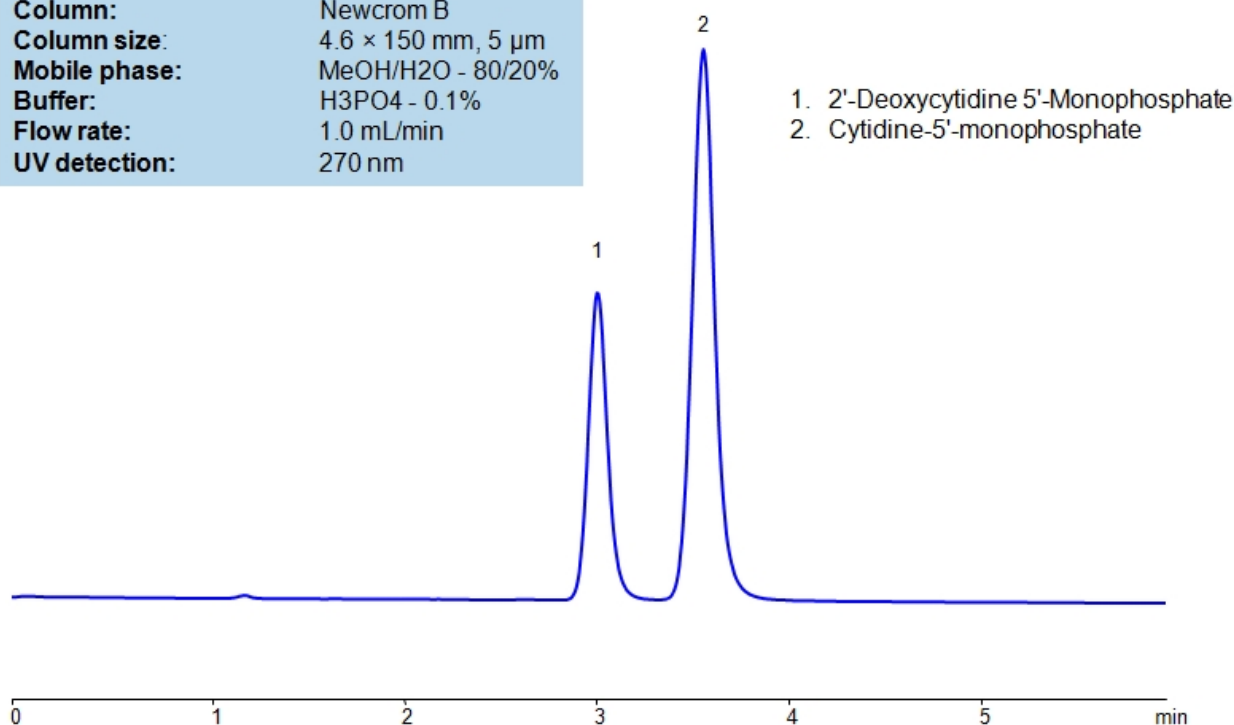


# HPLC Separation of Cytidine-5'-monophosphate (CMP) and 2'-Deoxycytidine 5'-Monophosphate (dCMP) on Newcrom B Column

<https://sielc.com/hplc-separation-of-cmp-and-dcmp>

## Chromatogram

**Column:** Newcrom B  
**Column size:** 4.6 × 150 mm, 5 µm  
**Mobile phase:** MeOH/H<sub>2</sub>O - 80/20%  
**Buffer:** H<sub>3</sub>PO<sub>4</sub> - 0.1%  
**Flow rate:** 1.0 mL/min  
**UV detection:** 270 nm



HPLC Separation of CMP and dCMP on Newcrom B Column\_1193

## Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of 2'-Deoxycytidine 5'-Monophosphate , Cytidine Monophosphate .

Cytidine-5'-monophosphate is a nucleoside monophosphate with C<sub>9</sub>H<sub>14</sub>N<sub>3</sub>O<sub>8</sub>P chemical formula. It is a fundamental building block for RNA and DNA as well as an intermediate in phospholipid synthesis.

2'-Deoxycytidine 5'-Monophosphate is a deoxyribonucleotide with C<sub>9</sub>H<sub>14</sub>N<sub>3</sub>O<sub>7</sub>P chemical formula. It is crucial when it comes to DNA synthesis. dCMP is often used in genetic research, biotechnology, and development of pharmaceuticals with a focus on antiviral and anticancer drugs.

2'-Deoxycytidine 5'-Monophosphate , Cytidine Monophosphate can be retained and analyzed using the Newcrom B stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN) with a phosphoric acid buffer. Detection is performed using UV.

## Method Parameters

<b>Mobile Phase</b>	MeOH/H <sub>2</sub> O – 80/20%
<b>Buffer</b>	H <sub>3</sub> PO <sub>4</sub> – 0.1%

<b>Flow Rate</b>	1.0 ml/min
<b>Detection</b>	UV 270nm
<b>Class of Compounds</b>	Acid, Hydrophilic, Ionizable
<b>Analyzing Compounds</b>	2'-Deoxycytidine 5'-Monophosphate, Cytidine Monophosphate

#### HPLC Column Used

**Newcrom B, 4.6 x 150 mm, 5 µm, 100 A, dual ended**

[Order this column at hplc-shop.de](http://hplc-shop.de) →