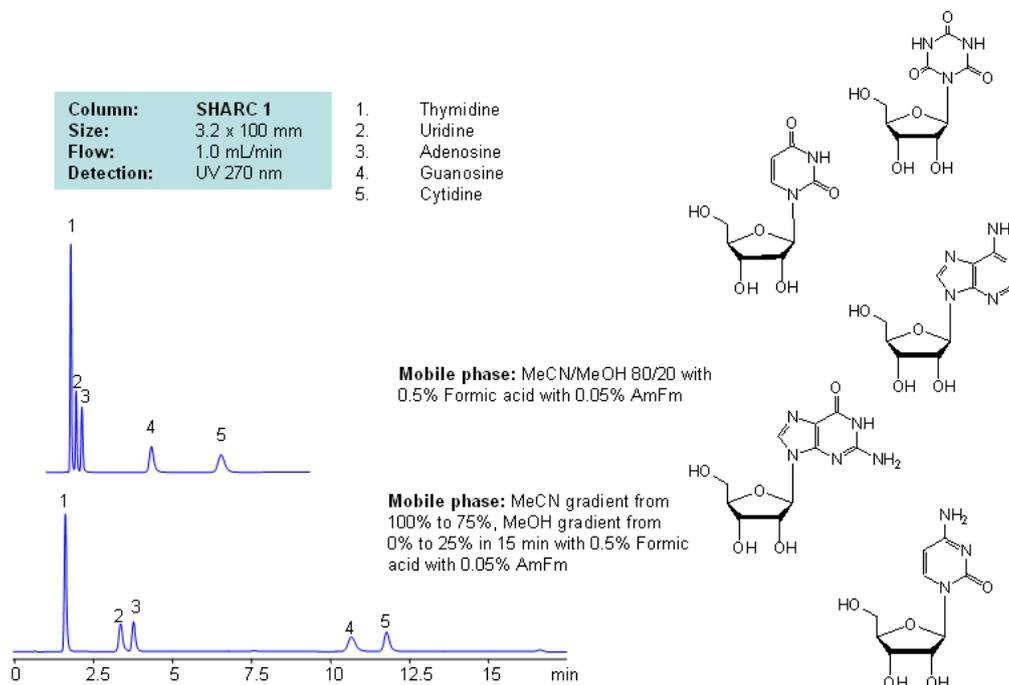


## HPLC Separation of Thymidine, Uridine, Adenosine, Guanosine, and Cytidine Using the Hydrogen Bonding Method



**Application Notes:** Nucleosides are glycosylamines consisting of nucleobase linked to ribose or deoxyribose sugar and are building blocks for DNA and RNA. These compounds are very polar and contain groups available for hydrogen bonding interaction. Thymidine, uridine, adenosine, guanosine and cytidine were separated using a hydrogen-bonding method. There is a strong correlation between the retention time and mobile phase composition. The strength of hydrogen-bonding interaction increases as the number of hydroxyls in the analytes increase. Additionally the order of elution for compounds depends on the ratio of the mobile phases: acetonitrile and methanol. Our method is compatible with LC/MS and preparative chromatography.

**Application Columns:** SHARC1, 3.2x100 mm, 5 µm, 100 Å, To learn more about SHARC1 columns click [here](#) . To order this column click [here](#) . To see more chromatographic separations check our web site.

**Application Compounds:** Thymidine, uridine, adenosine, guanosine and cytidine

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.

## Method Parameters

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

Quelle: [https://sielc.com/Separation\\_of\\_Thymidine\\_Uridine\\_Adenosine\\_Guanosine\\_and\\_Cytidine\\_Using\\_the\\_Hydrogen\\_Bonding\\_Method](https://sielc.com/Separation_of_Thymidine_Uridine_Adenosine_Guanosine_and_Cytidine_Using_the_Hydrogen_Bonding_Method)