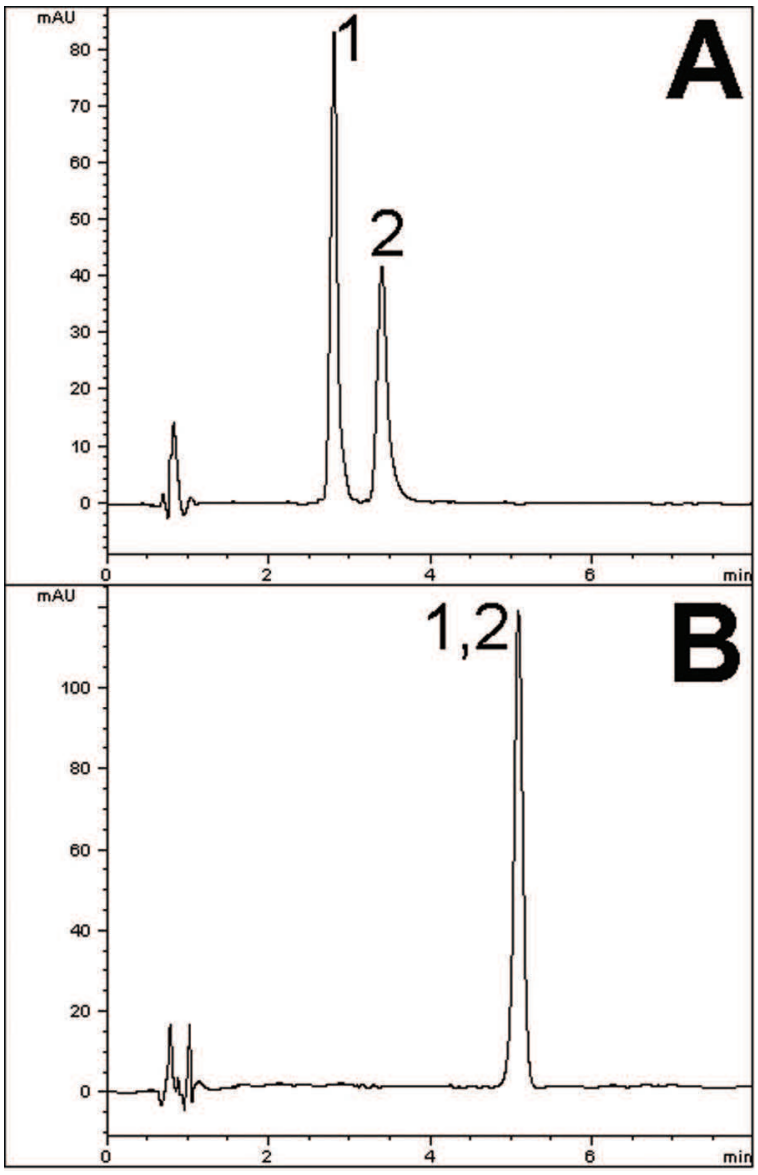
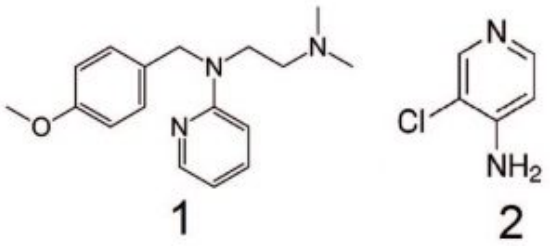
Pyrilamine & 4-Amino-3-Chloropyridine analysis with HPLC – AppNote

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™, 4µm, 100Å

Catalog No.: 40036-05P

Dimensions: 4.6 x 50mm

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.: 2µL

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.*

Attachment

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