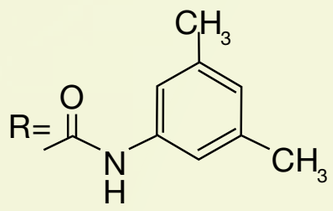
Simplified Chiral HPLC/SFC Column Screening Strategies

LUX® SIMPLIFIED CHIRAL SEPARATIONS

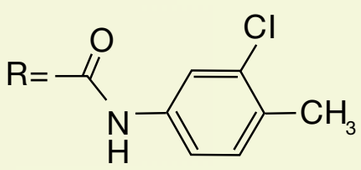
Lux® Cellulose-1
cellulose tris(3,5-dimethylphenylcarbamate)



Cellulose-O-R

Same chiral selector as CHIRALCEL® OD-H®

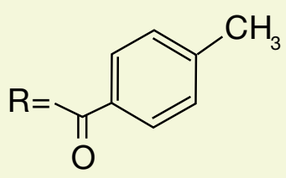
Lux® Cellulose-2
cellulose tris(3-chloro-4-methylphenylcarbamate)



Cellulose-O-R

Same chiral selector as CHIRALCEL® OZ-H®

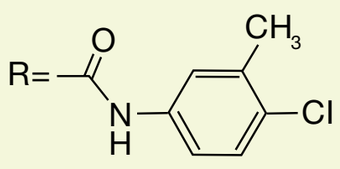
Lux® Cellulose-3
cellulose tris(4-methylbenzoate)



Cellulose-O-R

Same chiral selector as CHIRALCEL® OJ-H®

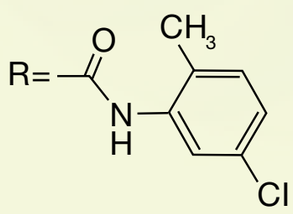
Lux® Cellulose-4
cellulose tris(4-chloro-3-methylphenylcarbamate)



Cellulose-O-R

Same chiral selector as CHIRALCEL® OX-H®

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



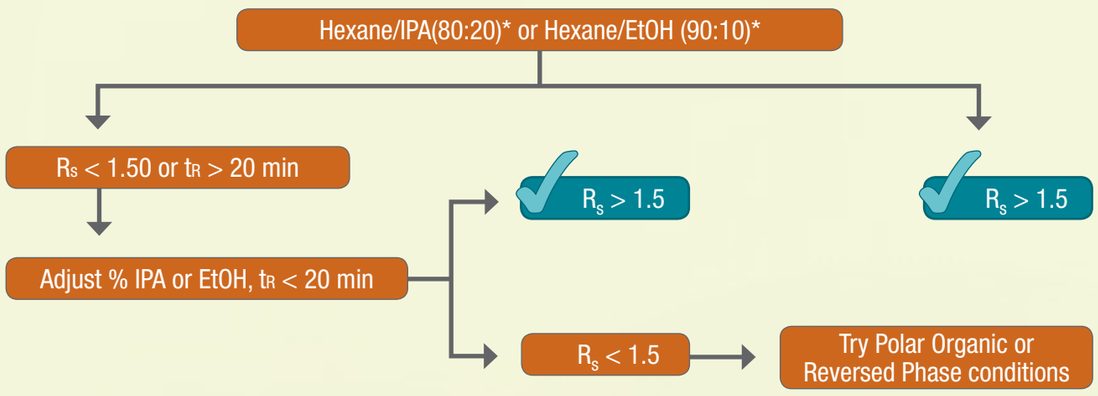
Amylose-O-R

Same chiral selector as CHIRALCEL® AY-H®

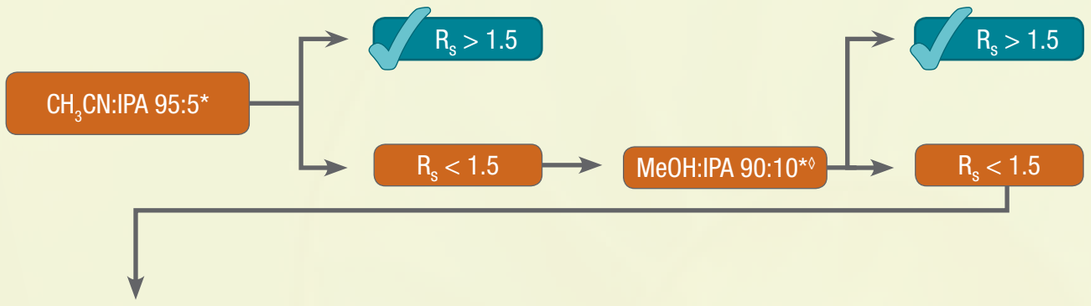
HPLC Screen

Tip We suggest screening all five Lux phases to identify the optimal chiral separation.

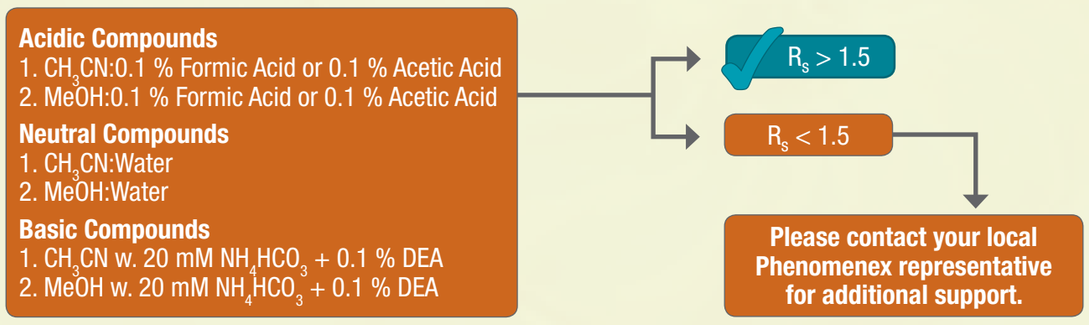
Normal Phase (NP)



Polar Organic (PO)



Reversed Phase (RP)

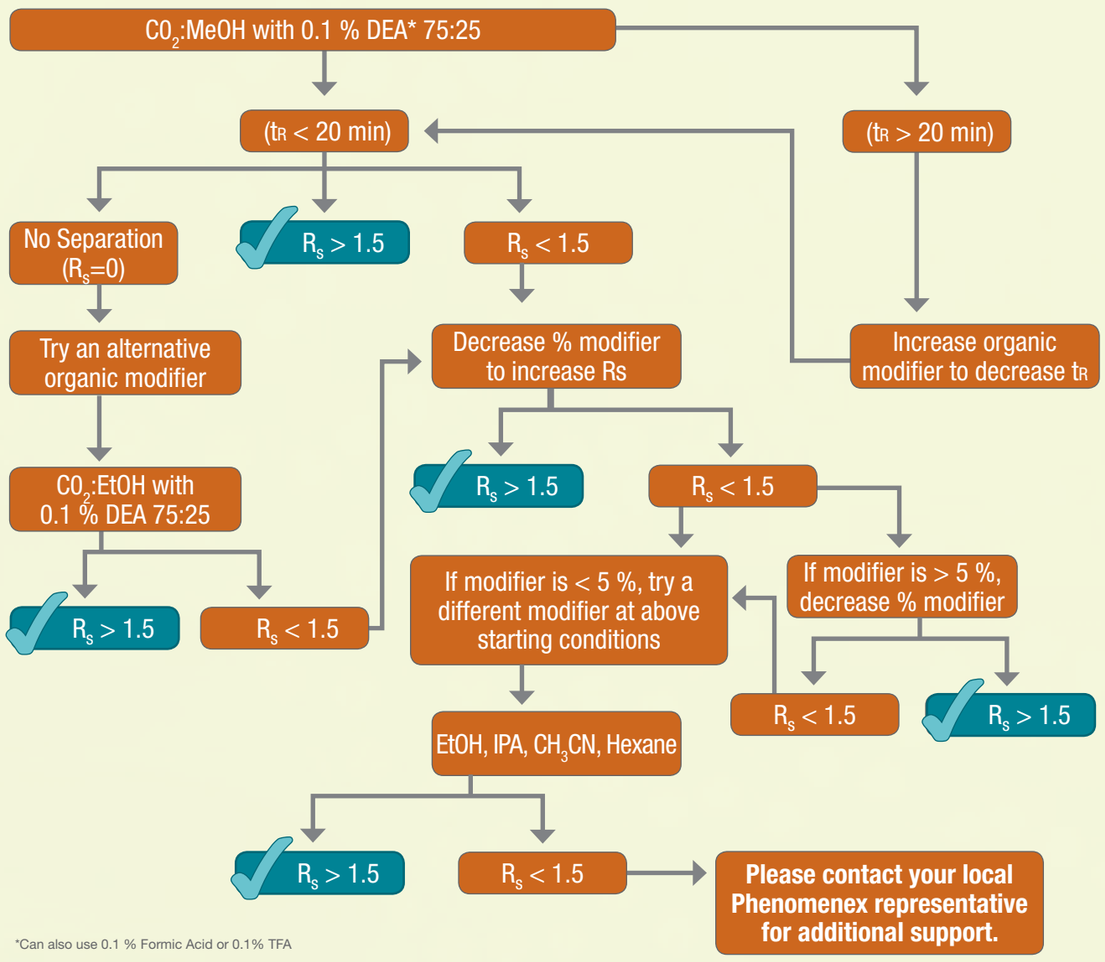


Notes: This screening strategy can be started at any step depending on the properties of the racemates.
A common dimension used in chiral screening is 250 x 4.6 mm. For faster screening, use shorter columns.
* Use 0.1 % DEA with basic and neutral compounds and 0.1 % HCOOH with acidic and neutral compounds
◊ Changing % IPA in methanol can be occasionally beneficial

Key: IPA: Isopropanol; **DEA:** Diethylamine; **MeOH:** Methanol; **CH_3CN:** Acetonitrile; **EtOH:** Ethanol; **CH_3COONH_4:** Ammonium acetate; **HCOOH:** Formic acid; **NH_4HCO_3:** Ammonium bicarbonate; **CO_2:** Carbon Dioxide

SFC Screen

Tip We suggest screening all five Lux phases to identify the optimal chiral separation.

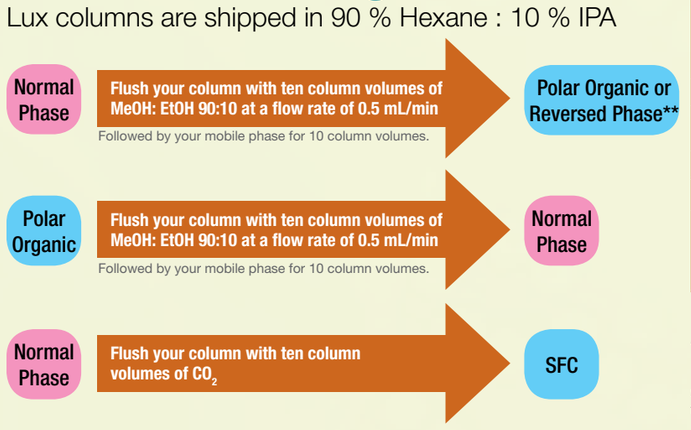


*Can also use 0.1 % Formic Acid or 0.1% TFA

Solvent Considerations

Solvent Switching

Lux columns are shipped in 90 % Hexane : 10 % IPA



COMPATIBLE	
Polar Organic	• Methanol • Acetonitrile • IPA • Mixtures of above
Normal Phase	• Alkane/alcohol mixtures
Reversed Phase	• Aqueous methanol/acetonitrile • Buffer and methanol/acetonitrile mixtures
SFC	• Supercritical CO_2

AVOID	
• Tetrahydrofuran • Acetone • Chlorinated hydrocarbons • Ethylacetate	• Dimethylsulfoxide • Dimethylformamide • N-methylformamide • Pyridine

**Once column is in reversed phase mode, it is not recommended to solvent switch.

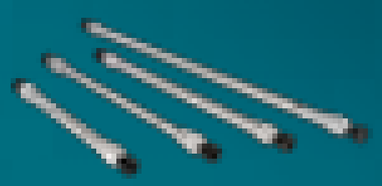
See column care use notes at www.phenomenex.com/lux for more information.

Why Choose Lux Chiral Columns?

- Stable in normal phase, polar organic, SFC, and reversed phase conditions
- 3 µm and 5 µm packed columns, as well as, 10 µm and 20 µm bulk media for scale up
- Pressure stable up to 300 bar
- High efficiency and loading capacity

guarantee

If Lux analytical columns (≤ 4.6 mm ID) do not provide at least an equivalent or better separation as compared to a competing column of the same particle size, similar phase and dimensions, return the column with comparative data within 45 days for a FULL REFUND.



WEB: **www.phenomenex.com/lux**

FREE Chiral Screening!

For more information or to begin a project today, please contact your local Phenomenex representative.

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www.phenomenex.com/phenologix

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phenologix@phenomenex.com

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