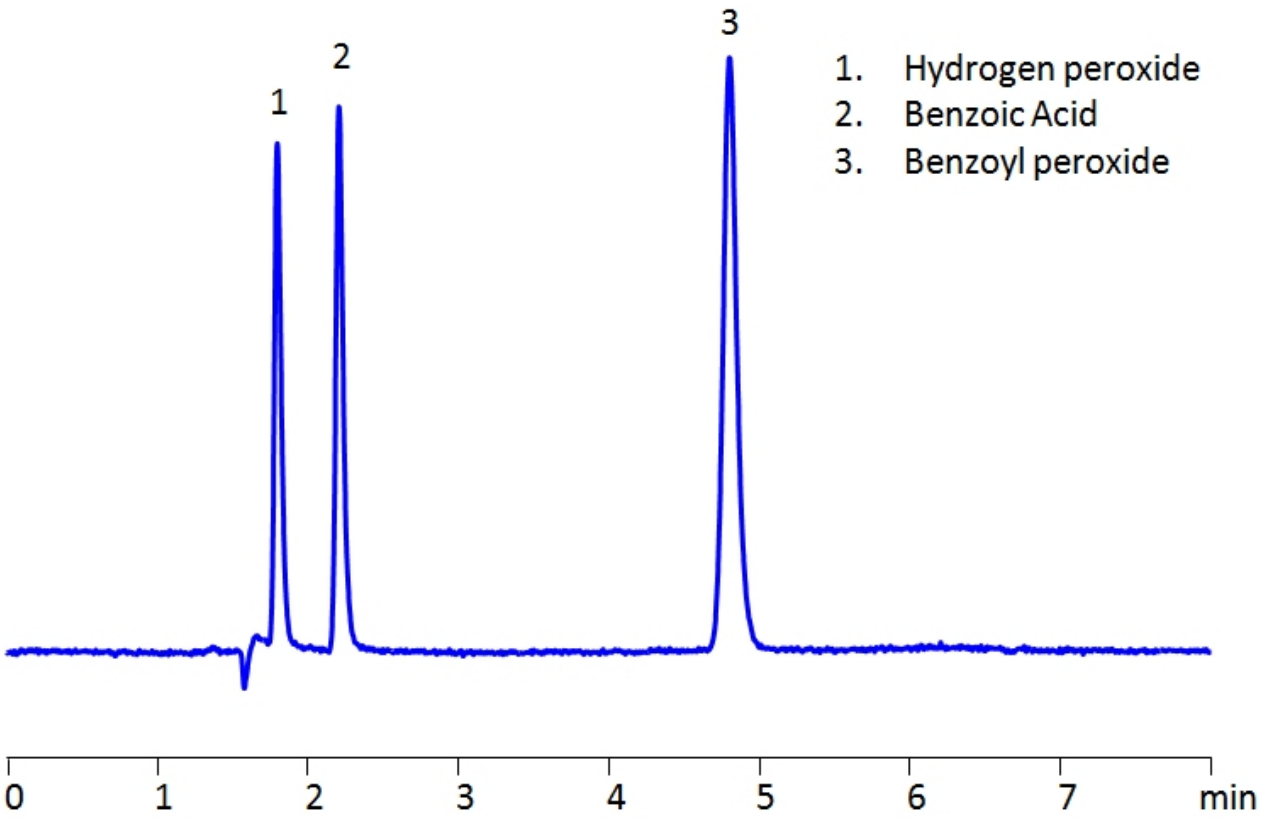
HPLC Determination of Benzoyl Peroxide on Newcrom R1 Column

https://sielc.com/hplc-determination-of-benzoyl-peroxide

Chromatogram



Column:	Newcrom R1
Column size:	4.6 × 150 mm, 5 µm
Column part number:	NR1-46.150.0510
Mobile phase:	MeCN/H2O – 80/20%
Buffer:	No
Flow rate:	1.0 mL/min
Detection:	UV 235 nm

Description

· High Performance Liquid Chromatography (HPLC) Method for Analysis of Benzoyl peroxide.

Hydrogen Peroxide is a chemical compound with the chemical formula H 2 O 2 . While most assume it to be a colorless liquid, in it's natural state, it is pale blue. It's primary uses are found in bleaching, as a disinfectant, and sewage treatment. On occasion, it is used as acne treatment as well. It is used in a variety of production of organic peroxy compounds and inorganic peroxides.

Benzoic Acid is an organic compound with the chemical formula C 7 H 6 O 2 . It is considered to be the simplest aromatic carboxylic acid. In nature, it can be found in many plants, especially berries. It is used for food preservation of food, as it can inhibit growth of bacteria and mold. While it is safe in food, it can cause irritation to skin, eye, and respiratory systems. You can find detailed UV spectra of Benzoic Acid and information about its various lambda maxima by visiting the following link.

Benzoyl Peroxide is an organic peroxide with the chemical formula C 14 H 10 O 4 . It is a commonly used as topical treatment for mild acne because of its antibacterial, anti keratolytic, and comedolytic properties. It is converted to benzoic acid in the skin and primarily targets the pilosebaceous units.

Benzoyl Peroxide can be retained in HPLC on Newcrom R1 reverse-phase column with the simple isocratic mobile phase consisting of acetonitrile (MeCN) and water. The analysis method can be UV detected at 235 nm.

Method Parameters

Mobile Phase	MeCN – 80%
Buffer	No
Flow Rate	1.0 ml/min
Detection	UV 235 nm
Class of Compounds	Hydrophobic
Analyzing Compounds	Benzoyl peroxide,Hydrogen Peroxide

HPLC Column Used

Newcrom R1, 4.6 x 150 mm, 5 µm, 100 A, dual ended

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