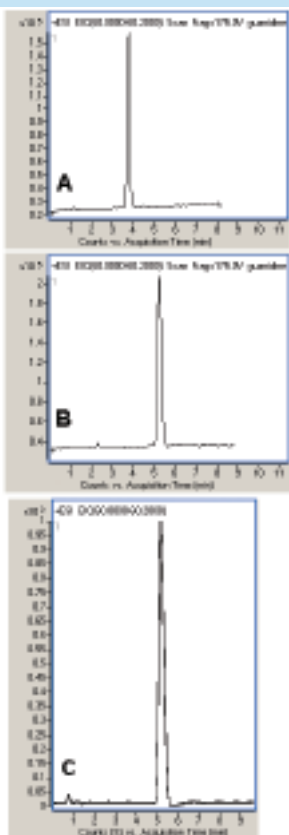


Guanidine by Aqueous Normal Phase

Very High Signal To Noise Ratio for Reproducible Results



Notes:

Note1: The chromatogram shown as Figure C represents 10 injections (overlaid on each other) performed over several weeks. Between the runs, this column was used in other methods to analyze urine samples, oil samples, saliva samples and plant extract samples. No change in retention time was observed. This shows how robust the Diamond Hydride is.

Note 2: The high concentration of acetonitrile in the mobile phase assured good signal to noise in the MS chromatogram even when an extremely diluted sample was analyzed. A lower limit of quantitation (LLOQ) of 10 ng/mL is about 100 times lower than for UV detection.

Method Conditions

Column: Cogent Diamond Hydride™ 4µm, 100Å.
Catalog No.: 70000-15P-2
Dimensions: 2.1 x150 mm
Solvents: A: DI water + 0.1% formic acid
 B: acetonitrile + 0.1% formic acid
Mobile phase: Isocratic Runs:
 Figure A: 75%B
 Figure B: 80%B
 Figure C: 80%B,
 overlaid 10 injections done on different days %RSD = 0.1
Flow rate: 0.4 mL/min.
Peaks: **Figure A and B:** Guanidine 60 m/z (M+H)⁺
 RT = 3.776 min at 75%B and RT = 5.159 min at 80%B
 100 ng/mL prepared in 50%A/50%B
Figure C: Guanidine 60 m/z (M+H)⁺
 (10 injections) RT = 5.159 min at 80%B
 10 ng/mL prepared in 50%A/50%B
Detection: ESI – pos - Agilent 6210 MSD TOF mass spectrometer.

Discussion

Guanidine is a highly polar compound that can be analyzed routinely using a Cogent Diamond Hydride™ HPLC column. This simple isocratic Aqueous Normal Phase (ANP) mobile phase is compatible with LC-MS and can also be used with a UV detector. Chromatograms shown in Figures A and B illustrate the principles of ANP chromatography: retention of polar compound increases when the concentration of acetonitrile (non polar component of the mobile phase) increases.

For more information visit www.MTC-USA.com

Cat. No.	Description
70000-15P-2	Cogent Diamond Hydride™ HPLC Column, 100Å, 4µm, 2.1 x 150mm