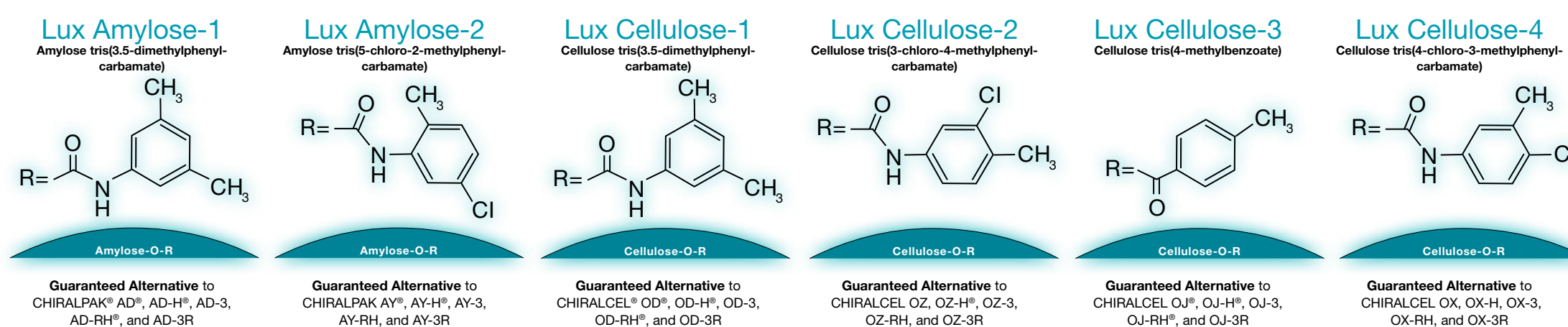


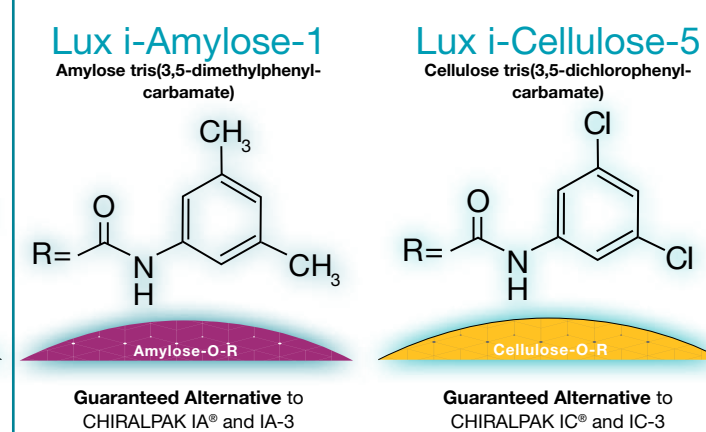
# Simplified Chiral HPLC/SFC Column Screening Strategies



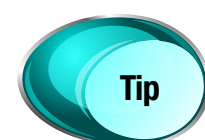
## Coated



## Immobilized

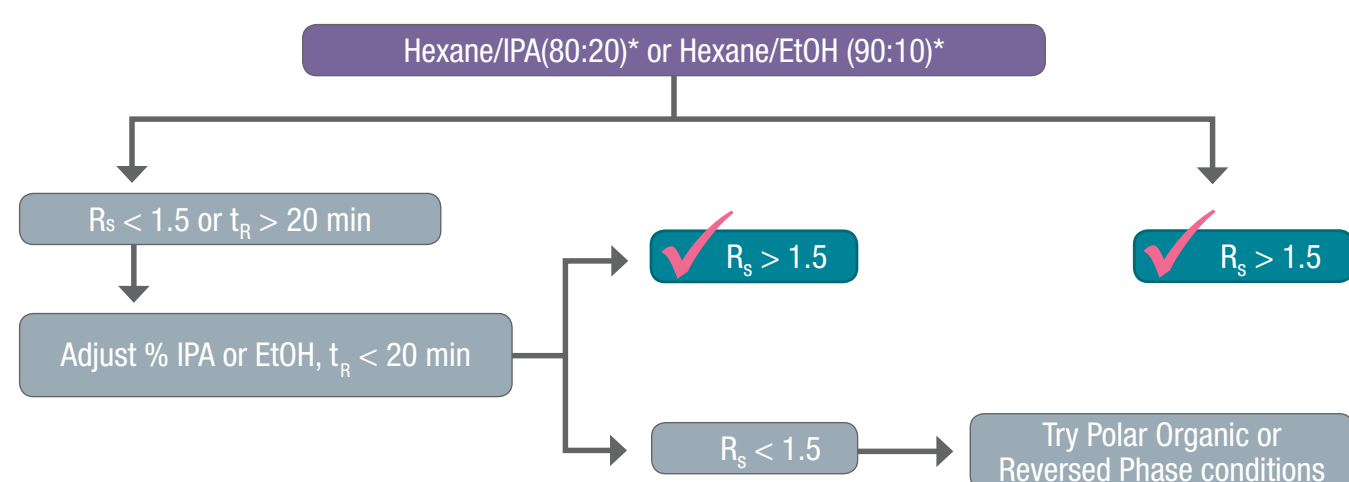


## HPLC SCREEN

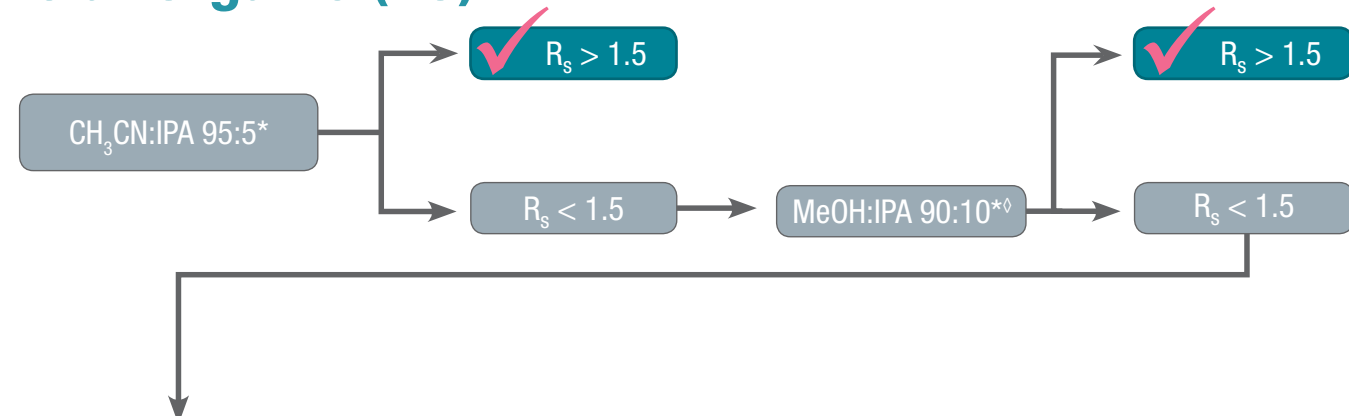


We suggest screening all seven Lux phases to identify the optimal chiral separation.

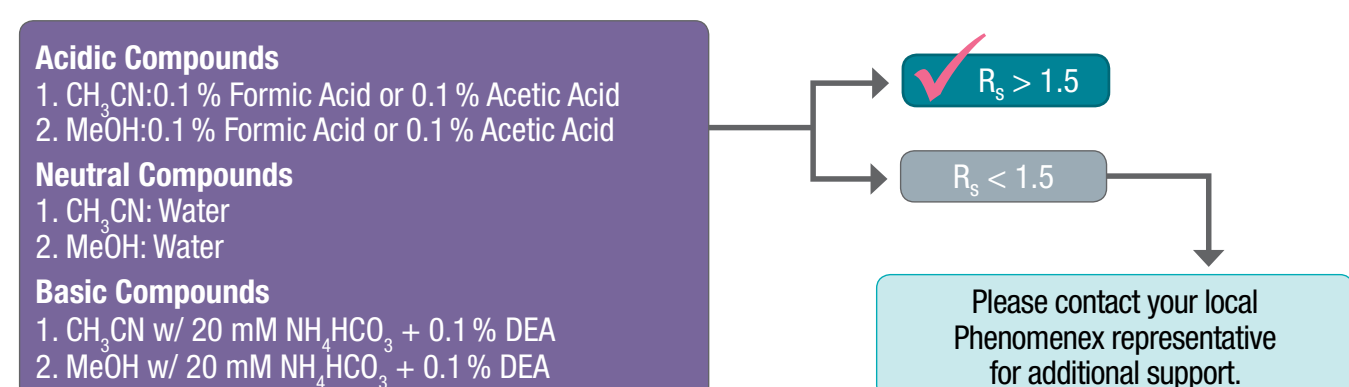
### Normal Phase (NP)



### 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

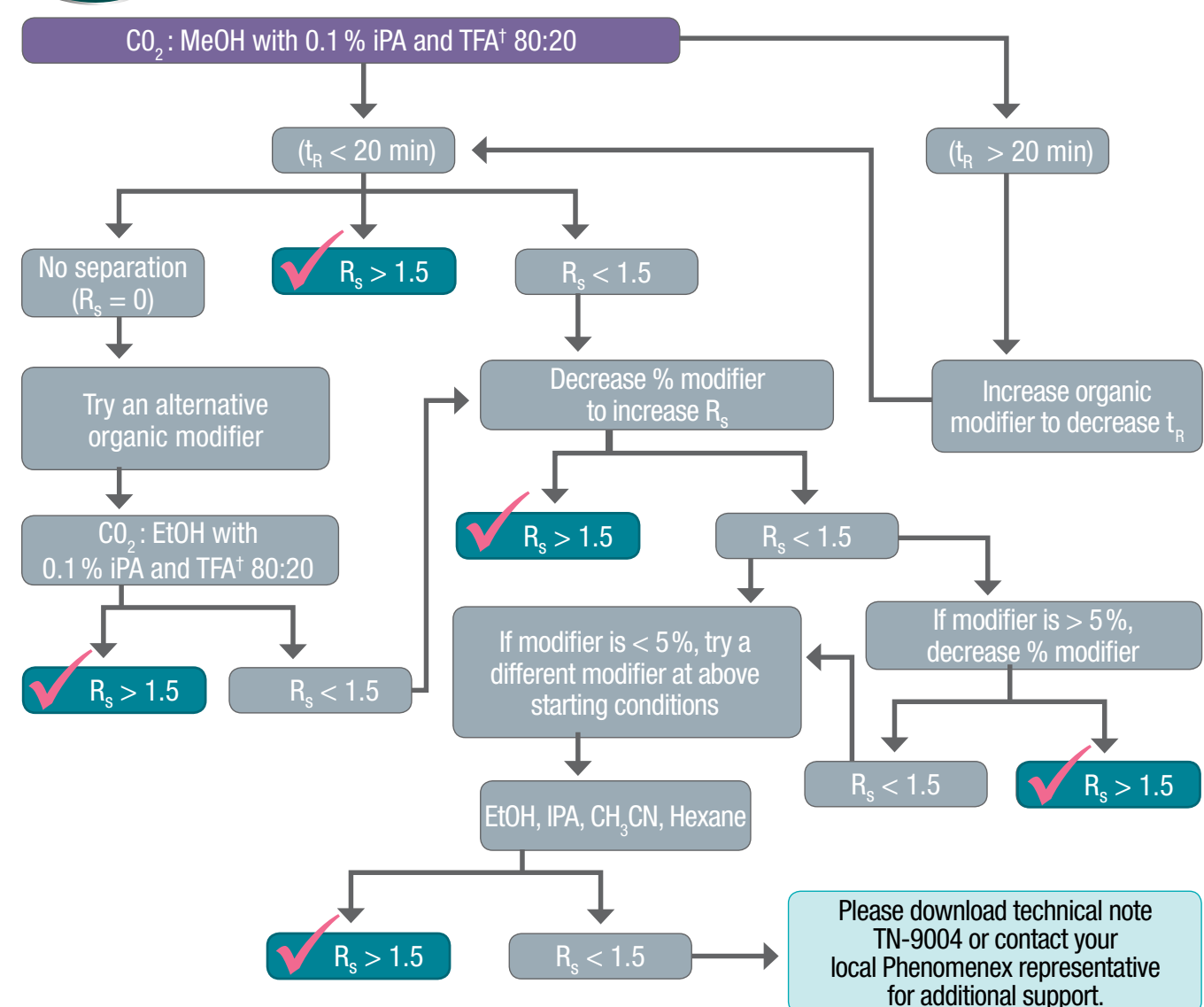
† Changing % IPA in methanol can be occasionally beneficial

Key: IPA: Isopropanol; IPA: Isopropylamine; DEA: Diethylamine; MeOH: Methanol; CH<sub>3</sub>CN: Acetonitrile; EtOH: Ethanol; CH<sub>3</sub>COONH<sub>4</sub>: Ammonium acetate; HCOOH: Formic acid; NH<sub>4</sub>HCO<sub>3</sub>: Ammonium bicarbonate; CO<sub>2</sub>: Carbon Dioxide

## SFC SCREEN



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



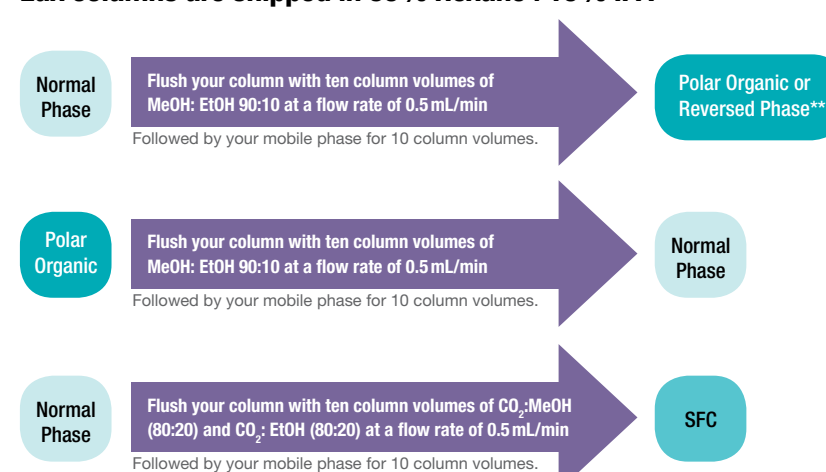
\*Can also use 0.1 % Formic Acid, 0.1 % NH<sub>4</sub>OH, or 0.1 % TFA

Please download technical note TN-9004 or contact your local Phenomenex representative for additional support.

## SOLVENT CONSIDERATIONS

### Solvent Switching

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



COMPATIBLE	
Polar Organic	<ul style="list-style-type: none"> <li>Methanol</li> <li>Acetonitrile</li> <li>IPA</li> <li>Mixtures of above</li> </ul>
Normal Phase	<ul style="list-style-type: none"> <li>Alkane/alcohol mixtures</li> </ul>
Reversed Phase	<ul style="list-style-type: none"> <li>Aqueous methanol/acetonitrile</li> <li>Buffer and methanol/acetonitrile mixtures</li> </ul>
SFC	<ul style="list-style-type: none"> <li>Supercritical CO<sub>2</sub></li> </ul>
AVOID	
Normal Phase	<ul style="list-style-type: none"> <li>Tetrahydrofuran</li> <li>Acetone</li> <li>Chlorinated hydrocarbons</li> <li>Ethylacetate</li> </ul>
	<ul style="list-style-type: none"> <li>Dimethylsulfoxide</li> <li>Dimethylformamide</li> <li>N-methylformamide</li> <li>Pyridine</li> </ul>

The immobilized portion of the Lux i-Cellulose-5 and i-Amylose-1 greatly increases column robustness by tolerating strong organic solvents such as DMSO, DCM, Ethyl Acetate, MIBK, and THF to be injected onto the column.

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

See column care and use notes at [www.phenomenex.com/lux](http://www.phenomenex.com/lux) for more information.

## why choose LUX chiral columns?

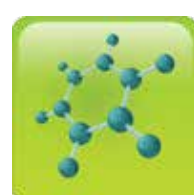
- Stable in normal phase, polar organic, SFC, and reversed phase conditions
- 3 µm and 5 µm packed columns, as well as, 10 µm and 20 µm bulk media for scale up
- Pressure stable up to 300 bar
- High efficiency and loading capacity



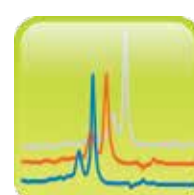
### Need a chiral method now?

Easily search by analyte name or compound structure here:

[www.phenomenex.com/Lux](http://www.phenomenex.com/Lux)



Structure Search



Analyte Name Search



## FREE CHIRAL SCREENING

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

You can also visit us online:

[www.phenomenex.com/phenologix](http://www.phenomenex.com/phenologix)

or email us at:

[phenologix@phenomenex.com](mailto:phenologix@phenomenex.com)

Trademarks  
Lux is a registered trademark of Phenomenex. DAICEL, CHIRALCEL, CHIRALPAK, AD, AD-H, AD-RH, AY, AY-H, IA, IC, OD, OD-H, OD-RH, OJ, OJ-H, OJ-RH, and OZ-RH are registered trademarks of DAICEL Corporation. All such trademarks are used by Chiral Technologies under license from DAICEL Corporation. Chiral Technologies, Inc. is a subsidiary of DAICEL Chemical Industries, LTD.

Disclaimer  
Phenomenex is in no way affiliated with DAICEL Corporation.

© 2017 Phenomenex, Inc. All rights reserved.

**phenoLogix**  
Your Method. Our Scientists.

**phenomenex**  
...breaking with tradition<sup>SM</sup>