

Pick the **RIGHT**
CHIRAL COLUMN
The **FIRST** Time
EVERY Time
RISK-FREE*

See Inside for 3 Easy Ways



* See inside for complete 'risk-free' details.

 **phenomenex**
...breaking with tradition™



3 Ways to Confidently Choose a Chiral Column

1. Match Your Compound's Functional Groups to Our Chiral Phases (pp. 6-7)

- ▶ Method and column selection from functional group index based on 100s of chiral compound screens

2. Search Your Compound's Structure or Name on Phenomenex.com (pp. 8-9)

- ▶ Application Structure Search
- ▶ Application Name Search

new

3. Submit Your Compound to Our PhenoLogix FREE Chiral Screening Services (p. 10)

Still can't find the optimal chiral column? Send in your compound and our dedicated team will screen it for you

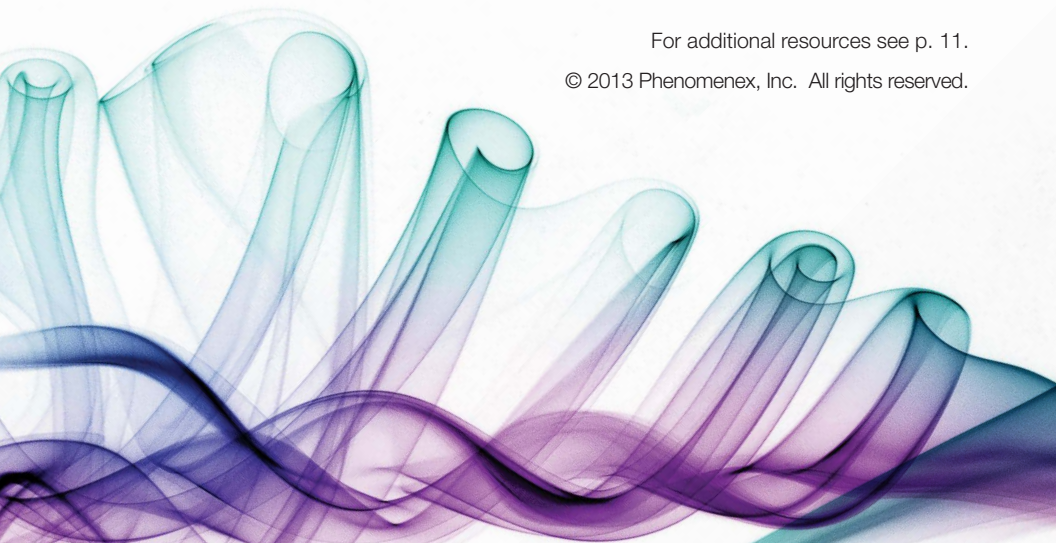
- ▶ Over 90 % Hit Ratio
- ▶ Easy Scale-Up for Preparative Purification

* RISK-FREE

If you order a Lux™ analytical column (≤ 4.6 mm ID) based on the three steps in this guide and do not receive the promised separation, return the column with comparative data within 45 days for a FULL REFUND.

For additional resources see p. 11.

© 2013 Phenomenex, Inc. All rights reserved.



Lux[®] Chiral Columns Will Resolve 92 % of Your Enantiomers*

Introducing Lux Polysaccharide-Based Chiral Phases

Lux Amylose-2 Amylose tris(5-chloro-2-methylphenylcarbamate)

Lux Cellulose-1 Cellulose tris(3,5-dimethylphenylcarbamate)

Lux Cellulose-2 Cellulose tris(3-chloro-4-methylphenylcarbamate)

Lux Cellulose-3 Cellulose tris(4-methylbenzoate)

Lux Cellulose-4 Cellulose tris(4-chloro-3-methylphenylcarbamate)

►► Why choose a polysaccharide-based chiral column?

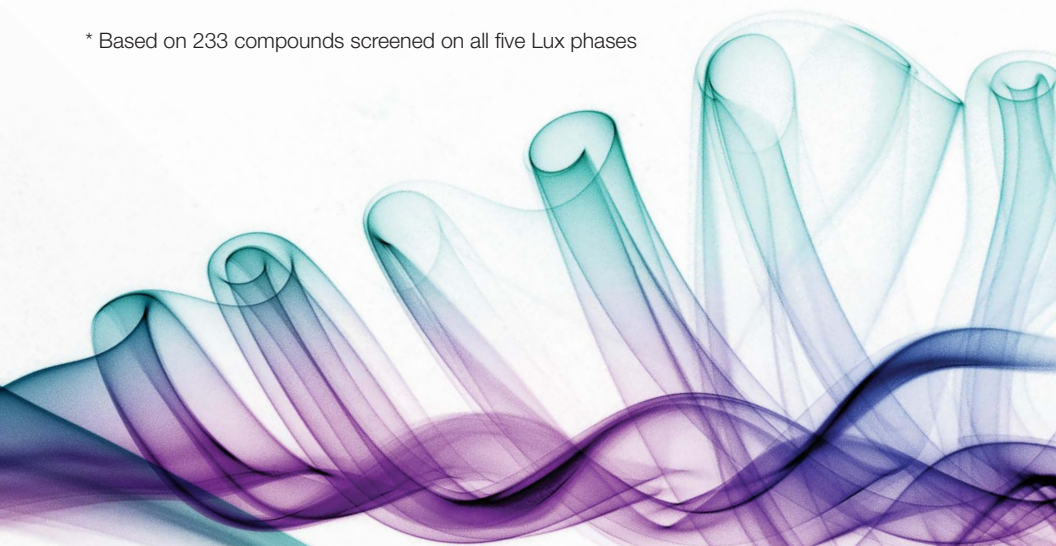
Polysaccharide-based chiral stationary phases (CSPs) such as Lux are the most widely used CSPs for the chromatographic separation of enantiomers.¹ A recent review pointed out that in 2007 more than 90 % of the HPLC methods used for the determination of enantiomeric excess were performed on polysaccharide-based chiral stationary phases.²

Learn more about each unique phase on pp. 4-5.

1. Chankvetadze, B. J. Chromatogr. A 2012, 1269, 26-51.

2. Ikai, T.; Okamoto, Y. Chem. Rev. 2009, 109, 6077-6101.

* Based on 233 compounds screened on all five Lux phases

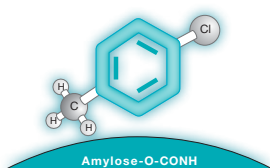


Five Unique Lux[®] Phases Will Meet Your Laboratory's Demands

- ▶ Stable in Normal Phase, Polar Organic, Reversed Phase, and SFC conditions
- ▶ 3 μm and 5 μm for packed columns (analytical, semi-preparative, and Axia[™]-packed preparative)
- ▶ 10 μm and 20 μm bulk media for scale-up (see p. 23 for more details)
- ▶ Pressure stable up to 300 bar
- ▶ High efficiency and high loading capacity

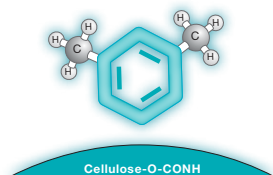


Many chiral screening groups use all 5 Lux phases on their primary screen to increase chances of locating the optimal enantiomeric separation.



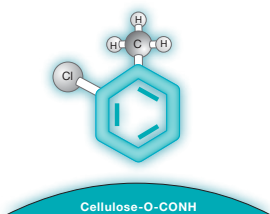
Lux Amylose-2

- ▶ Amylose tris(5-chloro-2-methylphenylcarbamate)
- ▶ Chlorinated amylose phase offers a broad range of selectivity



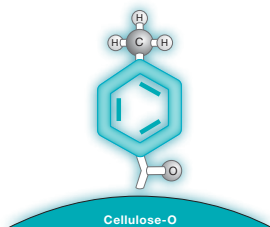
Lux Cellulose-1

- ▶ Cellulose tris(3,5-dimethylphenylcarbamate)
- ▶ Proven successful and universal Chiral Stationary Phase (CSP)



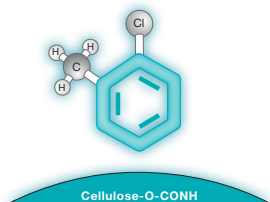
Lux® Cellulose-2

- ▶ Cellulose tris(3-chloro-4-methylphenylcarbamate)
- ▶ Unique chlorinated cellulose phase with complementary selectivity



Lux Cellulose-3

- ▶ Cellulose tris(4-methylbenzoate)
- ▶ Methylbenzoate is a diverse CSP compared to traditional selectors



Lux Cellulose-4

- ▶ Cellulose tris(4-chloro-3-methylphenylcarbamate)
- ▶ First-to-market chlorinated cellulose derivative offers unique chiral recognition abilities

Try any Lux phase

RISK-FREE

If you order a Lux analytical column (≤ 4.6 mm ID) based on the three steps in this guide and do not receive the promised separation, return the column with comparative data within 45 days for a FULL REFUND.

For additional Lux information please visit www.phenomenex.com/lux

Selecting Your Chiral Column

1. Functional Groups

Use the functional group index (pp. 12-21) to browse the selection of popular chiral compounds.

Step 1:

- ▶ Locate the class (A-G) that best represents your compound's primary functional group
- ▶ Select a subclass where necessary
- ▶ Browse through the chiral compounds to find a match or similar compound

The index table provides the Lux[®] phase used, the mode of chromatography, and the Application ID that is searchable at www.phenomenex.com/ChiralAppSearch

Example:

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class A: Amine derivatives RNH ₂ , R ₂ NH and R ₃ N	Amino-alcohol	Beta blocker drugs			
		acebutolol	Lux Amylose-2	NP	20084
		acebutolol	Lux Amylose-2	PO	18130

NP = Normal Phase

RP = Reversed Phase

PO = Polar Organic

A full list of successful applications for chiral compounds can be searched at www.phenomenex.com/ChiralAppSearch

Selecting Your Chiral Column

1. Functional Groups

Step 2:

Once you locate a match, type the App ID (or compound name) into the search field on **www.phenomenex.com/ChiralAppSearch** to receive:

- ▶ Chromatogram
- ▶ Running Conditions
- ▶ Detection Used
- ▶ Retention Times
- ▶ Selectivity (alpha value)
- ▶ Column Details (length, ID, particle size, part number, etc.)

Search

Site Search Alternative Search Options HPLC GC Sample Prep Accessories Applications

Application Search by Name Search by Structure

Search Applications **Filtering by: Phase: Chiral II (helical polymer)** Clear All Filters

View Application Details Learn More About Lux Add to App Locker

Selected Application:

Application ID: 20730
Title: [Lansoprazole on Lux 5µm Cellulose-2 in PO Elution Mode](#)
Separation Mode: Chiral Chromatography
Method: Lux
Brand: Lux
Description: Lux® 5µ Cellulose-2, LC Column 250 x 4.6 mm, Ea
Part Number: [00G-4457-EQ](#)
Analytes: [View](#)

958 Search Results 10 per page

separation mode	title	column
Chiral Chromatography	Lansoprazole on Lux 5µm Cellulose-2 in PO Elution Mode	Lux® 5µ Cellulose-2, LC Column 250 x 4.6 mm, Ea

Selecting Your Chiral Column

2. Application Searches

A. Application Structure Search (for novel compounds)

new

Ability to draw your compound and search for results based on sub-structure (aka functional group), exact match, or similar match.

Getting started:

- ▶ Visit **www.phenomenex.com/ChiralStructureSearch**
- ▶ Draw your compound (or functional groups)
- ▶ Click on of the following “Match Compounds” options and click Search

TIP

Do you have a structure drawn out?
You can copy and paste compound structures
into this search field.

Search

Steps: Draw Structure, Match Compounds, View Applications

H
C
N
O
S
P
F
Cl
Br
...
•

NC1(C(=O)CCCC1)c2ccccc2Cl

Molecular Weight:
223.6981

Formula:
C₁₂H₁₄ClON

Match Compounds

☐ Sub-Structure
☒ Exact Match
☐ Similar

8

Phenomenex | WEB: www.phenomenex.com

Selecting Your Chiral Column

2. Application Searches

A. Application Structure Search *(continued)*

Filter Results:

1 Matching Compound Results

CID	Name	Formula	Mol. Weight	View Applications
123767	Norketamine	C ₁₂ H ₁₄ NOCl	223.70	2

Filter results:

- ▶ Select “HPLC” and “Chiral Chromatography” in the respective drop-down menus and then click the blue arrow
- ▶ View the relevant applications and pinpoint the one that fits your needs

B. Application Name Search *(for known compounds)*

Over a thousand chiral applications and growing.

How to navigate:

- ▶ Visit **www.phenomenex.com/ChiralAppSearch** (pre-filtered for Lux® applications)
- ▶ Input the Application ID or compound name into the search field
- ▶ Scan through the results to find your match

Selecting Your Chiral Column

3. PhenoLogix

Join other chiral chromatographers from around the world who have achieved success with our in-house screening services.

FREE Chiral Screening Services

- ▶ Rapid 10 Day Screening From Receipt of Samples
- ▶ Screen All 5 Lux® Phases in Normal Phase, Reversed Phase, and Polar Organic Modes
- ▶ Over 90 % Hit Ratio
- ▶ Detailed Report
- ▶ Easy Method Transfer
- ▶ Confidentiality Agreements Accepted Upon Request

Preparative and Process Scale-Up

- ▶ Media Screening
- ▶ Small Scale Purification
- ▶ DAC Packing Assistance

Simply visit **www.phenomenex.com/ChiralScreening** to submit your application today.

“ We requested two different chiral compounds be separated and purified. We received the first set of compounds at 99% e.e. within a week and the second set in 2 weeks, also at greater than 99% e.e. The second set was a difficult separation. We were very happy with the quality of the separation and the quick turnaround, which was tantamount. [PhenoLogix] did a great job of informing me on the progress and chemistry/separation issues that arose. I have recommended this service to other colleagues in the Pharmaceutical and BioTech industry here in San Diego and I look forward to using them again. ”

Researcher – Celgene Corporation, San Diego, California

Selecting Your Chiral Column

More Resources

Visit **www.phenomenex.com/Lux** to:

- ▶ Request Free Chiral Method Development Poster
- ▶ Download Multiple Technical Notes
- ▶ Download Lux Brochures
- ▶ Download Lux Care and Use Notes
- ▶ Access Chiral Structure Search
- ▶ Access Chiral Application Search

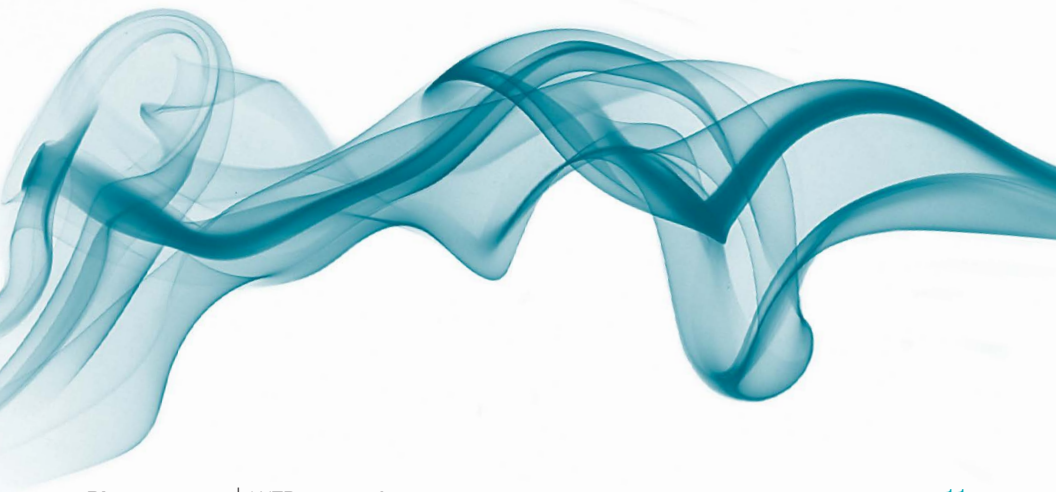
All applications associated with our growing library are viewable online at **www.phenomenex.com/ChiralAppSearch**



Lux columns are interchangeable between normal phase, polar organic, reversed phase, and SFC modes with a simple solvent switch. Refer to Lux Care and Use Notes for more information.

Lux Method Development Kits

Available in 2, 3, 4, or 5 column kits. Please contact your local Technical Consultant to customize your kit and receive pricing.



Functional Group Index

The index table provides the Lux® phase used, the mode of chromatography, and the Application ID that is searchable at **www.phenomenex.com/ChiralAppSearch**

NP = Normal Phase RP = Reversed Phase PO = Polar Organic

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class A: Amine derivatives RNH_2 , R_2NH and R_3N	Amino-alcohol	Beta blocker drugs			
		$ \begin{array}{c} H \\ \\ R-N \\ \\ H \end{array} \quad \begin{array}{c} R \\ \\ R-N \\ \\ H \end{array} \quad \begin{array}{c} R \\ \\ R-N \\ \\ R \end{array} $			
		acebutolol	Lux Amylose-2	NP	20084
		acebutolol	Lux Amylose-2	PO	18130
		alprenolol	Lux Cellulose-2	NP	20443
		atenolol	Lux Cellulose-1	NP	20547
		atenolol	Lux Cellulose-2	PO	20355
		bambuterol	Lux Amylose-2	NP	20454
		betaxolol	Lux Cellulose-2	NP	20501
		betaxolol	Lux Cellulose-4	RP	20171
		bisoprolol	Lux Cellulose-1	NP	20261
		bopindolol	Lux Cellulose-4	RP	20173
		carazolol	Lux Cellulose-2	NP	20117
		carvedilol	Lux Cellulose-4	NP	20422
		clenbuterol	Lux Cellulose-2	RP	20194
		clenbuterol	Lux Cellulose-3	NP	20399
		esmolol	Lux Cellulose-1	NP	20403
		isoproterenol	Lux Cellulose-2	RP	20072
		isoxsuprine	Lux Cellulose-4	NP	20541
		isoxsuprine	Lux Cellulose-4	RP	20146
		metoprolol	Lux Cellulose-1	NP	20470
		mianserin	Lux Cellulose-1	RP	20225
		oxprenolol	Lux Cellulose-1	NP	20544
		pindolol	Lux Cellulose-1	RP	20198
		pindolol	Lux Cellulose-2	NP	20125
		propranolol	Lux Cellulose-1	NP	20477
		propranolol	Lux Cellulose-3	RP	20308
		sotalol	Lux Cellulose-2	NP	20550
		toliprolol	Lux Amylose-2	NP	20511
	Diphenyl methyl	Anti-allergic drugs			
		hydroxyzine	Lux Amylose-2	NP	20087
		hydroxyzine	Lux Cellulose-3	RP	20320
		meclizine	Lux Cellulose-3	NP	20338
		terfenadine	Lux Cellulose-1	RP	20237
		terfenadine	Lux Cellulose-2	NP	20078

Functional Group Index

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class A: Amine derivatives RNH_2 , R_2NH and R_3N	Phenyl methyl pyridyl	Anti-allergic drugs			
$ \begin{array}{c} H \\ \\ R-N \\ \\ H \end{array} \quad \begin{array}{c} R \\ \\ R-N \\ \\ H \end{array} \quad \begin{array}{c} R \\ \\ R-N \\ \\ R \end{array} $		bromopheniramine	Lux Amylose-2	NP	20082
		carbinoxamine	Lux Amylose-2	NP	20452
		chlorpheniramine	Lux Amylose-2	NP	20445
		dimetindene	Lux Cellulose-1	NP	20435
		dimetindene	Lux Cellulose-3	RP	20300
		doxylamine	Lux Cellulose-4	NP	20346
		doxylamine	Lux Cellulose-4	RP	20170
		mirtazapine	Lux Cellulose-2	PO	20067
		mirtazapine	Lux Cellulose-4	NP	20425
		pheniramine	Lux Cellulose-3	NP	20429
Class B: Acid derivatives RCO_2H	Acids	Anti-inflammatory drugs			
$ \begin{array}{c} O \\ \\ R-C-O-H \end{array} $		carprofen	Lux Cellulose-1	RP	20278
		carprofen	Lux Cellulose-3	NP	20440
		etodolac	Lux Cellulose-3	RP	20324
		fenoprofen	Lux Amylose-2	NP	20453
		fenoprofen	Lux Cellulose-3	RP	20309
		ibuprofen	Lux Cellulose-2	NP	20274
		ibuprofen	Lux Cellulose-3	RP	20310
		indoprofen	Lux Amylose-2	NP	20510
		indoprofen	Lux Cellulose-3	RP	20296
		ketoprofen	Lux Cellulose-3	NP	20099
		ketorolac	Lux Amylose-2	NP	20091
		ketorolac	Lux Cellulose-2	RP	20277
		ketorolac	Lux Cellulose-3	PO	20367
		suprofen	Lux Cellulose-3	NP	20098
		suprofen	Lux Cellulose-3	RP	20294

Functional Group Index

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class B: Acid derivatives RCO_2H 	N-protected amino acids	FMOC amino acids			
		FMOC-Ala-OH	Lux Cellulose-1	NP	20561
		FMOC-Ala-OH	Lux Cellulose-3	RP	20334
		FMOC-Ile-OH	Lux Cellulose-3	NP	20389
		FMOC-Ile-OH	Lux Cellulose-4	RP	20179
		FMOC-Leu-OH	Lux Cellulose-3	NP	20388
		FMOC-Leu-OH	Lux Cellulose-4	RP	20168
		FMOC-Lys-(boc)-OH	Lux Cellulose-1	NP	20479
		FMOC-Lys-(boc)-OH	Lux Cellulose-3	PO	20366
		FMOC-Lys-(boc)-OH	Lux Cellulose-3	RP	20318
		FMOC-Pro-OH	Lux Cellulose-2	NP	20409
		FMOC-Pro-OH	Lux Cellulose-2	PO	20354
		FMOC-Pro-OH	Lux Cellulose-4	RP	20151
		FMOC-Trp-OH	Lux Cellulose-4	NP	20540
		FMOC-Ser-OH	Lux Cellulose-3	RP	20336
		FMOC-Ser-OH	Lux Cellulose-4	NP	20416
	Others	abscisic acid	Lux Cellulose-1	NP	20557
		abscisic acid	Lux Cellulose-3	RP	20313
		flumequine	Lux Cellulose-2	RP	20141
		proglumide	Lux Cellulose-2	NP	20407
		proglumide	Lux Cellulose-4	RP	20187
Class C: Amide and imide derivatives RNHCOR 	Amide	Anesthetic drugs			
		bupivacaine	Lux Cellulose-2	NP	20272
		bupivacaine	Lux Cellulose-3	RP	20286
		prilocaine	Lux Amylose-3	NP	20081
	Benzodiazepine	Tranquilizing drugs			
		oxazepam	Lux Cellulose-1	PO	20283
		oxazepam	Lux Cellulose-1	RP	20232
		temazepam	Lux Cellulose-1	RP	20236

Functional Group Index

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID	
Class C: Amide and imide derivatives RNHCOR 	Imide	aminoglutethimide	Lux Cellulose-1	PO	20069	
		aminoglutethimide	Lux Cellulose-3	NP	20107	
		aminoglutethimide	Lux Cellulose-4	RP	20169	
		tesicam	Lux Cellulose-4	RP	20189	
		thalidomide	Lux Amylose-2	NP	20507	
		thalidomide	Lux Cellulose-2	RP	20239	
	Hydantoin	Anticonvulsant drugs				
		hydroxyphenytoin	Lux Cellulose-3	RP	20288	
		mephenytoin	Lux Amylose-2	NP	20526	
		mephenytoin	Lux Cellulose-1	NP	20250	
		mephenytoin	Lux Cellulose-1	RP	20224	
		mephenytoin	Lux Cellulose-2	NP	20061	
		mephenytoin	Lux Cellulose-3	NP	20428	
		mephenytoin	Lux Cellulose-3	RP	20326	
		mephenytoin	Lux Cellulose-4	NP	20157	
		mephenytoin	Lux Cellulose-4	RP	20184	
	Barbiturate	hexobarbital	Lux Amylose-2	NP	20095	
		hexobarbital	Lux Cellulose-2	RP	20218	
	Others	bucetin	Lux Amylose-2	NP	20519	
		bucetin	Lux Cellulose-1	RP	20137	
		bucetin	Lux Cellulose-4	PO	20378	
		cisapride	Lux Cellulose-2	NP	20497	
		cisapride	Lux Cellulose-2	PO	20280	
		cisapride	Lux Cellulose-2	RP	20243	
		chlormezanone	Lux Cellulose-1	NP	20485	
		chlormezanone	Lux Cellulose-3	PO	20371	
		chlormezanone	Lux Cellulose-3	RP	20332	
		midodrine	Lux Cellulose-2	NP	20121	
		milnacipran	Lux Cellulose-2	NP	20412	
		milnacipran	Lux Cellulose-2	RP	20227	
		naproamide	Lux Cellulose-1	RP	20246	
		naproamide	Lux Cellulose-3	NP	20467	



Functional Group Index

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class C: Amide and imide derivatives $RNHCOR$ 	Others	proglumide	Lux Cellulose-2	NP	20407
		proglumide	Lux Cellulose-4	RP	20187
		tropicamide	Lux Cellulose-2	NP	20122
		tropicamide	Lux Cellulose-2	RP	20241
		tropicamide	Lux Cellulose-4	NP	20160
Class D: N-heterocycle derivatives 	Dihydropyridine	Channel blocker drugs			
		amlodipine	Lux Cellulose-4	PO	20358
		felodipine	Lux Cellulose-3	RP	20307
		isradipine	Lux Amylose-2	NP	20089
		nicardipine	Lux Cellulose-1	NP	20075
		nisoldipine	Lux Cellulose-1	NP	20276
	Imidazole and triazole	Antifungal drugs			
		bifonazole	Lux Cellulose-2	NP	20506
		bifonazole	Lux Cellulose-3	RP	20333
		econazole	Lux Cellulose-3	NP	20110
		econazole	Lux Cellulose-3	PO	20368
		econazole	Lux Cellulose-3	RP	20325
		enilconazole	Lux Cellulose-2	PO	20068
		enilconazole	Lux Cellulose-4	NP	20427
		ketoconazole	Lux Cellulose-1	PO	20353
		miconazole	Lux Cellulose-3	NP	20129
		miconazole	Lux Cellulose-3	RP	20290
		ornidazole	Lux Amylose-2	NP	20530
		sulconazole	Lux Cellulose-2	NP	20126
		sulconazole	Lux Cellulose-3	RP	20298
		sulconazole	Lux Cellulose-4	PO	20375
		tetramisole	Lux Cellulose-2	NP	20127
		tetramisole	Lux Cellulose-2	PO	20284
		tetramisole	Lux Cellulose-2	RP	20238
		voriconazole	Lux Cellulose-2	PO	20356
		voriconazole	Lux Cellulose-4	NP	20421

Functional Group Index

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class D: N-heterocycle derivatives 	Benzimidazole	Antiulcer drugs			
		lansoprazole	Lux Cellulose-2	NP	20498
		lansoprazole	Lux Cellulose-4	RP	20182
		omeprazole	Lux Cellulose-1	NP	20564
		omeprazole	Lux Cellulose-4	RP	20186
		pantoprazole	Lux Cellulose-4	NP	20420
		rabeprazole	Lux Cellulose-4	RP	19716
	Atropine derivative	atropine	Lux Cellulose-2	NP	20123
		homatropine	Lux Cellulose-1	RP	20219
	Phenothiazine	ethopropazine	Lux Cellulose-3	PO	20362
		ethopropazine	Lux Cellulose-3	RP	20303
		promethazine	Lux Cellulose-3	RP	20306
		propiomazine	Lux Cellulose-3	PO	20556
	Morpholine	aprepitant	Lux Cellulose-4	PO	19638
		molindone	Lux Amylose-2	NP	20092
		molindone	Lux Cellulose-3	RP	20328
		reboxetine	Lux Cellulose-1	NP	20056
		reboxetine	Lux Cellulose-2	RP	20235
	Indole	Beta blocker drugs			
		bopindolol	Lux Cellulose-4	RP	20173
		carazolol	Lux Cellulose-2	NP	20117
		carvedilol	Lux Cellulose-4	NP	20422
		pindolol	Lux Cellulose-1	RP	20198
		pindolol	Lux Cellulose-2	NP	20125
		Anti-inflammatory drugs			
		carprofen	Lux Cellulose-1	RP	20278
		carprofen	Lux Cellulose-3	NP	20385
		etodolac	Lux Cellulose-1	NP	20440
		etodolac	Lux Cellulose-3	RP	20324

Functional Group Index

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class D: N-heterocycle derivatives 	Quinoline	laudanosine	Lux Cellulose-2	NP	20495
		laudanosine	Lux Cellulose-4	RP	20183
		methaqualone	Lux Amylose-2	NP	20516
		methaqualone	Lux Cellulose-3	PO	20555
		methaqualone	Lux Cellulose-3	RP	20311
		metofoline	Lux Cellulose-1	PO	20070
		metofoline	Lux Cellulose-2	NP	20064
		metofoline	Lux Cellulose-3	RP	20330
		nomifensine	Lux Cellulose-3	NP	20395
		nomifensine	Lux Cellulose-3	RP	20329
		praziquantel	Lux Cellulose-4	NP	20542
		praziquantel	Lux Cellulose-4	RP	20147
		primaquine	Lux Cellulose-1	NP	20404
Class E: Alcohol, ether and epoxide ROH and ROR 	Alcohols	1-phenyl-1-propanol	Lux Cellulose-1	RP	20133
		1-phenylethanol	Lux Cellulose-1	RP	20134
		3-methyl-2-phenyl-pentan-1-ol	Lux Cellulose-3	NP	20384
		benzoin	Lux Cellulose-1	RP	20207
		benzoin	Lux Cellulose-2	NP	20116
		bucetin	Lux Amylose-2	NP	20519
		bucetin	Lux Cellulose-1	RP	20137
		bucetin	Lux Cellulose-4	PO	20378
		methocarbamol	Lux Cellulose-2	NP	20260
		methocarbamol	Lux Cellulose-3	RP	20322
	Diols	mephesisin	Lux Cellulose-1	RP	20223
		mephesisin	Lux Cellulose-4	NP	20348
		nadolol	Lux Cellulose-1	PO	17424
	Chiral epoxides	trans-Stilbene oxide	Lux Amylose-2	NP	20532
		trans-Stilbene oxide	Lux Amylose-2	PO	20455
		trans-Stilbene oxide	Lux Cellulose-1	PO	20441
		trans-Stilbene oxide	Lux Cellulose-2	PO	20444
		trans-Stilbene oxide	Lux Cellulose-3	PO	20457
		trans-Stilbene oxide	Lux Cellulose-4	PO	20456

Functional Group Index

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class E: Alcohol, ether and epoxide ROH and ROR $\begin{array}{c} \text{OH} \\ \\ \text{R} \end{array} \quad \text{and} \quad \begin{array}{c} \text{O} \\ / \backslash \\ \text{R} \quad \text{R}' \end{array}$	Ether	4-Phenyl-1,3-dioxane	Lux Cellulose-1	RP	20135
		4-Phenyl-1,3-dioxane	Lux Cellulose-3	NP	20382
		4-Phenyl-1,3-dioxane	Lux Cellulose-3	PO	20363
		Anti-allergic drugs			
		carbinoxamine	Lux Amylose-2	NP	20452
		Antifungal drugs			
		ketoconazole	Lux Cellulose-1	PO	20353
		Beta blocker drugs			
		propanolol	Lux Cellulose-1	NP	20477
		propanolol	Lux Cellulose-3	RP	20308
Class F: Ketone and ester RCOR $\begin{array}{c} \text{O} \\ \\ \text{R} \quad \text{R}' \end{array} \quad \text{and} \quad \begin{array}{c} \text{O} \\ \\ \text{R} \quad \text{C} \quad \text{OR}' \end{array}$	Ketones	Anti-inflammatory drugs			
		ketoprofen	Lux Cellulose-3	NP	20099
		ketorolac	Lux Amylose-2	NP	20091
		ketorolac	Lux Cellulose-2	RP	20277
		ketorolac	Lux Cellulose-3	PO	20367
		suprofen	Lux Cellulose-3	NP	20098
		suprofen	Lux Cellulose-3	RP	20294
		Anti-allergic drugs			
		methadone	Lux Cellulose-2	NP	18456
		methadone	Lux Cellulose-4	NP	19698
	Amino ketone	ketamine	Lux Cellulose-3	NP	20112
		ketamine	Lux Cellulose-4	RP	20287
		norketamine	Lux Cellulose-3	NP	20131
		norketamine	Lux Cellulose-3	RP	20337
	Coumarin	Anticoagulant drugs			
		warfarin	Lux Amylose-2	NP	20508
		warfarin	Lux Cellulose-3	PO	20360
		warfarin	Lux Cellulose-3	RP	20295
	Benzopyranone	flavanone	Lux Cellulose-1	PO	20373
		naringenin	Lux Cellulose-4	NP	20162

Functional Group Index

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class F: Ketone and ester RCOR $\begin{array}{c} \text{O} \\ \parallel \\ \text{R}-\text{C}-\text{R}' \end{array}$ and $\begin{array}{c} \text{O} \\ \parallel \\ \text{R}-\text{C}-\text{OR}' \end{array}$	Ester	Beta blocker drugs			
		bopindolol	Lux Cellulose-4	RP	20173
		esmolol	Lux Cellulose-1	NP	20403
		Calcium channel blocker			
		amlodipine (see Dihydropyridine)	Lux Cellulose-4	PO	20358
		cyclopentolate	Lux Amylose-2	NP	20531
		etozolin	Lux Cellulose-2	NP	20504
		etozolin	Lux Cellulose-3	RP	20331
		homatropine	Lux Cellulose-1	RP	20219
		mebeverine	Lux Cellulose-1	NP	20482
	Amino ester	mebeverine	Lux Cellulose-2	RP	20222
		citalopram	Lux Cellulose-4	NP	20424
	Cyano	verapamil	Lux Cellulose-3	NP	20114
		Muscarinic Antagonists			
	Alkyne	oxybutyn	Lux Cellulose-3	RP	20289
		nicardipine	Lux Cellulose-1	NP	20075
	Nitro	ornidazole	Lux Amylose-2	NP	20530
	Sulfoxide	Antiulcer drugs			
		lansoprazole	Lux Cellulose-2	NP	20498
		lansoprazole	Lux Cellulose-4	RP	20182
		omeprazole	Lux Cellulose-1	NP	20564
		omeprazole	Lux Cellulose-4	RP	20186
		(for more see Benzimidazole)			
	Sulfone	Anti-Anxiety Agents			
		chlormezanone	Lux Cellulose-1	NP	20485
		chlormezanone	Lux Cellulose-3	PO	20371
		chlormezanone	Lux Cellulose-3	RP	20332
	Sulfonamide	althiazide	Lux Cellulose-1	RP	20136
		bendroflumethiazide	Lux Cellulose-2	NP	20490

Functional Group Index

Functionality	Subclass	Chiral Compounds	Lux Phase	Mode	App ID
Class G: Other		bendroflumethiazide	Lux Cellulose-3	RP	20073
		cyclothiazide	Lux Cellulose-1	NP	20560
		indapamide	Lux Cellulose-1	NP	20563
		indapamide	Lux Cellulose-1	RP	20221
		metolazone	Lux Cellulose-1	RP	20195
		metolazone	Lux Cellulose-3	PO	20369
		trichloromethiazide	Lux Cellulose-4	NP	20352
	Non-aromatic	cyclophosphamide hydrate	Lux Amylose-2	NP	20523
		cyclophosphamide hydrate	Lux Cellulose-3	RP	20321
		hexobarbital	Lux Amylose-2	NP	20095
	Chiral organic compounds with axial and planar chirality	hexobarbital	Lux Cellulose-2	RP	20218
		1,1-Dihydroxy-6,6-Dimethylbiphenyl	Lux Cellulose-3	RP	20302

Lux[®] Ordering Information

3 μ m Analytical Columns (mm)							SecurityGuard [™] Cartridges (mm)	
Phases	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*
							/10pk	/10pk
Cellulose-1	00B-4458-B0	00F-4458-B0	00B-4458-E0	00D-4458-E0	00F-4458-E0	00G-4458-E0	AJO-8402	AJO-8403
Cellulose-2	00B-4456-B0	00F-4456-B0	00B-4456-E0	00D-4456-E0	00F-4456-E0	00G-4456-E0	AJO-8398	AJO-8366
Cellulose-3	00B-4492-B0	00F-4492-B0	00B-4492-E0	00D-4492-E0	00F-4492-E0	00G-4492-E0	AJO-8621	AJO-8622
Cellulose-4	00B-4490-B0	00F-4490-B0	00B-4490-E0	00D-4490-E0	00F-4490-E0	00G-4490-E0	AJO-8626	AJO-8627
Amylose-2	00B-4471-B0	00F-4471-B0	00B-4471-E0	00D-4471-E0	00F-4471-E0	00G-4471-E0	AJO-8471	AJO-8470

for ID: 2.0–3.0 mm 3.2–8.0 mm

5 μ m Analytical Columns (mm)						SecurityGuard [™] Cartridges (mm)	
Phases	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*
						/10pk	/10pk
Cellulose-1	00B-4459-B0	00B-4459-E0	00D-4459-E0	00F-4459-E0	00G-4459-E0	AJO-8402	AJO-8403
Cellulose-2	00B-4457-B0	00B-4457-E0	00D-4457-E0	00F-4457-E0	00G-4457-E0	AJO-8398	AJO-8366
Cellulose-3	00B-4493-B0	00B-4493-E0	00D-4493-E0	00F-4493-E0	00G-4493-E0	AJO-8621	AJO-8622
Cellulose-4	00B-4491-B0	00B-4491-E0	00D-4491-E0	00F-4491-E0	00G-4491-E0	AJO-8626	AJO-8627
Amylose-2	00B-4472-B0	00B-4472-E0	00D-4472-E0	00F-4472-E0	00G-4472-E0	AJO-8471	AJO-8470

for ID: 2.0–3.0 mm 3.2–8.0 mm

* SecurityGuard Analytical Cartridges require holder, Part No. : KJO-4282

The polysaccharide-based CSPs are frequently used for preparative purifications because they are easily scaled-up from the analytical separations.³

RISK-FREE

If you order a Lux analytical column (≤ 4.6 mm ID) based on the three steps in this guide and do not receive the promised separation, return the column with comparative data within 45 days for a FULL REFUND.



3. Francotte, E. J. Chromatogr. A 2001, 906, 379-397.

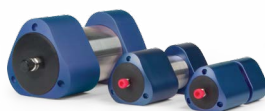
Lux[®] Ordering Information

5 µm Semi-Prep Columns (mm)			SecurityGuard [™] Cartridges (mm)
Phases	150 x 10.0	250 x 10.0	10 x 10.0 [†]
			/3pk
Cellulose-1 [†]	00F-4459-NO	00G-4459-NO	AJO-8404
Cellulose-2 [†]	00F-4457-NO	00G-4457-NO	AJO-8399
Cellulose-3	00F-4493-NO	00G-4493-NO	AJO-8623
Cellulose-4	00F-4491-NO	00G-4491-NO	AJO-8628
Amylose-2	00F-4472-NO	00G-4472-NO	AJO-8472

for ID: 9–16 mm

[†] Inquire for Lux 10 µm Cellulose-1 and Cellulose-2 columns

[‡] SemiPrep SecurityGuard Cartridges require holder, Part No.: AJO-7220



5 µm Axia [™] Packed Preparative Columns (mm)					SecurityGuard Cartridges (mm)	
Phases	150 x 21.2	250 x 21.2	250 x 30	250 x 50	15 x 21.2 ^{**}	15 x 30.0 [*]
					/ea	/ea
Cellulose-1 [†]	00F-4459-PO-AX	00G-4459-PO-AX	00G-4459-UO-AX	00G-4459-V0-AX	AJO-8405	AJO-8406
Cellulose-2 [†]	00F-4457-PO-AX	00G-4457-PO-AX	00G-4457-UO-AX	00G-4457-V0-AX	AJO-8400	AJO-8401
Cellulose-3	00F-4493-PO-AX	00G-4493-PO-AX	00G-4493-UO-AX	00G-4493-V0-AX	AJO-8624	AJO-8625
Cellulose-4	00F-4491-PO-AX	00G-4491-PO-AX	00G-4491-UO-AX	00G-4491-V0-AX	AJO-8629	AJO-8630
Amylose-2	00F-4472-PO-AX	00G-4472-PO-AX	00G-4472-UO-AX	00G-4472-V0-AX	AJO-8473	AJO-8474

for ID: 18–29 mm 30–49 mm

[†] Inquire for Lux 10 µm Cellulose-1 and Cellulose-2 columns

^{**} HPLC PREP SecurityGuard Cartridges require holder, Part No. : AJO-8223
SFC PREP SecurityGuard Cartridges require holder, Part No. : AJO-8617

^{*} HPLC PREP SecurityGuard Cartridges require holder, Part No. : AJO-8277
SFC PREP SecurityGuard Cartridges require holder, Part No. : AJO-8618

Bulk Media		
Phases	100 g	1 kg
10 µm		
Cellulose-1	04G-4501	04K-4501
Cellulose-2	04G-4502	04K-4502
20 µm		
Cellulose-1	04G-4473	04K-4473
Cellulose-2	04G-4464	04K-4464
Cellulose-3	04G-4504	04K-4504
Cellulose-4	04G-4503	04K-4503

Please inquire for 20 µm Lux Amylose-2 media



Terms and Conditions

Subject to Phenomenex Standard Terms and Conditions, which may be viewed at <http://www.phenomenex.com/TermsAndConditions>.

Trademarks

Lux is a registered trademark of Phenomenex. SecurityGuard and Axia are trademarks of Phenomenex.

Disclaimer

Axia is patented by Phenomenex. U.S. Patent No. 7,674,383

SecurityGuard is patented by Phenomenex. U.S. Patent No. 6,162,362

CAUTION: this patent only applies to the analytical-sized guard cartridge holder, and does not apply to SemiPrep, PREP or ULTRA holders, or to any cartridges.

The opinions stated herein are solely those of the speaker and not necessarily those of any company or organization.

© 2013 Phenomenex, Inc. All rights reserved.

Chiral Column Selection Guide

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: 02 503 4015 (French)
t: 02 511 8666 (Dutch)
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: +45 4810 6265
nordicinfo@phenomenex.com

Finland

t: 09 4789 0063
f: +45 4810 6265
nordicinfo@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

India

t: 040-3012 2400
f: 040-3012 2411
indiainfo@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

Mexico

t: 001-800-844-5226
f: 001-310-328-7768
tecnicomx@phenomenex.com

The Netherlands

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

New Zealand

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

Norway

t: 810 02 005
f: +45 4810 6265
nordicinfo@phenomenex.com

Puerto Rico

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

Sweden

t: 08 611 6950
f: +45 4810 6265
nordicinfo@phenomenex.com

United Kingdom

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

United States

t: (310) 212-0555
f: (310) 328-7768
info@phenomenex.com

All other countries: Corporate Office USA



t: (310) 212-0555
f: (310) 328-7768
info@phenomenex.com



www.phenomenex.com

Phenomenex products are available worldwide.
For the distributor in your country, contact
Phenomenex USA, International Department
at international@phenomenex.com