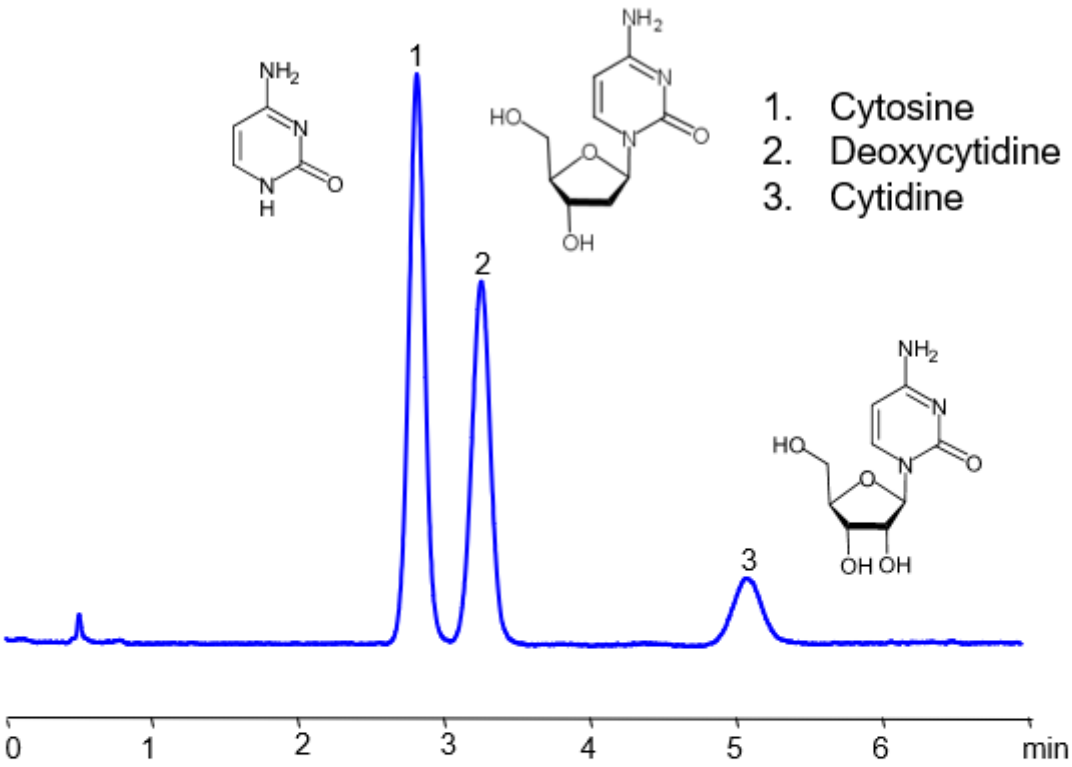
HPLC Method for Separation of Cytosine, Deoxycytidine and Cytidine on BIST B+ Column

https://sielc.com/hplc-method-of-cytosine-deoxycytidine-cytidine

Chromatogram



Column:	BIST B+
Column size:	4.6 × 50 mm, 5 µm
Column part number:	TBP-46.50.0510
Mobile phase:	MeCN – 85%
Buffer:	H_2SO_4 - 0.2%
Flow rate:	1.0 mL/min
Detection:	UV 260 nm

Description

· HPLC Method for Separation of Cytosine , Deoxycytidine , Cytidine on BIST B+ by SIELC Technologies .

Cytosine , also noted as C and Cyt , has the chemical formula C 4 H 5 N 3 O . In DNA, it pairs with Guanine to create a base pair. In RNA, it is synonymous with Uracil, being an interchangeable third base. Not only that, due to it's instability, it can change into Uracil through spontaneous deamination.

Deoxycytidine is a deoxyribonucleoside with the chemical formula C 9 H 13 N 3 O 4 . It is a precursor for 5-aza-2′-cytidine, which is a treatment for myelodysplastic syndrome. It works through interfering with the methylation of the P15/INK4B gene. It can also

be used as a biomarker for tumor diagnosis.

Cytidine , also noted as C or Cyd , is a nucleoside molecule with the chemical formula C 9 H 13 N 3 O 5 . It is primarily found in foods with high RNA contents, such as organ meets, brewer's yeast, and beer. During digestion, Cyd is broken down into ribosyl pyrimidines.

Cytosine , Deoxycytidine , Cytidine can be retained and analyzed using the BIST B+ stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN) with a sulfuric acid buffer. Detection is performed using UV.

Method Parameters

Mobile Phase	MeCN – 85%
Buffer	H2SO4 – 0.2%
Flow Rate	1.0 ml/min
Detection	UV 260 nm
Peak Retention Time	2.8, 3.2, 5.1 min
Class of Compounds	Nucleosides
Analyzing Compounds	Cytosine,Deoxycytidine,Cytidine

HPLC Column Used

BIST B+, 4.6 x 50 mm, 5 µm, 100 A, dual ended

Order this column at hplc-shop.de →