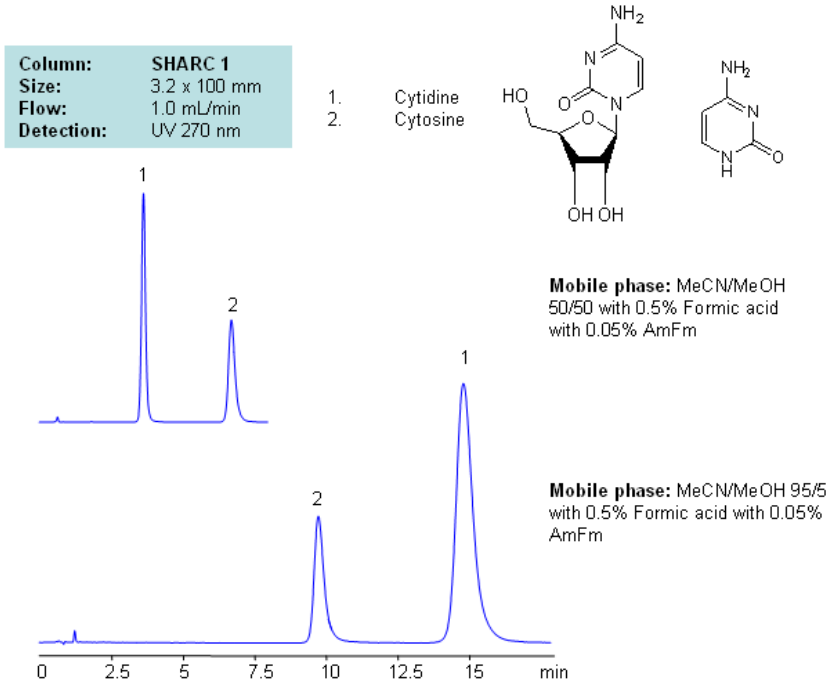
HPLC Separation of Cytidine and Cytosine Using the Hydrogen Bonding Method



Application Notes: Nucleosides glycosylamines consisting of nucleobase linked to ribose or deoxyribose sugar. Nucleoside are building blocks for DNA and RNA. These compounds are very polar in nature and contain groups available for hydrogen bonding interaction. A method for separation of cytosine and cytidine was developed based on the strong dependence of retention time to the mobile phase composition. The mobile phase consists of acetonitrile and methanol. Order of elution for compounds depends on the amount of acetonitrile and methanol. Our method is compatible with LC/MS and preparative chromatography, and can be used for separation of other nucleobases and nucleotides.

Application Columns: SHARC1, 3.2×100 mm, 5 µm, 100 Å. To learn more about SHARC1columns click here . To order this column click here . To see more chromatographic separations check our web site.

Application Compounds: Cytosine and Cytidine

Detection Technique: UV, LC/MS

The SHARC™ family of innovative columns represents the first commercially available columns primarily utilizing separation based on hydrogen bonding. SHARC stands for Specific Hydrogen-bond Adsorption Resolution Column . Hydrogen bonding involves an interaction or attraction between a bound hydrogen atom and molecules containing electronegative atoms, such as oxygen, nitrogen, and fluorine.

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Method Parameters

Column	Sharc 1, 3.2×100 mm, 5 µm, 100 Å
Mobile Phase	MeCN/MeOH
Buffer	AmFm, Formic acid
Flow Rate	1.0 mL/min
Detection	UV, 270 nm

Quelle: https://sielc.com/Separation_of_Cytidine_and_Cytosine_Using_the_Hydrogen_Bonding_Method