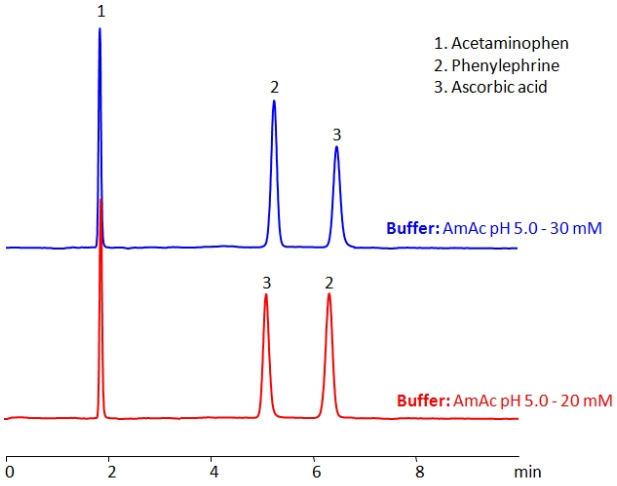
HPLC Method for the Determination of Acetaminophen, Phenylephrine, and Ascorbic Acid on Primesep S Column



Column:	**Primesep S**
Column size:	4.6 × 150 mm, 5 µm
Column part number:	S-46.150.0510
Mobile phase:	MeCN/H_2O – 80/20%
Flow:	1.0 mL/min
Detection:	UV 270 nm

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. It's chemical formula is C9H13NO2 . 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 C6H8O6 . 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

Column	Primesep S, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN/H2O – 80/20%
Buffer	Ammonium acetate pH 5.0
Flow Rate	1.0 mL/min
Detection	UV 270 nm MS- compatible mobile phase

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