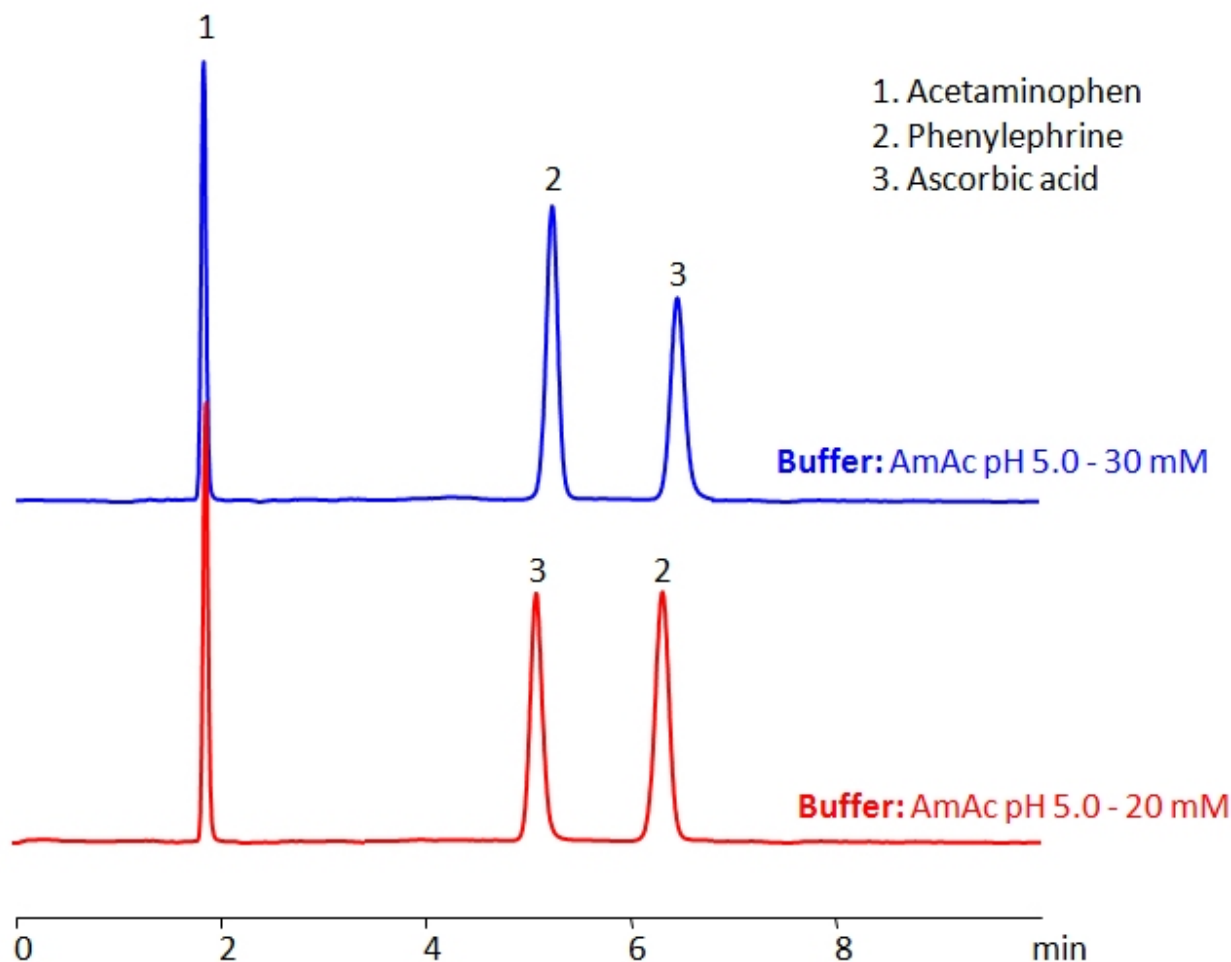


HPLC Method for the Determination of Acetaminophen, Phenylephrine, and Ascorbic Acid on Primesep S Column

<https://sielc.com/hplc-method-for-the-determination-of-acetaminophen-phenylephrine-and-ascorbic-acid>

Chromatogram



Column:	Primesep S
Column size:	4.6 × 150 mm, 5 μm
Column part number:	S-46.150.0510
Mobile phase:	MeCN/H ₂ O – 80/20%
Flow:	1.0 mL/min
Detection:	UV 270 nm

Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of Acetaminophen, Phenylephrine, and Ascorbic Acid

Acetaminophen, also known as Paracetamol, is a medication with the molecular formula C₈H₉NO₂. It is an over-the-counter pain killer that also reduces fever. Unlike Ibuprofen and naproxen, it is not an anti-inflammatory drug.

Phenylephrine is a common over-the-counter decongestant, but can also be used for pupil dilation and hemorrhoid treatment. Its chemical formula is $C_9H_{13}NO_2$. It is sold under many brand names including Mucinex, Sudafed PE, Sinex, and many other generic brands. While it is best known as a decongestant, it has a wide variety of other pharmaceutical applications, including pupil dilation, hypotension (low blood pressure) treatment, and hemorrhoid relief.

Ascorbic Acid is a vitamin with the molecular formula $C_6H_8O_6$. Typically, it is used to treat scurvy, support immune system, and preserve food. It is a white to light yellow powder that is easily dissolved in water. It can be found in a large variety of fruits and vegetables, especially in citrus.

You can find detailed UV spectra of Acetaminophen and information about its various lambda maxima by visiting the following link.

You can find detailed UV spectra of Ascorbic Acid and information about its various lambda maxima by visiting the following link.

Acetaminophen (Paracetamol), Phenylephrine, Ascorbic Acid, Phenylephrine hydrochloride can be retained and analyzed using the Primesep S stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN) with an ammonium acetate buffer. Detection is performed using UV.

Method Parameters

Mobile Phase	MeCN/H ₂ O – 80/20%
Buffer	Ammonium acetate pH 5.0
Flow Rate	1.0 ml/min
Detection	UV 270nm MS- compatible mobile phase
Class of Compounds	Drug
Analyzing Compounds	Acetaminophen (Paracetamol), Phenylephrine, Ascorbic Acid, Phenylephrine hydrochloride

HPLC Column Used

Primesep S, 4.6 x 150 mm, 5 µm, 100 Å, dual ended

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