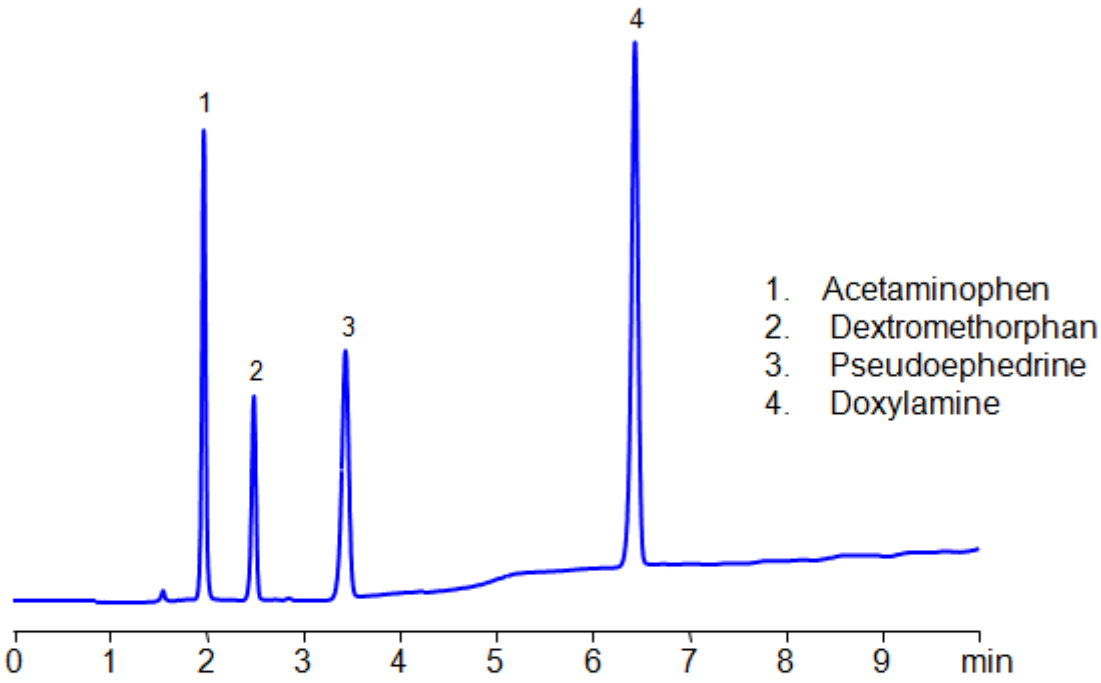
HPLC Method for Separation of NyQuil Active Ingredients on BIST B+ Column

https://sielc.com/hplc-separation-of-nyquil-active-ingredients-on-BIST_Bplus_column

Chromatogram



Column:	BIST™ B +
Size:	4.6 x 150mm
Flow:	1.0 mL/min
Mobile phase:	Gradient MeCN – 90 - 60% in 10 min
Buffer:	H_2SO_4 –0.4%
Flow rate:	1.0 mL/min
Detection:	UV 210 nm

Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of Acetaminophen, Dextromethorphan, Pseudoephedrine, Doxylamine

Nyquil is a combination of medicines used to treat headaches, fever, body aches, cough, runny nose, sneezing, and sore throat caused by allergies, the common cold, or the flu. Nyquil contains the active ingredients acetaminophen, dextromethorphan HBr, doxylamine succinate, and sometimes, phenylephrine HCl. Acetaminophen is a pain reliever and fever reducer. Dextromethorphan is a cough suppressant. It affects the cough reflex in the brain that triggers coughing. Doxylamine is an antihistamine that reduces the effects of the natural chemical histamine in the body. Histamine can produce symptoms of sneezing, itching, watery eyes, and runny nose. Pseudoephedrine is used to relieve nasal congestion caused by colds, allergies, and hay fever. It is also used to temporarily relieve sinus congestion and pressure.

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 Dextromethorphan and information about its various lambda maxima by visiting the following link.

All active compounds of Nyquil can be separated in HPLC on a BIST B+ column. The analytical method uses acetonitrile (ACN) gradient and water with sulfuric acid (H2SO4) as buffer and UV detected at 210 nm.

Method Parameters

Mobile Phase	Gradient MeCN – 90-60%, 10 min
Buffer	H2SO4 – 0.4%
Flow Rate	1.0 ml/min
Detection	UV, 210 nm
Class of Compounds	Drug, Basic, Hydrophobic, Ionizable
Analyzing Compounds	Acetaminophen (Paracetamol),Dextromethorphan,Doxylamine,Pseudoephedrine (PSE)

HPLC Column Used

BIST B+, 4.6 x 150 mm, 5 µm, 100 A, dual ended

Order this column at hplc-shop.de →