

Aqueous Normal Phase:

Achieve Normal Phase Separation
with Reverse Phase Solvents



Q. Why is ANP better than HILIC?

A. HILIC will require more time to equilibrate, more salt to retain compounds, lacks RT precision and lifetime of the columns is short.

With ANP equilibration is extremely fast, RT precision is extraordinarily good and columns last up to 10x longer. Also ANP can retain some non-polar compounds.

For Normal or Reverse Phase starting points contact: customers@mtc-usa.com

MANUFACTURED BY:

MICROSOLV TECHNOLOGY CORPORATION

9158 Industrial Blvd NE
Leland, NC 28451
www.mtc-usa.com

p: 1.732.380.8900
f: 1.910.769.9435
e: customers@mtc-usa.com

COGENT™



SINCE
2003

Quick Method Development Strategy for Cogent TYPE-C™

Silica Hydride Based,
Bonded Stationary
Phases

MANUFACTURED BY:

MICROSOLV TECHNOLOGY CORPORATION

Quick Method Development Strategy for Cogent TYPE-C™

Silica Hydride Based, Bonded Stationary Phases

Using Aqueous Normal Phase (ANP)*

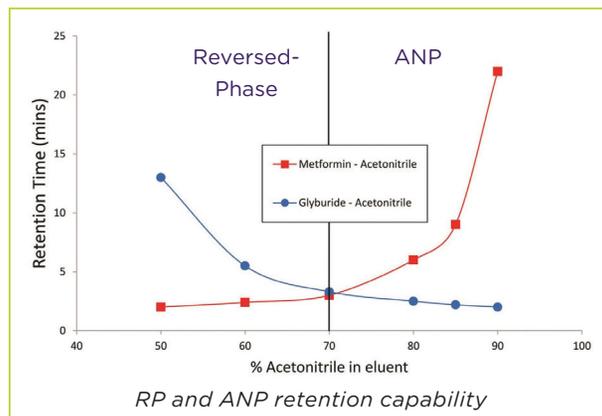
*These columns can be used for reverse (RP) or normal phase (ONP) mode as well as ANP. Use typical method development strategy when using these columns in RP or ONP modes.

INTRODUCTION

Cogent TYPE-C™ Silica Hydride Based, Bonded Stationary Phases

Cogent TYPE-C Silica based, stationary phases have the ability to retain polar solutes at high concentrations of the organic component while maintaining an aqueous component in the mobile phase. All of the Cogent TYPE-C phases possess this capability. The exact composition of the mobile phase where aqueous normal phase (ANP) retention begins depends on the solute as well as the stationary phase selected.

Because of the attached organic group that is part of the stationary phase, the TYPE-C columns can also retain nonpolar compounds based on the typical reversed phase mechanisms. The diagram below illustrates how this dual retention capability works for both polar (metformin) and nonpolar (glyburide) compounds:



QUICK START INSTRUCTIONS

A generic strategy for using the ANP method is relatively simple:

Step 1: Mobile Phase Selection. After you have properly installed the column and conditioned it according to our suggestions, it is a good idea to start with a typical ANP gradient run. We suggest starting with an acidified mobile phase of water and acetonitrile. Acidify the mobile phase with up to 0.5% of an acid such as formic or acetic acid. If you are not using LCMS, TFA is another good candidate.

Step 2: Equilibrate. Equilibrate the column by running 100% acetonitrile for approximately 2 minutes.

Step 3: ANP Gradient. Set up your instrument to run a shallow gradient to run from 90% acetonitrile to 40% acetonitrile over 20 minutes for a 75mm long column. For longer columns, increase the gradient time proportionally. For sharper peaks and less retention, run a shorter (steeper) gradient from the same starting points to end points.

Step 4: Evaluate Data. Evaluate the gradient run for retention time, peak shape and elution order.

Step 5: If this strategy does not work, please consult our customer service department for additional assistance. customers@mtc-usa.com

For more information visit www.Cogent-HPLC.com

MANUFACTURED BY:

MICROSOLV TECHNOLOGY CORPORATION