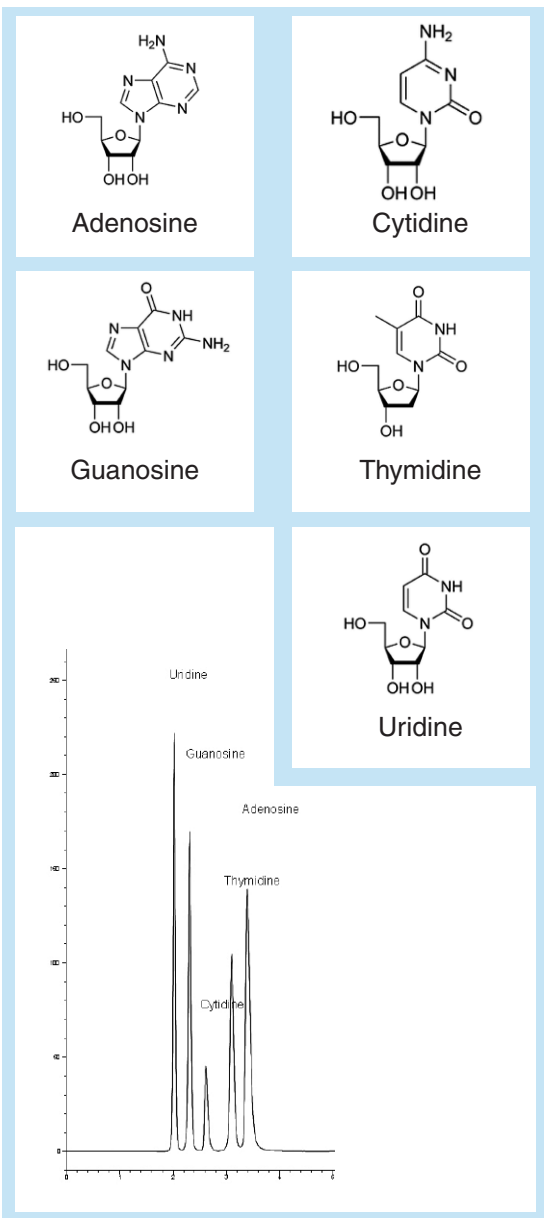


## Separation of Nucleobases by HPLC

Easy, Efficient and Precise



### Method Conditions

<b>Column:</b>	Cogent Diamond Hydride™ 4µm, 100Å.
<b>Catalog No.:</b>	70000-7.5P
<b>Dimensions:</b>	4.6 x 75 mm
<b>Mobile phase:</b>	DI Water + 0.1% Acetic Acid
<b>Temperature:</b>	30° C
<b>Flow rate:</b>	1.0 mL/min.
<b>Injection Volume:</b>	5ul
<b>Detection:</b>	UV: 254nm

### Discussion

This is an easy to use isocratic method for the separation of nucleosides as shown. The major advantage of this method is that even under 100% aqueous conditions, with good selectivity, there is no loss of retention with repeated runs as experienced with C18 columns. Highly efficient, these columns can be used in reverse phase as shown or in aqueous normal phase using high organic (ACN) composition with water.

For more information visit [www.MTC-USA.com](http://www.MTC-USA.com)

#### Notes:

Nucleosides are glycosylamines consisting of a nucleobase (often referred to simply as base) bound to a ribose or deoxyribose sugar. Examples of these include cytidine, uridine, adenosine, guanosine, thymidine and inosine.

Nucleosides can be phosphorylated by specific kinases in the cell on the sugar's primary alcohol group (-CH<sub>2</sub>-OH), producing nucleotides, which are the molecular building blocks of DNA and RNA.

Nucleosides can be produced by de novo synthesis pathways, particularly in the liver; but they are more abundantly supplied via ingestion and digestion of nucleic acids in the diet, whereby nucleotidases break down nucleotides (such as the thymine nucleotide) into nucleosides (such as thymidine) and phosphate. The nucleosides, in turn, are subsequently broken down:

- in the lumen of the digestive system by nucleosidases into nucleobases and ribose deoxyribose)
- inside the cell by nucleoside phosphorylases into nitrogenous bases, and ribose-1-phosphate or deoxyribose-1-phosphate.

Cat. No.	Description
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70000-7.5P	Cogent Diamond Hydride™ HPLC Column, 100Å, 4µm, 4.6 x 75mm
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