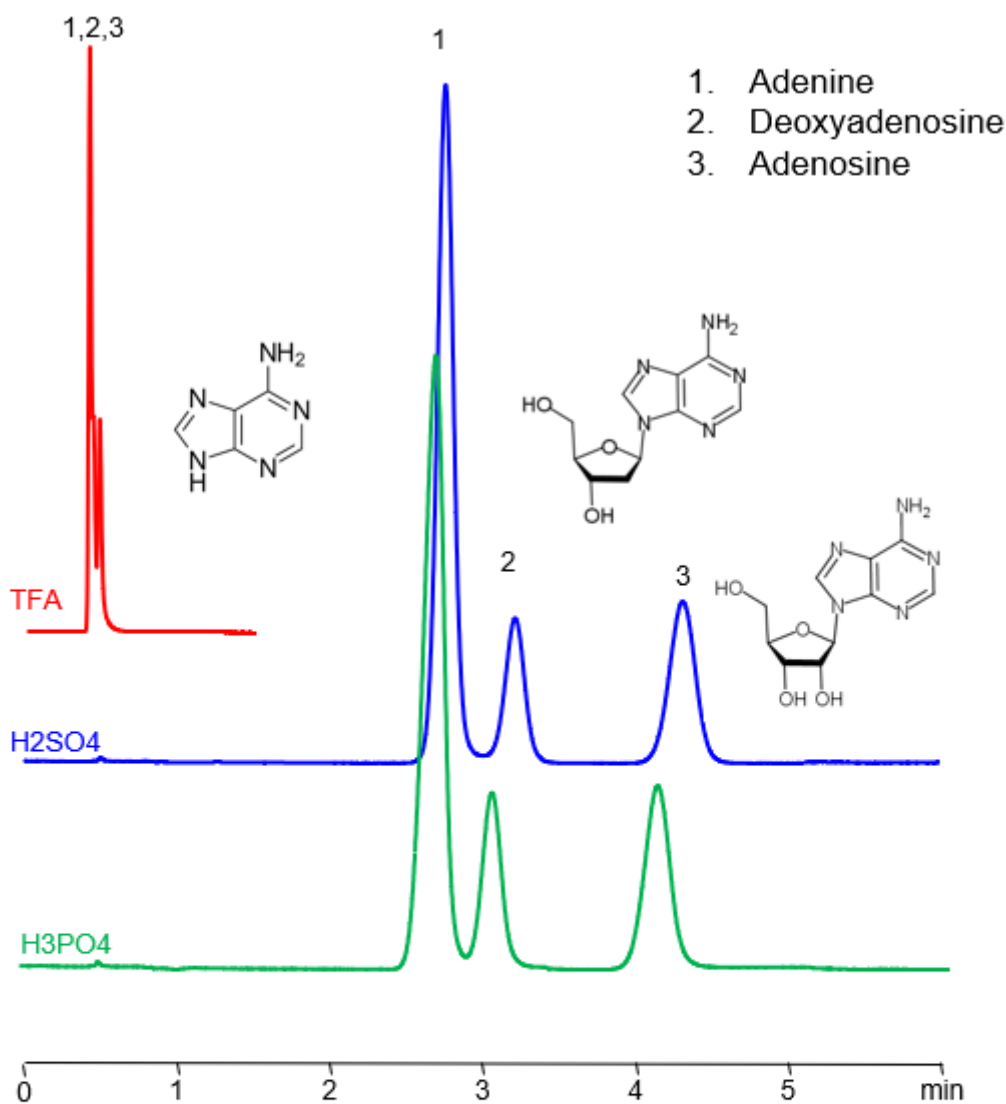


HPLC Method for Separation of Adenine, Deoxyadenosine and Adenosine on BIST B+ Column

<https://sielc.com/hplc-method-of-adenine-deoxyadenosine-and-adenosine>

Chromatogram



Column:	BIST B+
Column size:	4.6 × 50 mm, 5 μm
Column part number:	TBP-46.50.0510
Mobile phase:	MeCN – 85%
Buffer:	0.2%
Flow rate:	1,0 mL/min
Detection:	UV 260 nm

Description

HPLC Method for Separation of Adenine , Deoxyadenosine , Adenosine on BIST B+ by SIELC Technologies .

Adenine , also noted as A and Ade , has the chemical formula $C_5H_5N_5$. Besides DNA and RNA, Adenine can also be found in Adenosine triphosphate (ATP), which is a nucleotide triphosphate that provides energy in cells required for bodily functions. In DNA, it partners with Thymine via two hydrogen bonds, while in RNA it bonds to Uracil for protein synthesis.

Deoxyadenosine is a deoxyribonucleoside with the chemical formula $C_{10}H_{13}N_5O_3$. 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.

Adenosine is a key building block of energy-carrying molecules with the chemical formula $C_{10}H_{13}N_5O_4$. 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.

Adenine , Deoxyadenosine , Adenosine 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	H ₂ SO ₄ – 0.2%
Flow Rate	1.0 ml/min
Detection	UV 260 nm
Peak Retention Time	2.8, 3.2, 4.3 min
Class of Compounds	Nucleosides
Analyzing Compounds	Adenine,Deoxyadenosine,Adenosine

HPLC Column Used

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

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