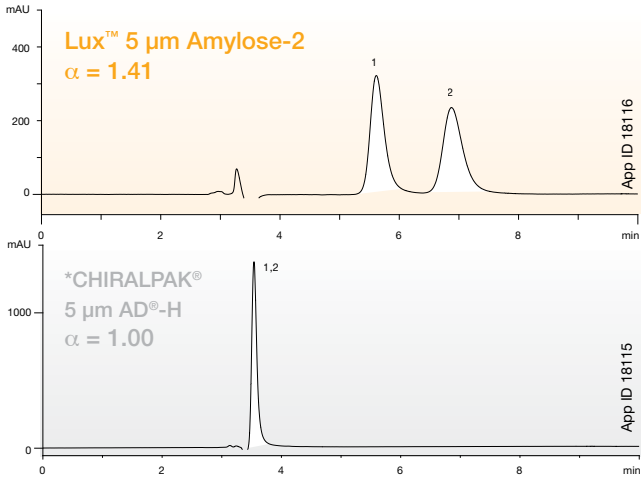
2-Phenylcyclohexanone

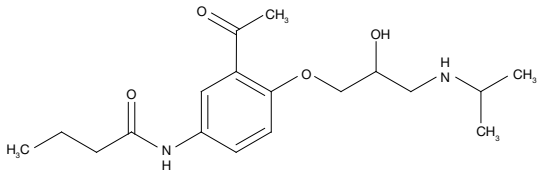




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

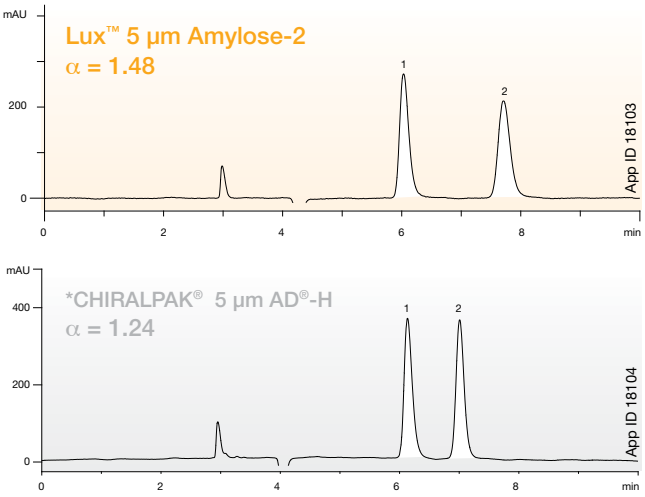
Acebutolol

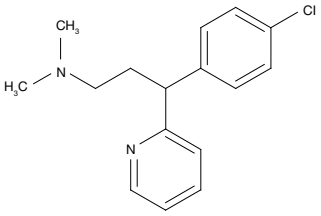




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (60:40)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Chlorpheniramine

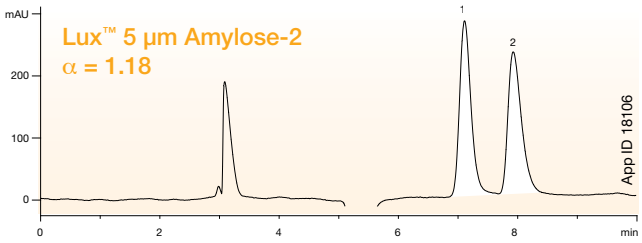


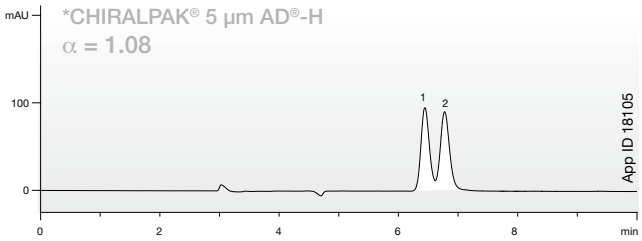


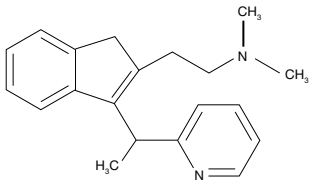
Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

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Dimethindene maleate

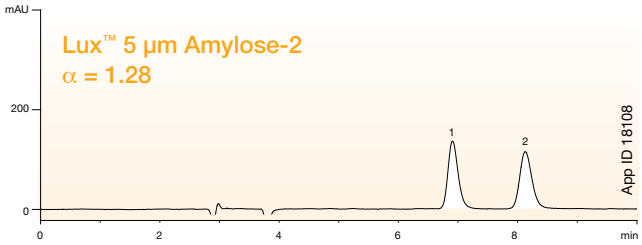


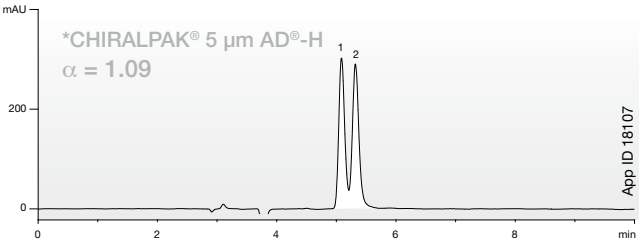


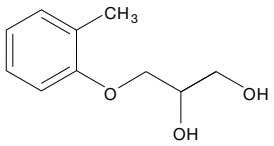


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Mephenesin

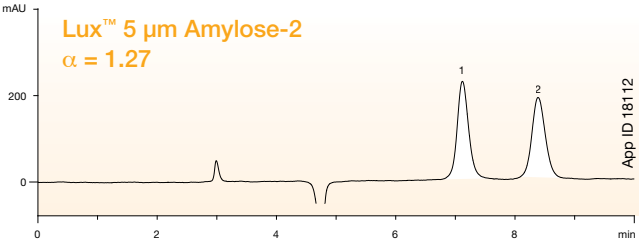


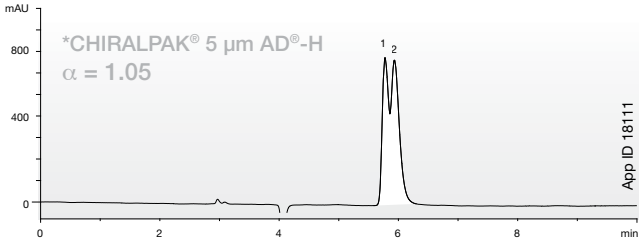


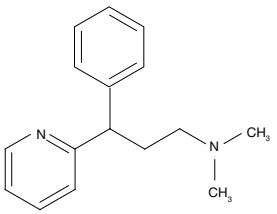


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (80:20)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Pheniramine







Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

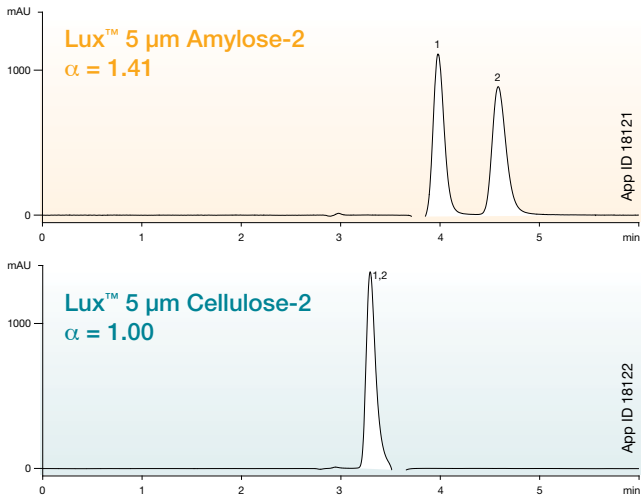
Additional applications are available upon request.

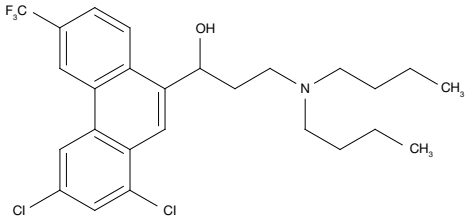
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Lux™ Amylose-2 Increases Chiral Success

Lux™ Amylose-2 offers complementary selectivity to Lux™ Cellulose-1 and Lux™ Cellulose-2, increasing the chances of successful chiral resolution.

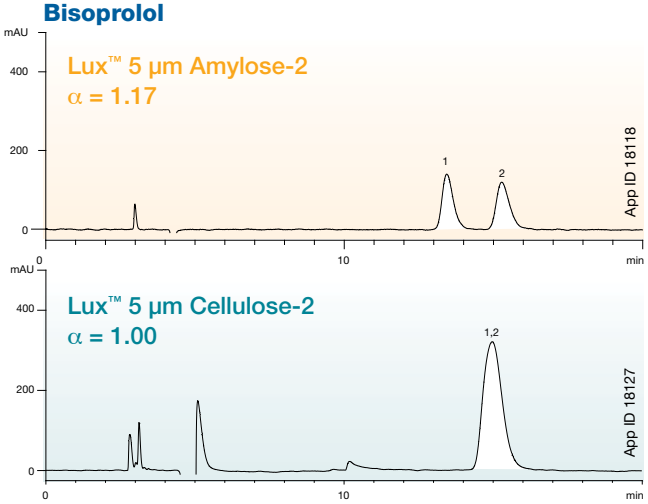
Halofantrine

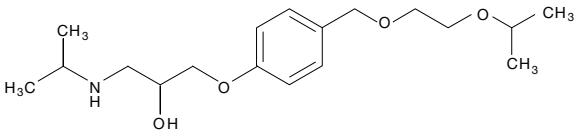




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (80:20)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

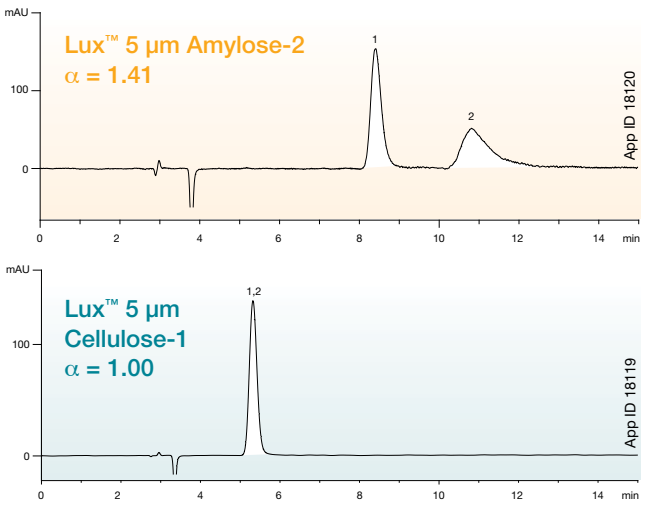
Bisoprolol

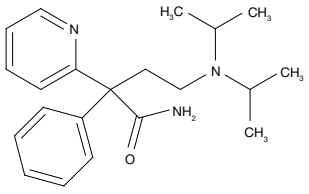




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
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Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

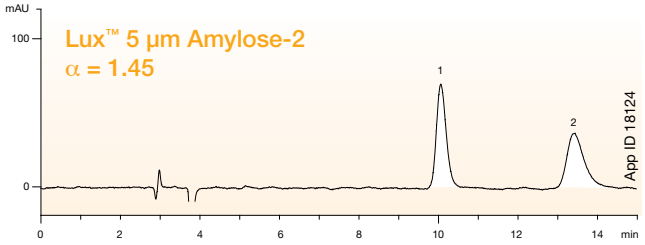
Disopyramide

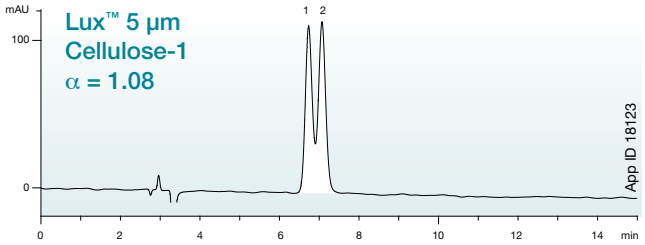


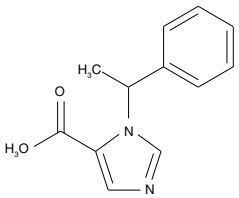


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (80:20)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Metomidate

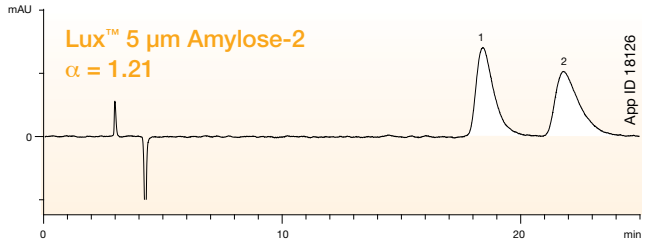


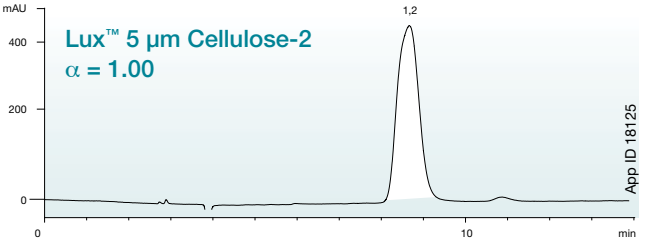


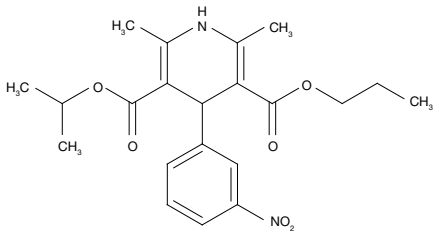


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (80:20)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Nimodipine

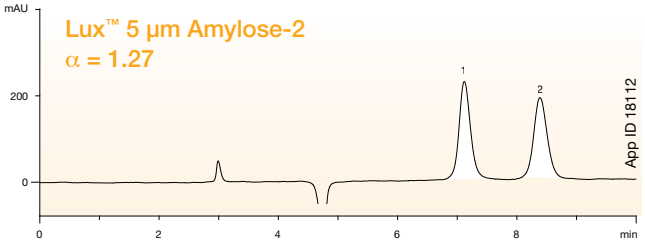


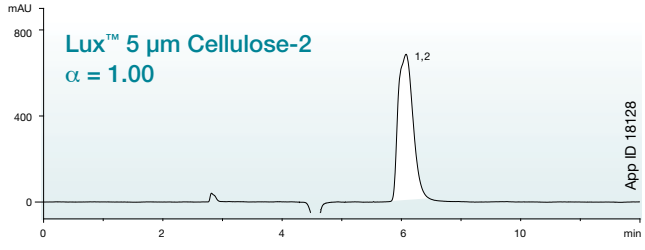


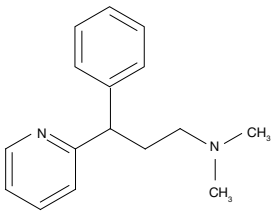


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (80:20)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Pheniramine





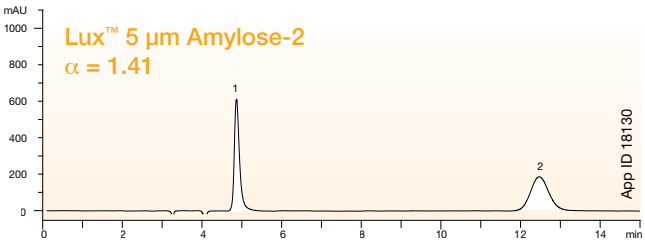


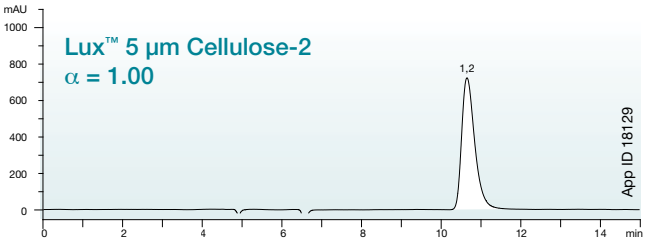
Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

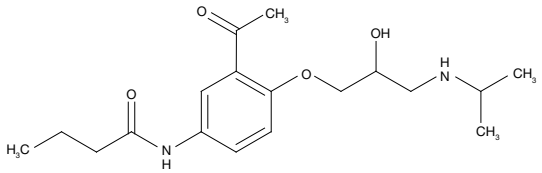
Lux™ Amylose-2 Increases Chiral Success (continued)

Lux™ Amylose-2 offers complementary selectivity to Lux™ Cellulose-1 and Lux™ Cellulose-2, increasing the chances of successful chiral resolution.

Acebutolol

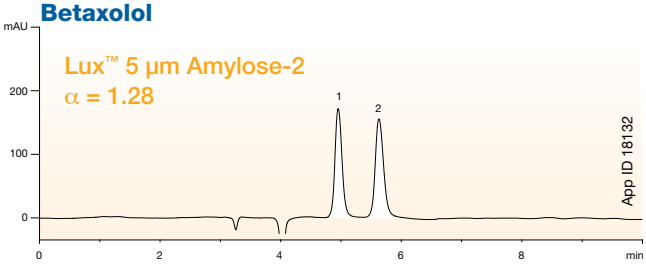


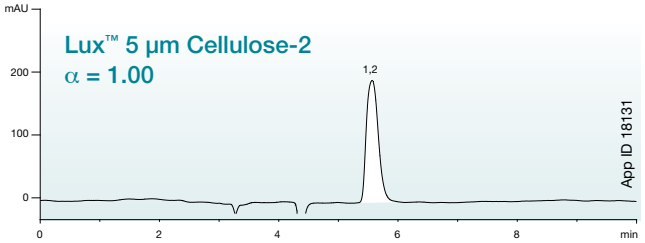


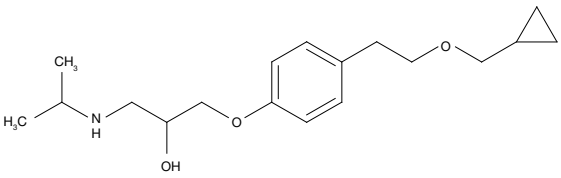


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetontrile / 0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Betaxolol

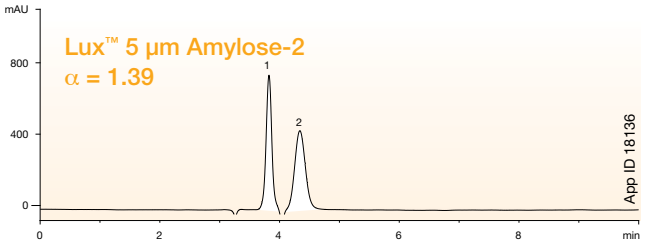


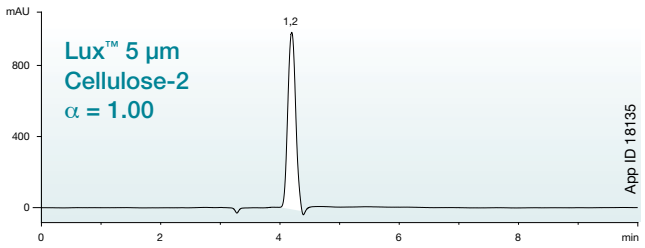


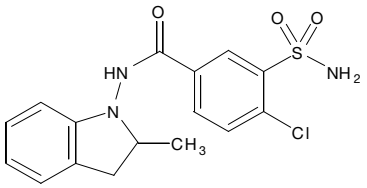


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetonitrile / 0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Indapamide

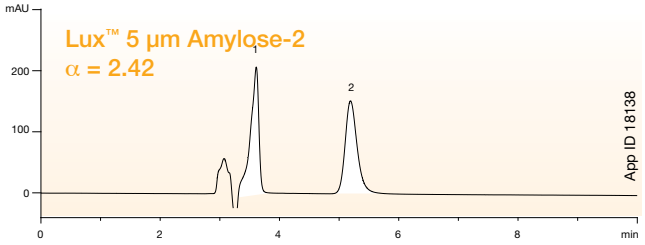


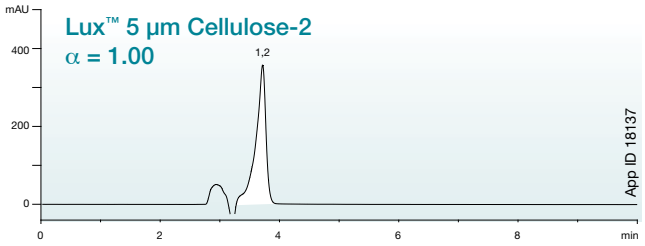


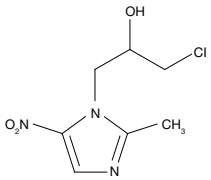


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetonitrile / 0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Ornidazole

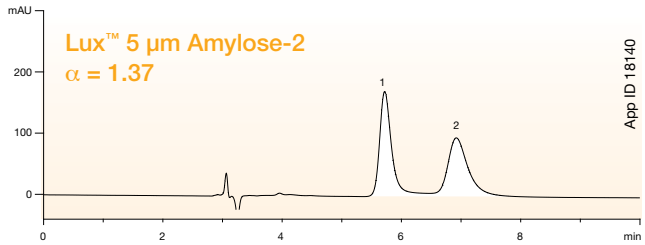


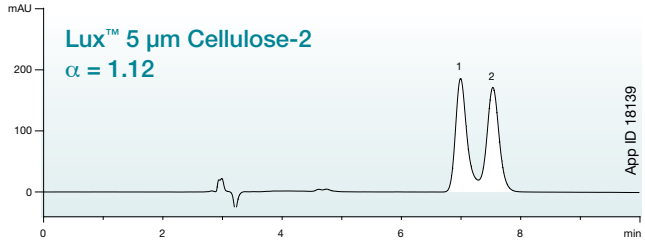


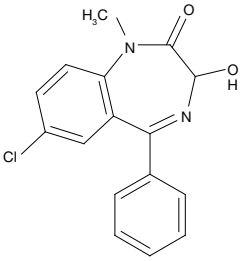


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Methanol /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Temazepam

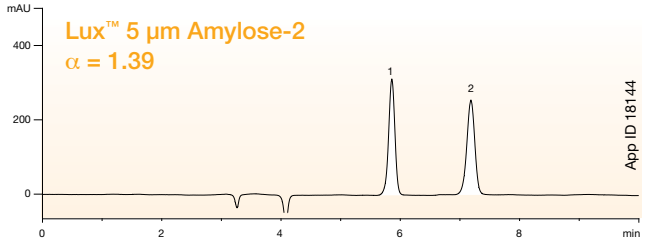


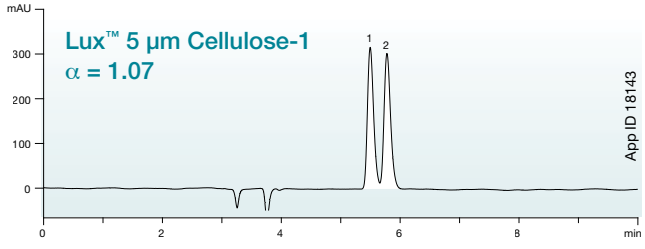


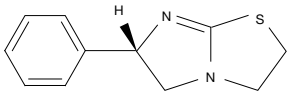


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Methanol /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Tetramisole





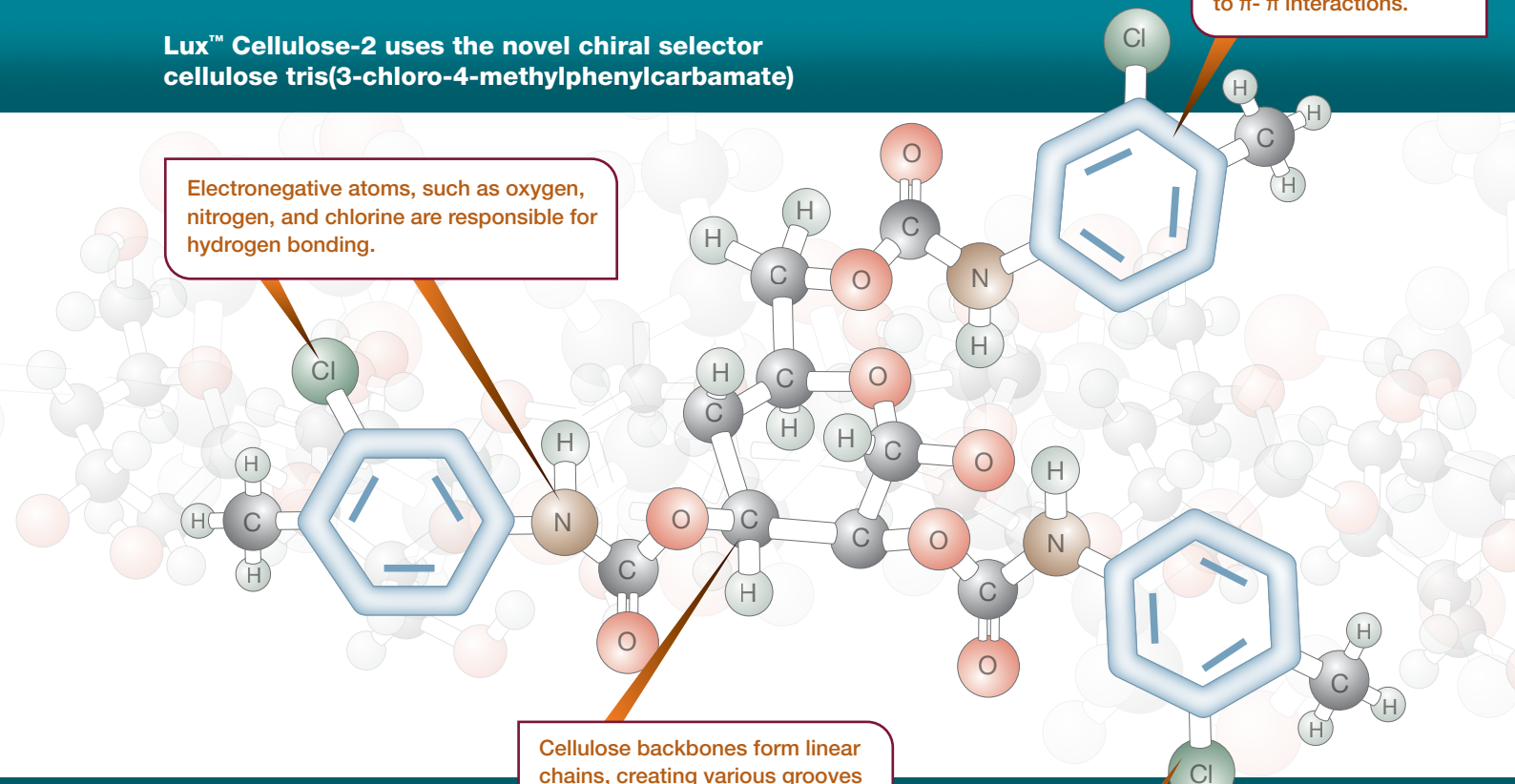


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetonitrile /
0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Additional applications are available upon request.

Cellulose-2

Lux™ Cellulose-2 uses the novel chiral selector cellulose tris(3-chloro-4-methylphenylcarbamate)



Novel Selectivity = More Possibilities

This universal, ***novel*** chlorinated cellulose phase improves your chiral screen success rate

Lux™ Cellulose-2

The chiral selector is a cellulose tris(3-chloro-4-methylphenylcarbamate)

The unique phase of Lux™ Cellulose-2 makes it an ideal choice for all chiral screening protocols. It provides excellent complementary selectivity to Lux™ Cellulose-1 and Lux™ Amylose-2.

The introduction of either electron-donating or electron-withdrawing groups, such as chlorine, tends to improve the optical resolution abilities of chiral stationary phases (CSPs) with phenylcarbamate derivatives. In addition, substitution at the meta or para position on the phenyl moiety is considered more beneficial than at the ortho position to establish higher chiral recognition.[2]

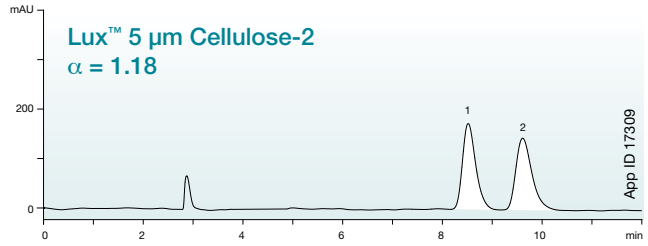
Studies show that for a set of 14 racemates of varying properties, the 3-chloro-4-methylphenylcarbamate derivative of cellulose was one of two derivatives to separate all 14 compounds with reasonable selectivity.[2]

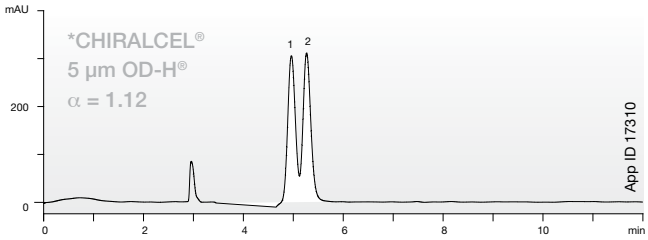
2. Bezhan Chankvetadze, Eiji Yashima, Yoshio Okamoto, J. Chromatography, 670 (1994) 39-49

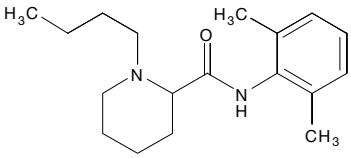
Lux™ Cellulose-2 vs. *CHIRALCEL® OD-H®

Lux™ Cellulose-2 offers novel selectivity, improving chances of chiral resolution during multiple column screening processes.

Bupivacaine

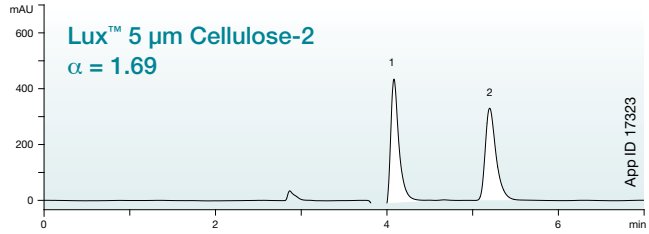


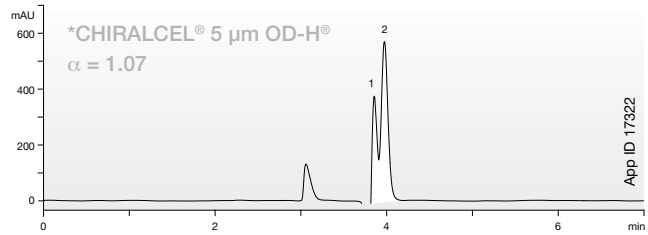


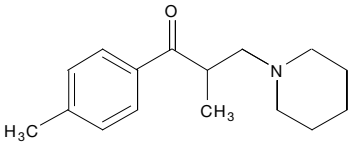


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Tolperisone

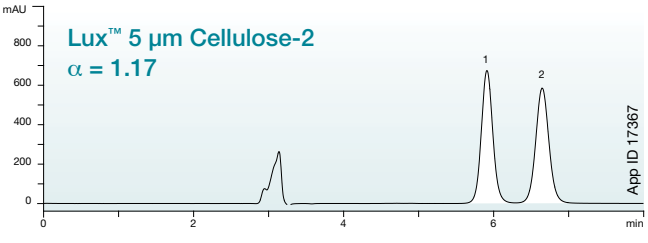


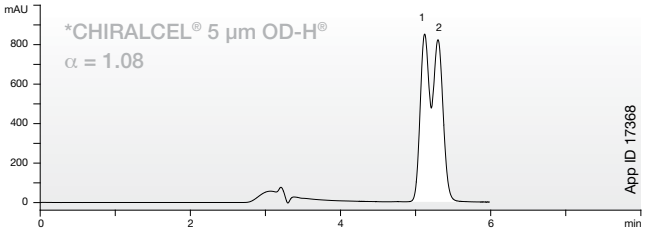


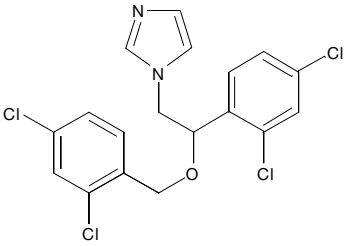


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Miconazole



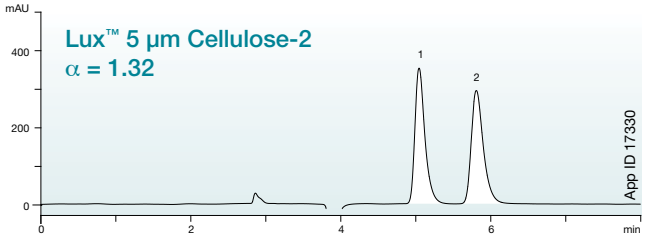


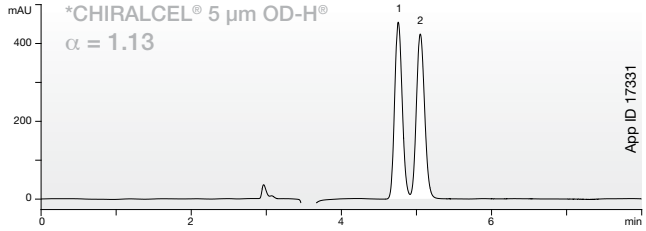


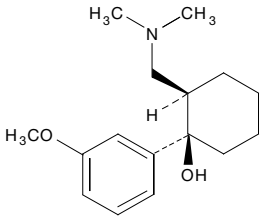
Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Methanol /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

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Tramadol

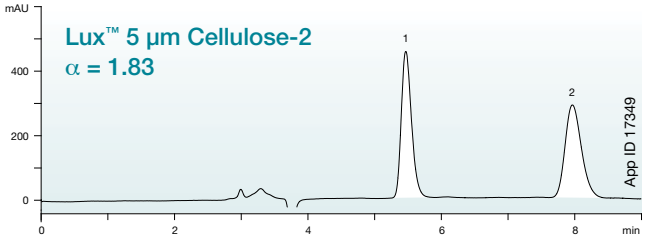


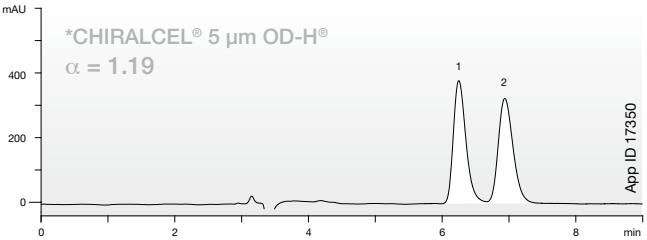


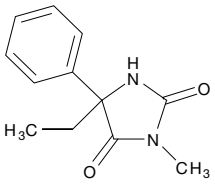


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Mephenytoin

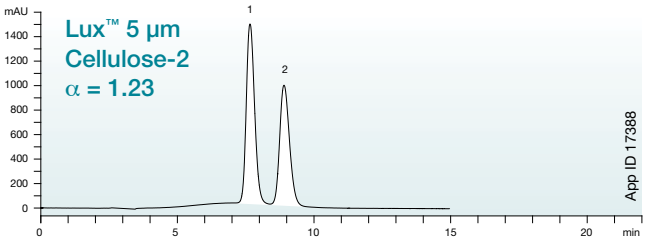


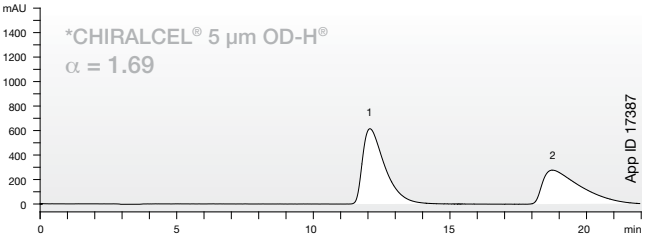


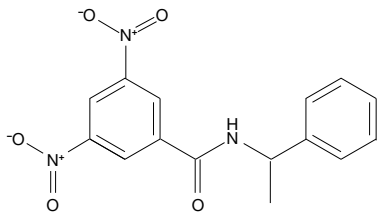


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (80:20)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

N-(3,5-Dinitrobenzoyl)-a'-methylbenzylamine







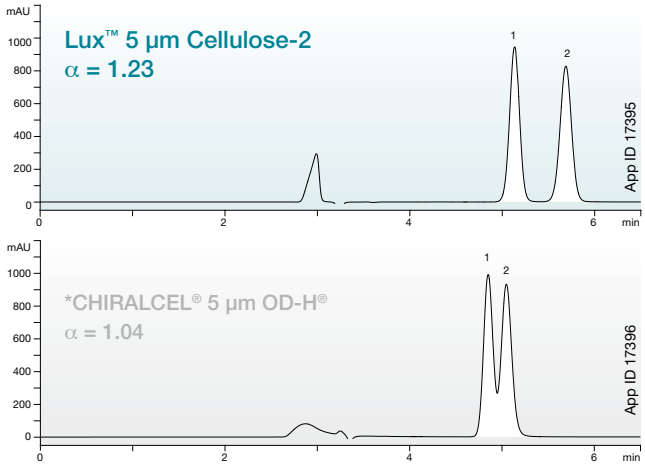
Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (60:40)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

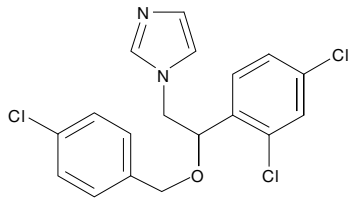
*CHIRALCEL and OD-H are registered trademarks of DAICEL Chemical Industries, Ltd. Comparative separations may not be representative of all applications.

Lux™ Cellulose-2 vs. *CHIRALCEL® OD-H® (continued)

Lux™ Cellulose-2 offers novel selectivity, improving chances of chiral resolution during multiple column screening processes.

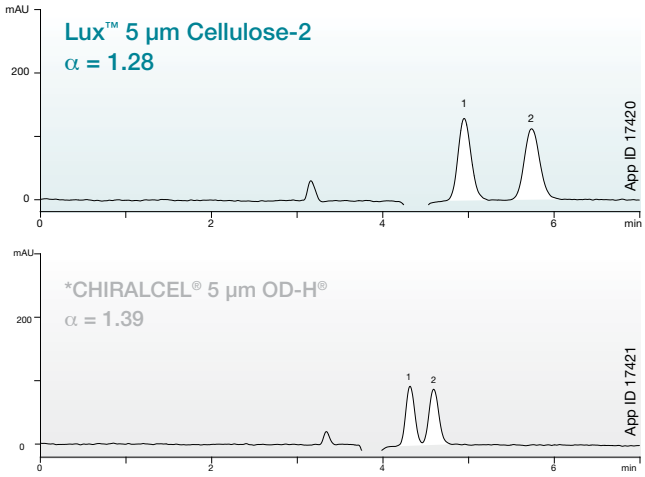
Econazole

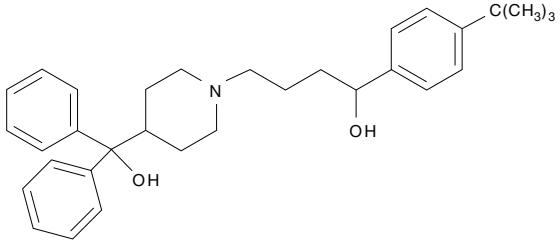




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Methanol /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

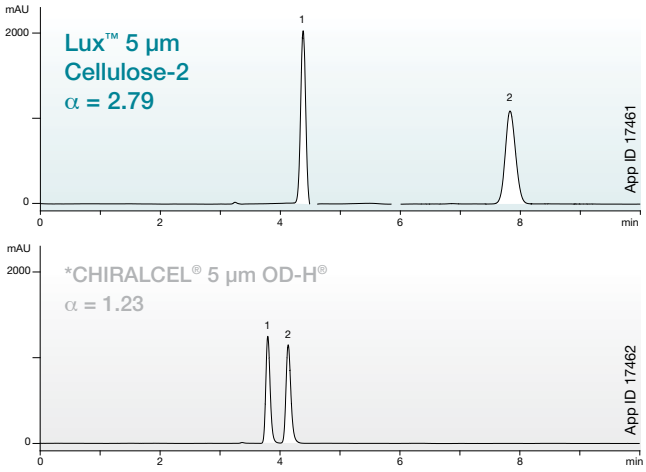
Terfenadine

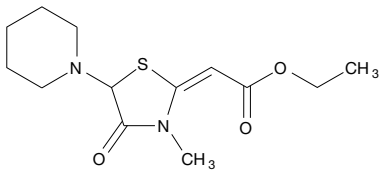




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetonitrile /
0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Etozolin

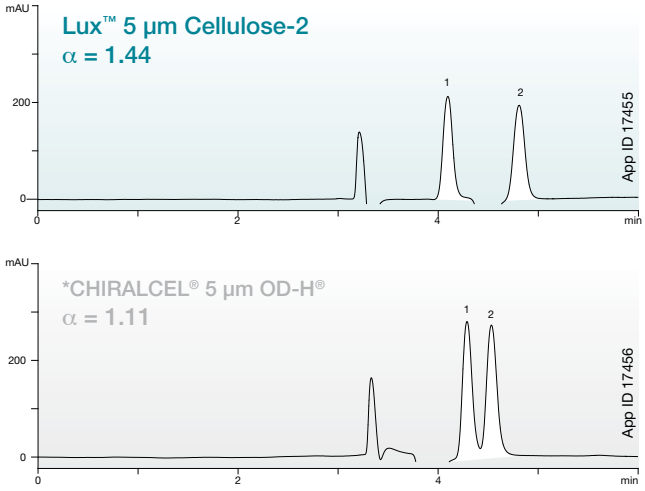


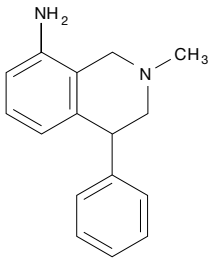


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetonitrile /
0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

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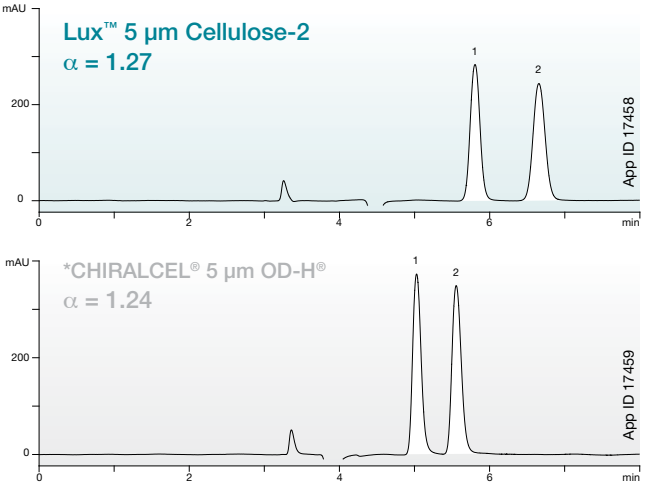
Nomifensine

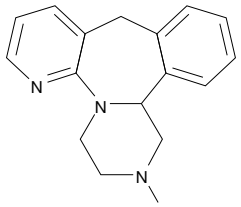




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetonitrile / 0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

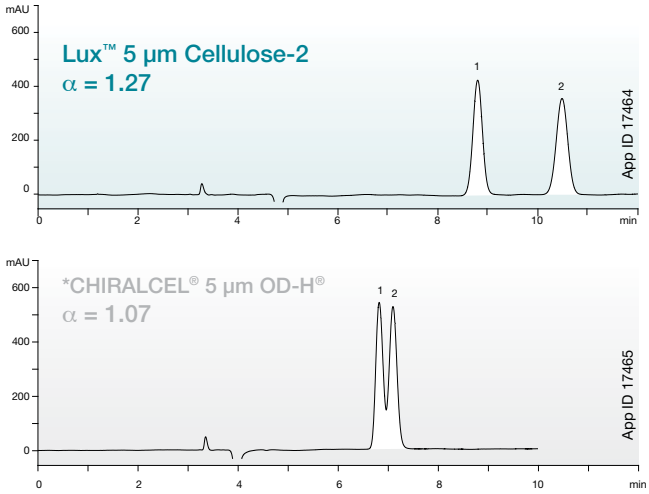
Mirtazapine

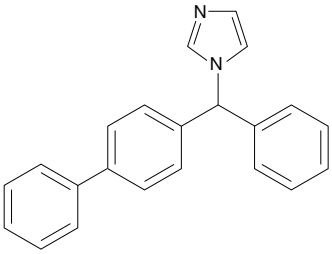




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetonitrile / 0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Bifonazole



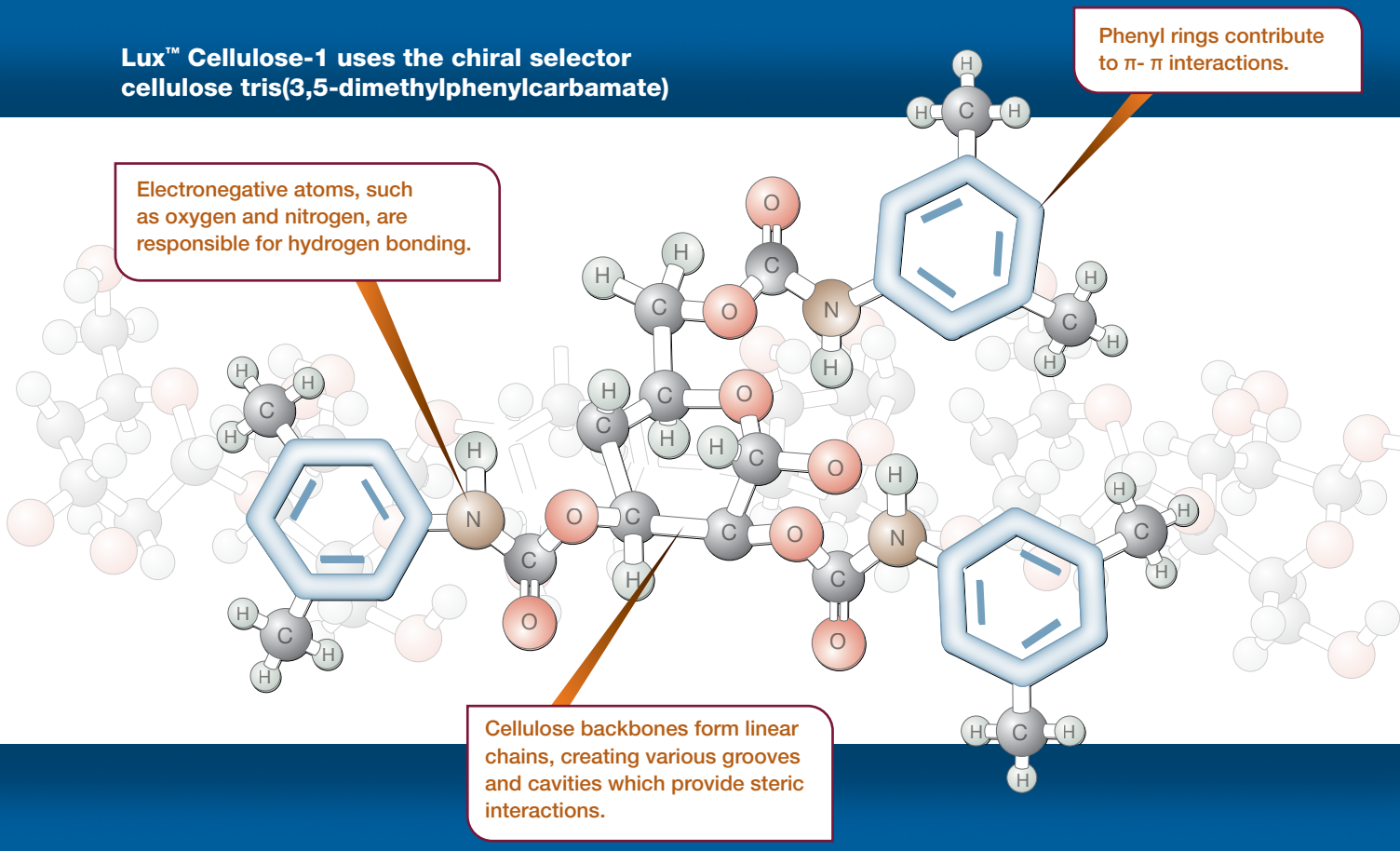


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Acetonitrile / 0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

*CHIRALCEL and OD-H are registered trademarks of DAICEL Chemical Industries, Ltd. Comparative separations may not be representative of all applications.

Cellulose-1

Lux™ Cellulose-1 uses the chiral selector cellulose tris(3,5-dimethylphenylcarbamate)



Guaranteed replacement for CHIRALCEL® OD-H®

Use for new methods or as a ***GUARANTEED**** replacement for ANY method on *CHIRALCEL® OD-H®

Lux™ Cellulose-1

The derivative is cellulose tris(3,5-dimethylphenylcarbamate)

Lux™ Cellulose-1 not only is your cost-effective alternative to CHIRALCEL® OD-H®, but it also can provide greater resolution for many applications, as shown in this brochure.

This particular chiral selector has well established abilities in resolving a wide range of racemates. Lux™ Cellulose-1 provides enhanced resolution for a variety of applications compared to similar CSPs.

This derivative of cellulose has a well established history of broad enantioselectivity. The substitution of the electron donating methyl groups at the 3 and 5 position enhance the activity of the phenyl group. This leads to enhanced enantioselectivity for aromatic and conjugated compounds.

*guarantee

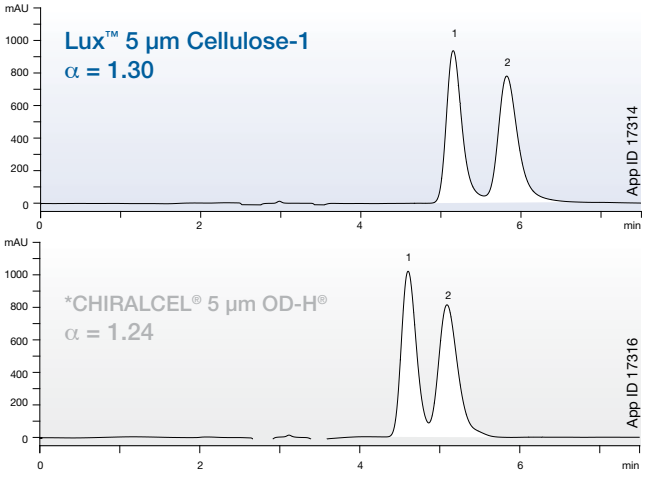
If you are not completely satisfied with Lux™ analytical columns, send in your comparative data to a similar product within 45 days and KEEP THE COLUMN FOR FREE.

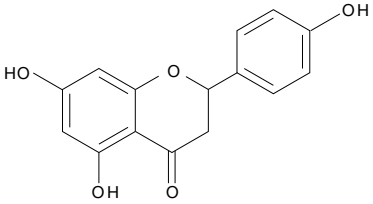
*CHIRALCEL and OD-H are registered trademarks of DAICEL Chemical Industries, Ltd.

Lux™ Cellulose-1 vs. *CHIRALCEL® OD-H®

Lux™ Cellulose-1 offers exceptional separations for your existing polysaccharide methods.

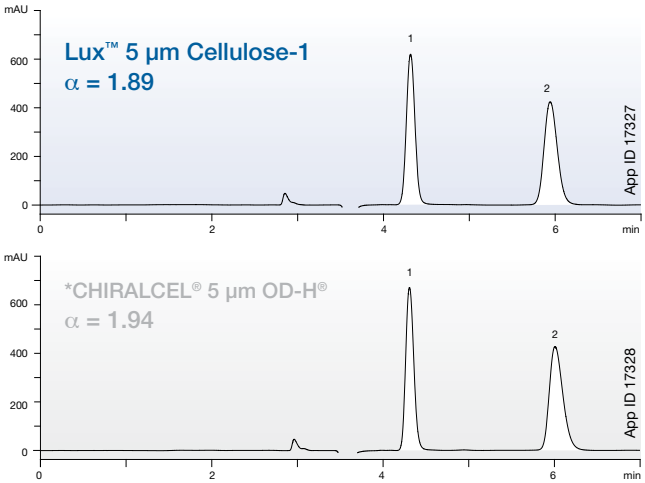
Naringenin

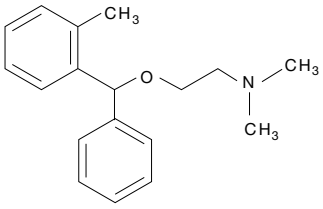




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Formic acid in Hexane /
0.1 % Formic acid in Isopropanol (60:40)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

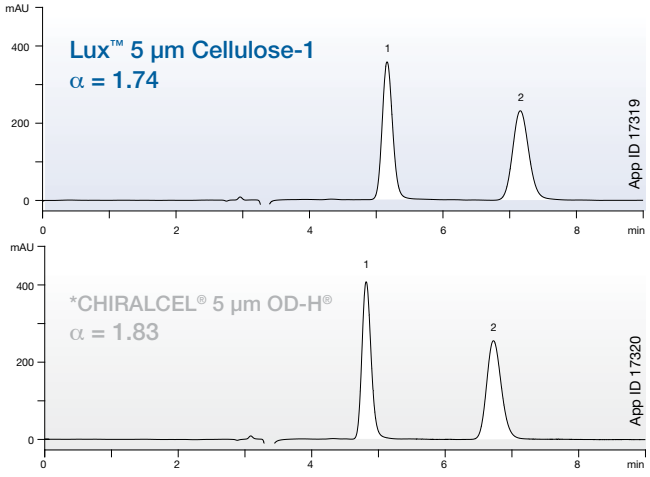
Orphenadrine

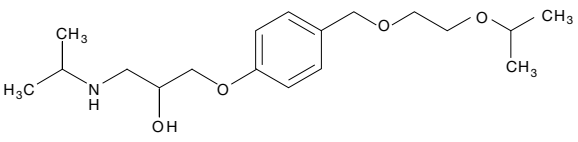




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Bisoprolol

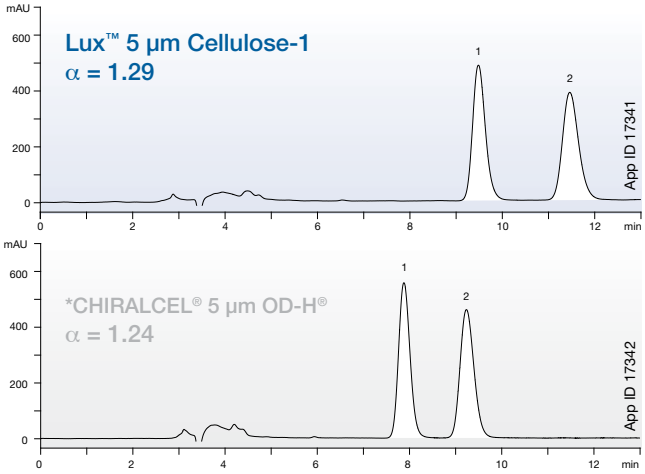


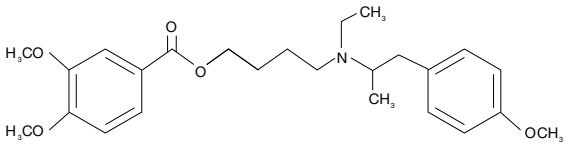


Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (80:20)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

*CHIRALCEL and OD-H are registered trademarks of DAICEL Chemical Industries, Ltd. Comparative separations may not be representative of all applications.

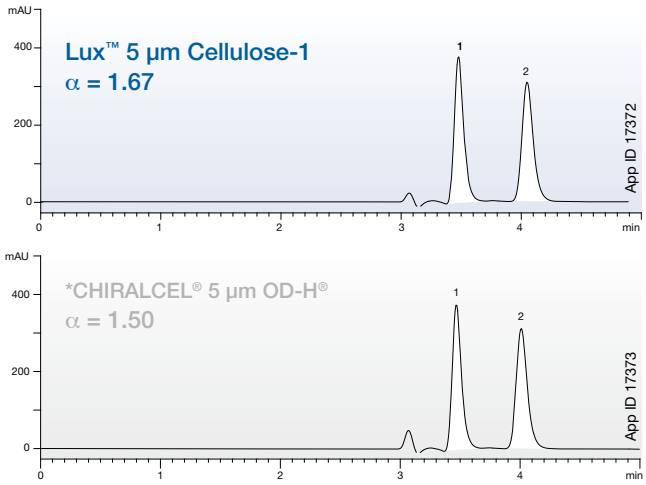
Mebeverine

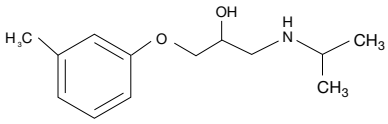




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (80:20)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

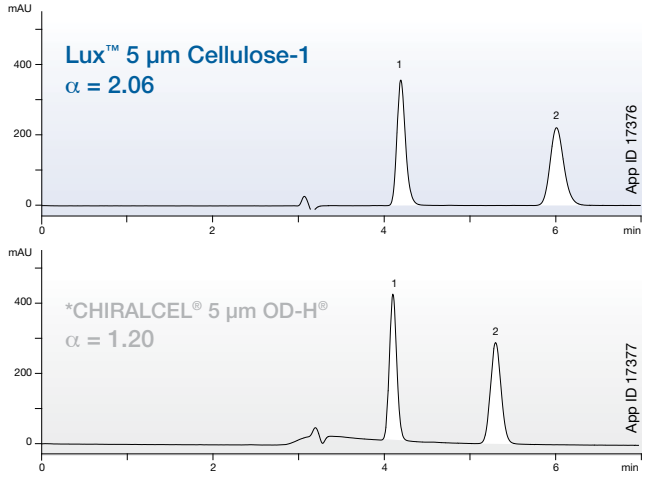
Toliprolol

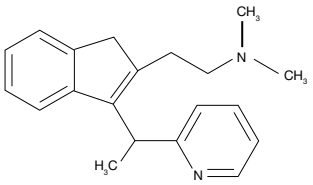




Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Methanol /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Dimethindene





Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 0.1 % Diethylamine in Methanol /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Additional applications are available upon request.

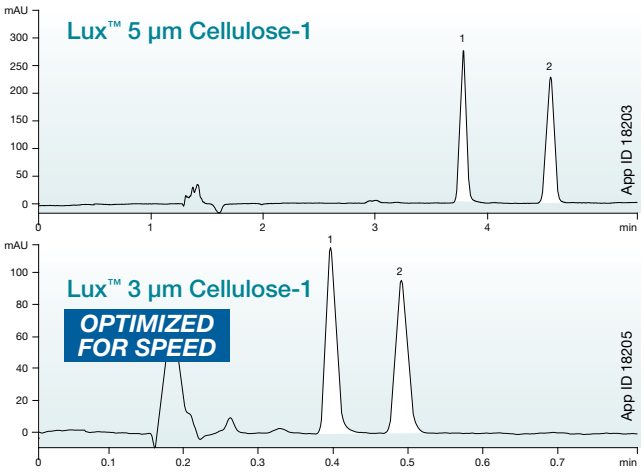
*CHIRALCEL and OD-H are registered trademarks of DAICEL Chemical Industries, Ltd. Comparative separations may not be representative of all applications.

Pressure Rated for SFC

From analytical to Axia™ packed preparative columns, Lux™ chiral columns offer complementary selectivities, high efficiency, and pressure stability up to 300 bar (4300 psi) for your SFC separations.

> "We were very pleased with how the Lux Cellulose-1 and Lux Cellulose-2 columns performed for chiral separations using SFC"
>
> **Dr. Melissa Dunkle**
> Pfizer Analytical Research Center
> Ghent University

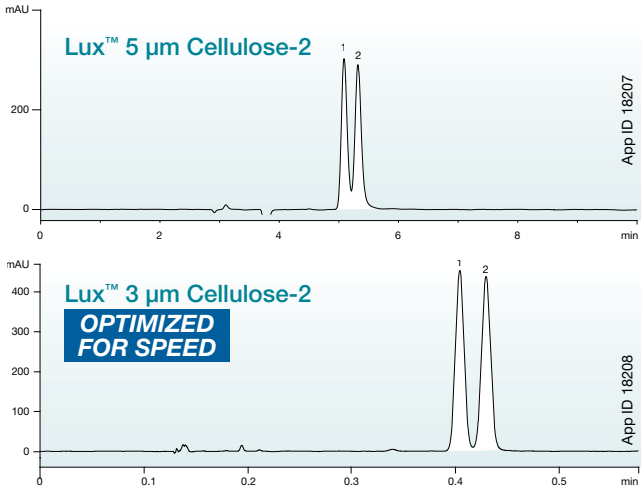
trans-Stilbene Oxide



Column: Lux™ 5 µm Cellulose-1
Dimensions: 250 x 4.6 mm
Part No.: 00G-4459-E0
Mobile Phase: 0.1 % Diethylamine with 0.1 % Trifluoroacetic acid in Methanol / Carbon Dioxide (25:75)
Flow Rate: 2 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

Column: Lux™ 3 µm Cellulose-1
Dimensions: 50 x 4.6 mm
Part No.: 00B-4458-E0
Mobile Phase: 0.1 % Diethylamine with 0.1 % Trifluoroacetic acid in Methanol / Carbon Dioxide (25:75)
Flow Rate: 4 mL/min
Detection: UV @ 220 nm
Temperature: Ambient

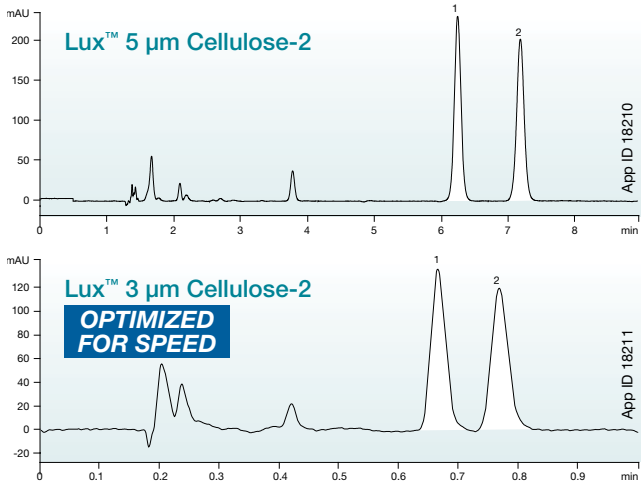
Bendroflumethiazide



Column: Lux™ 5 µm Cellulose-2
Dimensions: 250 x 4.6 mm
Part No.: 00G-4457-E0
Mobile Phase: 0.1 % Diethylamine with 0.1 % Trifluoroacetic acid in Methanol / Carbon Dioxide (30:70)
Flow Rate: 2 mL/min
Detection: UV @ 273 nm
Temperature: Ambient

Column: Lux™ 3 µm Cellulose-2
Dimensions: 50 x 4.6 mm
Part No.: 00B-4456-E0
Mobile Phase: 0.1 % Diethylamine with 0.1 % Trifluoroacetic acid in Methanol / Carbon Dioxide (30:70)
Flow Rate: 4 mL/min
Detection: UV @ 273 nm
Temperature: Ambient

Benzoin



Column: Lux™ 5 µm Cellulose-2
Dimensions: 250 x 4.6 mm
Part No.: 00G-4457-E0
Mobile Phase: 0.1 % Diethylamine with 0.1 % Trifluoroacetic acid in Methanol / Carbon Dioxide (15:85)
Flow Rate: 2 mL/min
Detection: UV @ 254 nm
Temperature: Ambient

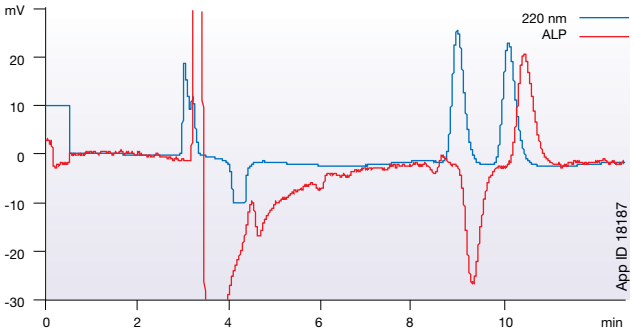
Column: Lux™ 3 µm Cellulose-2
Dimensions: 50 x 4.6 mm
Part No.: 00B-4456-E0
Mobile Phase: 0.1 % Diethylamine with 0.1 % Trifluoroacetic acid in Methanol / Carbon Dioxide (15:85)
Flow Rate: 4 mL/min
Detection: UV @ 254 nm
Temperature: Ambient

Data courtesy of Dr. Melissa Dunkle, Pfizer Analytical Research Center, Ghent University. SFC separations performed on a SandraSelerity SFC system.

Screen for Preparative Purifications

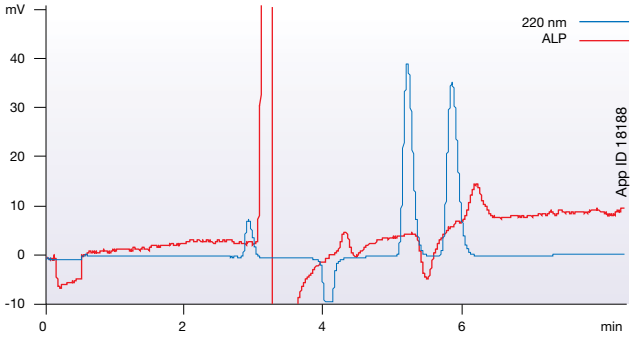
Increased resolution for more cost-effective preparative and process purifications.

Bupivacaine



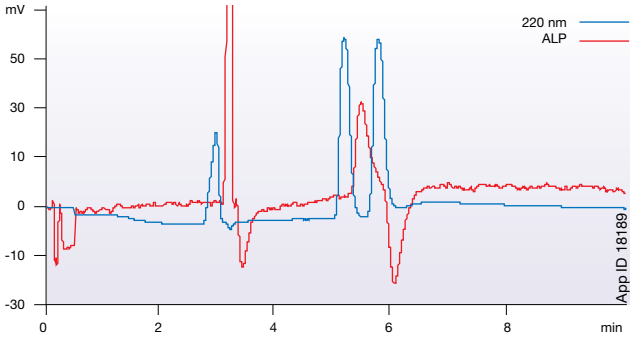
Column: Lux™ 5 µm Cellulose-2
Dimensions: 250 x 4.6 mm
Part No.: 00G-4457-E0
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Polarimeter: PDR-CHIRAL ALP
Temperature: Ambient

Tramadol



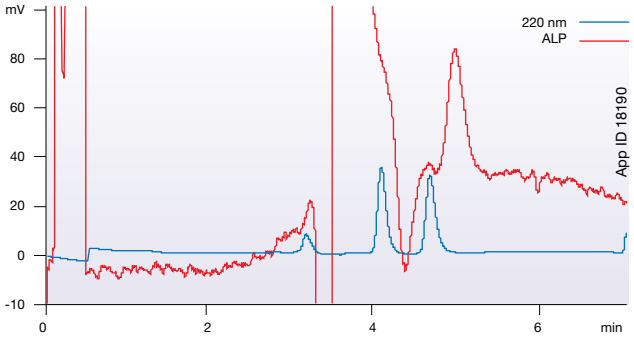
Column: Lux™ 5 µm Cellulose-2
Dimensions: 250 x 4.6 mm
Part No.: 00G-4457-E0
Mobile Phase: 0.1 % Diethylamine in Hexane /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Polarimeter: PDR-CHIRAL ALP
Temperature: Ambient

Econazole



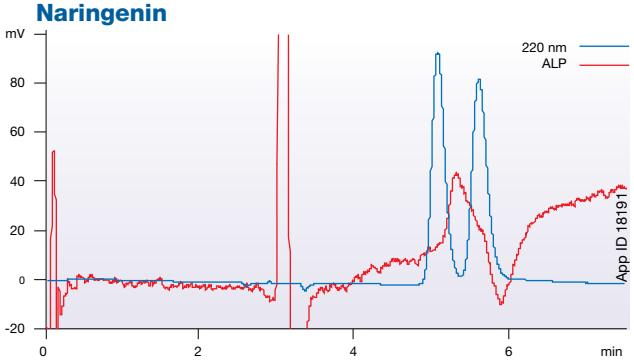
Column: Lux™ 5 µm Cellulose-2
Dimensions: 250 x 4.6 mm
Part No.: 00G-4457-E0
Mobile Phase: 0.1 % Diethylamine in Methanol /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Polarimeter: PDR-CHIRAL ALP
Temperature: Ambient

Nomifensine



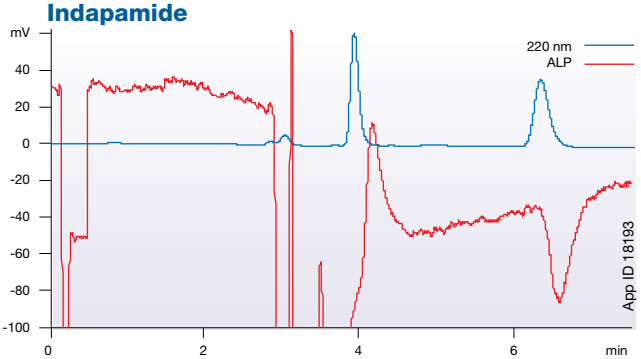
Column: Lux™ 5 µm Cellulose-2
Dimensions: 250 x 4.6 mm
Part No.: 00G-4457-E0
Mobile Phase: 0.1 % Diethylamine in Acetonitrile /
0.1 % Diethylamine in Isopropanol (95:5)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Polarimeter: PDR-CHIRAL ALP
Temperature: Ambient

Naringenin



Column: Lux™ 5 µm Cellulose-1
Dimensions: 250 x 4.6 mm
Part No.: 00G-4459-E0
Mobile Phase: 0.1 % Formic acid in Hexane /
0.1 % Formic acid in Isopropanol (60:40)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Polarimeter: PDR-CHIRAL ALP
Temperature: Ambient

Indapamide



Column: Lux™ 5 µm Cellulose-1
Dimensions: 250 x 4.6 mm
Part No.: 00G-4459-E0
Mobile Phase: 0.1 % Diethylamine in Methanol /
0.1 % Diethylamine in Isopropanol (90:10)
Flow Rate: 1 mL/min
Detection: UV @ 220 nm
Polarimeter: PDR-CHIRAL ALP
Temperature: Ambient

Lux™ Ordering Information



3 µm Analytical Columns (mm)

SecurityGuard™ Cartridges (mm)

	50 x 2.0	150 x 2.0	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	4 x 2.0*	4 x 3.0*
Phases							/10pk	/10pk
Cellulose-1	00B-4458-B0	00F-4458-B0	00B-4458-E0	00D-4458-E0	00F-4458-E0	00G-4458-E0	AJ0-8402	AJ0-8403
Cellulose-2	00B-4456-B0	00F-4456-B0	00B-4456-E0	00D-4456-E0	00F-4456-E0	00G-4456-E0	AJ0-8398	AJ0-8366
Amylose-2	—	00F-4471-B0	00B-4471-E0	—	00F-4471-E0	00G-4471-E0	AJ0-8471	AJ0-8470
						for ID:	2.0–3.0 mm	3.2–8.0 mm

5 µm Analytical Columns (mm)

SecurityGuard™ Cartridges (mm)

	50 x 2.0	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	4 x 2.0*	4 x 3.0*
Phases						/10pk	/10pk
Cellulose-1	00B-4459-B0	00B-4459-E0	00D-4459-E0	00F-4459-E0	00G-4459-E0	AJ0-8402	AJ0-8403
Cellulose-2	00B-4457-B0	00B-4457-E0	00D-4457-E0	00F-4457-E0	00G-4457-E0	AJ0-8398	AJ0-8366
Amylose-2	—	00B-4472-E0	00D-4472-E0	00F-4472-E0	00G-4472-E0	AJ0-8471	AJ0-8470
					for ID:	2.0–3.0 mm	3.2–8.0 mm

3 µm Method Screening Kits

(save 10 % when purchased as a kit)

	50 x 4.6 mm	250 x 4.6 mm
Screening Kit*	KH0-8483	KH0-8482

*Kit contains one column of each phase.



Column Performance Check Standard

Part No.	Description	Unit	Price
AL0-8412	Chiral Test Mix No. 5 (Lux)	ea	

5 µm Semi-Prep Columns (mm)

SecurityGuard™ Cartridges (mm)

	150 x 10.0	250 x 10.0	10 x 10.0‡
Phases			/3pk
Cellulose-1	00F-4459-N0	00G-4459-N0	AJ0-8404
Cellulose-2	00F-4457-N0	00G-4457-N0	AJ0-8399
		for ID:	9-16 mm



5 µm Axia™ Packed Preparative Columns (mm)

SecurityGuard™ Cartridges (mm)

	150 x 21.2	250 x 21.2	250 x 30	250 x 50	15 x 21.2**	15 x 30.0†
Phases					/ea	/ea
Cellulose-1	00F-4459-P0-AX	00G-4459-P0-AX	00G-4459-U0-AX	00G-4459-V0-AX	AJ0-8405	AJ0-8406
Cellulose-2	00F-4457-P0-AX	00G-4457-P0-AX	00G-4457-U0-AX	00G-4457-V0-AX	AJ0-8400	AJ0-8401
Amylose-2	00F-4472-P0-AX	00G-4472-P0-AX	00G-4472-U0-AX	00G-4472-V0-AX	AJ0-8473	AJ0-8474
				for ID:	18–29 mm	30–49 mm

*SecurityGuard Analytical Cartridges require holder, Part No. : KJ0-4282
‡SemiPrep SecurityGuard Cartridges require holder, Part No. : AJ0-7220
**PREP SecurityGuard Cartridges require holder, Part No. : AJ0-8223
†PREP SecurityGuard Cartridges require holder, Part No. : AJ0-8277

Bulk Media for Process Scale Purification

Beyond our largest preparative column dimensions, Lux™ phases are available in bulk quantities for HPLC purification at the process, pilot, and commercial scale. The highly reproducible manufacturing process makes scaling to large scale purification extremely straight-forward.



20 µm Bulk Media

	100 g	1 kg
Phases		
Cellulose-1	04G-4465	04K-4465
Cellulose-2	04G-4464	04K-4464
Amylose-2	†	†

†Please inquire for 20 µm Lux™ Amylose-2 media.

guarantee

If you are not completely satisfied with Lux™ analytical columns, send in your comparative data to a similar product within 45 days and KEEP THE COLUMN FOR FREE.

Use SecurityGuard™ to increase column lifetime

Use Phenex™ Syringe filters for mobile phase solvent filtration

Phenex™ Syringe Filters



For Sample and Solvent Filtration Prior to Chromatography!

- Less system downtime
- More consistent, reproducible results
- Increased column lifetime

Membrane Type/Size	15-17 mm Diameter for 2 – 10 mL sample volumes			25-28 mm Diameter for 10 – 100 mL sample volumes		
	Part No.	Unit	Price	Part No.	Unit	Price
0.45 µm						
Phenex-RC (Regenerated Cellulose)	AF0-2103-12 AF0-2103-52	100/pk 500/pk		AF0-8103-12 [5] AF0-8103-52 [5]	100/pk 500/pk	
Phenex-PES [3] (Polyethersulfone)	AF2-5108-12 [1] —	100/pk —		AF0-8108-12 [7] AF0-8108-52 [7]	100/pk 500/pk	
Phenex-PTFE [6] (Polytetrafluoroethylene)	AF0-2102-12 AF0-2102-52	100/pk 500/pk		AF0-1102-12 AF0-1102-52	100/pk 500/pk	
Phenex-NY (Nylon)	AF2-5107-12 [1] AF2-5107-52 [1]	100/pk 500/pk		AF0-1107-12 AF0-1107-52	100/pk 500/pk	
0.20 µm						
Phenex-RC (Regenerated Cellulose)	AF0-2203-12 AF0-2203-52	100/pk 500/pk		AF0-8203-12 [5] AF0-8203-52 [5]	100/pk 500/pk	
Phenex-PES [3] (Polyethersulfone)	— —	— —		AF0-8208-12 [7] AF0-8208-52 [7]	100/pk 500/pk	
Phenex-PTFE [6] (Polytetrafluoroethylene)	AF0-2202-12 AF0-2202-52	100/pk 500/pk		AF0-1202-12 AF0-1202-52	100/pk 500/pk	
Phenex-NY (Nylon)	AF2-5207-12 [1] AF2-5207-52 [1]	100/pk 500/pk		AF0-1207-12 AF0-1207-52	100/pk 500/pk	
1.20 µm						
Phenex-GF [2,3] (Glass Fiber)	*Prefiltration of heavily contaminated or highly viscous samples. When used in-series preceding a membrane filter, clogging of the membrane filter is prevented and sample clean up is optimized. Outlet connection is luer lock.*			AF0-8515-12 [7] AF0-8515-52 [7]	100/pk 500/pk	

guarantee

If Phenex™ Syringe Filters do not perform as well or better than your current syringe filter product of similar membrane, diameter and pore size, send in your comparative data within 45 days and keep the Phenex products for FREE!

Syringe filters are non-sterile. Housing is made of medical-grade polypropylene (PP) and offer luer lock inlet/slip outlet connections, unless otherwise indicated.

1. *17 mm diameter.*
2. *Glass fiber filters are 28 mm diameter and made of borosilicate. They will remove 90 % of all particles >1.2 µm.*
3. *Housing material is methacrylate butadiene styrene (MBS) polymerisate. Also known as Cyrolite™.*
4. *Cellulose acetate is surfactant-free.*
5. *26 mm diameter.*
6. *Hydrophobic membrane. Can be made hydrophilic by pre-wetting with IPA.*
7. *28 mm diameter.*
8. *Additional dimensions and membrane types are available. Please contact your local Phenomenex technical consultant or distributor for availability or assistance.*
9. *Larger quantity purchases at significant savings are available.*

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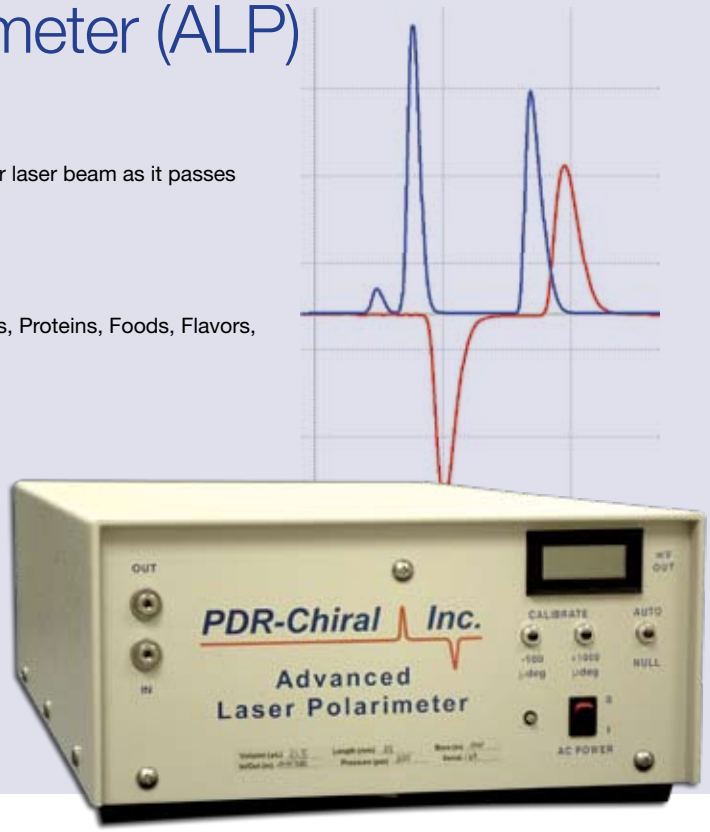
A special thank you to PDR-Chiral for supplying preparative applications on page 25.

Advanced Laser Polarimeter (ALP)

Simplify your HPLC, SFC, and Bulk purification

Measures the real-time rotation of a plane-polarized 670 nanometer laser beam as it passes through the flow cell to microdegree accuracy/resolution

- Universal Optical Activity Detector
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- Good Sensitivity & Reproducibility, Large Dynamic Range
- Fully Automatic, No User Adjustments or Stop Flow Scans
- Consistent Assignment (+/-) for Enantiomers



For further information on the Advance Laser Polarimeter, please contact PDR-Chiral, Inc.

PDR-Chiral Inc.
Chiral-Achiral HPLC/SFC

Email: info@pdr-chiral.com
Web: www.pdr-chiral.com

Australia
t: 02-9428-6444
f: 02-9428-6445
auinfo@phenomenex.com

Austria
t: 01-319-1301
f: 01-319-1300
anfrage@phenomenex.com

Belgium
t: +31 (0)30-2418700
f: +31 (0)30-2383749
beinfo@phenomenex.com

Canada
t: (800) 543-3681
f: (310) 328-7768
info@phenomenex.com

Denmark
t: 4824 8048
f: 4810 6265
dkinfo@phenomenex.com

France
t: 01 30 09 21 10
f: 01 30 09 21 11
franceinfo@phenomenex.com

Germany
t: 06021-58830-0
f: 06021-58830-11
anfrage@phenomenex.com

Ireland
t: 01 247 5405
f: +44 1625-501796
eireinfo@phenomenex.com

Italy
t: 051 6327511
f: 051 6327555
italiainfo@phenomenex.com

Luxembourg
t: +31 (0)30-2418700
f: +31 (0)30-2383749
nlinfo@phenomenex.com

Netherlands
t: 030-2418700
f: 030-2383749
nlinfo@phenomenex.com

New Zealand
t: 09-4780951
f: 09-4780952
nzinfo@phenomenex.com

Puerto Rico
t: (800) 541-HPLC
f: (310) 328-7768
info@phenomenex.com

United Kingdom
t: 01625-501367
f: 01625-501796
ukinfo@phenomenex.com

All other countries:
Corporate Office USA
t: (310) 212-0555
f: (310) 328-7768
info@phenomenex.com

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