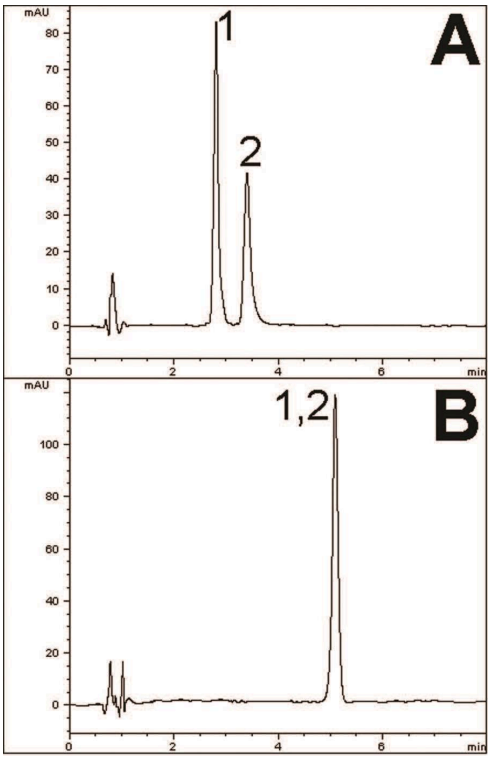
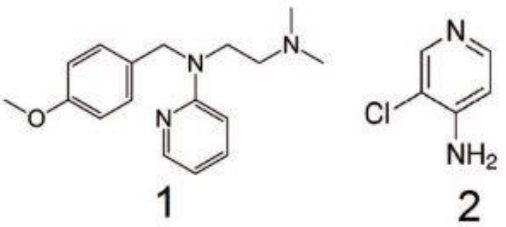
Pyrilamine and 4-Amino-3-Chloropyridine Analysis with HPLC - AppNote

Unique Selectivity on a Cogent Amide Stationary Phase

The Cogent Amide column offers unique selectivity that may not be readily attainable with other phases. Two test solutes shown in this application note *(Pyrilamine and 4-Amino-3-Chloropyridine)* were baseline separated on the Cogent Amide column *(Figure A)* , but they co-eluted with no resolution on a different Cogent column using otherwise equivalent method conditions *(Cogent Diamond Hydride™, Figure B)* . The presence of the Amide ligand provides additional selectivity that can make a significant difference in resolving closely- eluting compounds such as these.





Peaks: 1. Pyrilamine, 2. 4-Amino-3-Chloropyridine

Method Conditions

Column: Cogent Amide™, 4 µm, 100 Å

Catalog No.: 40036-05P
Dimensions: 4.6 x 50 mm

Mobile Phase:

- A: 90% DI Water / 10% Acetonitrile / 0.1% Formic Acid (v/v)
- B: B: Acetonitrile / 0.1% Formic Acid (v/v)

Gradient:

Time *(Minutes)*	%B
0	90
1	90
7	50
8	90

Post Time: 3 minutes
Flow rate: 1.0 mL / minute
Detection: UV 244 nm
Injection vol.: 2 µL

Sample Preparation: 100 mg / L Pyrilamine and 4-Amino-3-Chloropyridine reference standards in diluent of 50/50 solvent A/solvent B. Peak identities confirmed with individual standards.

Note: *Amine-containing compounds such as Pyrilamine and 4-Amino-3-Chloropyridine can be difficult to analyze using conventional silica- based stationary phases. These columns have residual silanol groups on the surface that can interact electrostatically with Amines, causing peak tailing. Chromatographers use a number of strategies to avoid these issues, such as use of ion pair agents or endcapping. However, Cogent TYPE-C Silica phases are virtually free of silanols, and therefore good peak shapes can be obtained without these workaround method strategies.*

COGENT HPLC Columns™

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