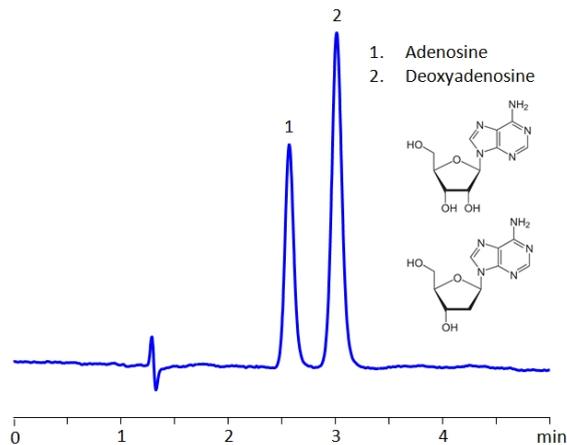


HPLC Separation of Adenosine and Deoxyadenosine on Newcrom AH Column



Column:	Newcrom AH
Column size:	3.2 × 100 mm, 5 μm
Column part number:	NAH-32.100.0510
Mobile phase:	MeCN/H ₂ O – 10/90%
Buffer:	AmFm pH 3.0 – 10 mM
Flow rate:	0.5 mL/min
Detection:	UV 260 nm (MS-compatible mobile phase)

High Performance Liquid Chromatography (HPLC) Method of Adenosine and Deoxyadenosine.

Adenosine is a key building block of energy-carrying molecules with the chemical formula C₁₀H₁₃N₅O₄. It has a variety of other uses, including being an inhibitory neurotransmitter which helps with sleep and acting as a blood flow regulator. Medicinally, it is used as treatment for supraventricular tachycardia (SVT). You can find detailed UV spectra of Adenosine and information about its various lambda maxima by visiting the following link.

Deoxyadenosine is a deoxyribonucleoside with the chemical formula C₁₀H₁₃N₅O₃. It is a derivative of adenosine. High presence of it can kill T lymphocytes and kill those cells, leading to adenosine deaminase severe combined immunodeficiency disease, also known as ADA-SCID.

Deoxyadenosine, Adenosine are the building blocks for DNA and RNA as well as other roles in biomechanical processes such as signal transduction. By using a Newcrom AH mixed-mode column with a cation-exchange mechanism, nucleosides: adenosine and deoxyadenosine, can be baseline separated in a short time using an isocratic method with a simple mobile phase of water, acetonitrile (MeCN, ACN), and ammonium formate (AmFm) buffer. Detection can be achieved with UV 260 nm, mass spectrometry (MS), evaporative light scattering detection (ELSD) and Charged aerosol detection (CAD).

Method Parameters

Column	Newcrom AH, 3.2 x 100 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN/H ₂ O – 10/90%
Buffer	AmFm pH 3.0 – 10 mM
Flow Rate	1.0 mL/min
Detection	UV, 260 nm

Quelle: <https://sielc.com/hplc-separation-of-adenosine-and-deoxyadenosine>