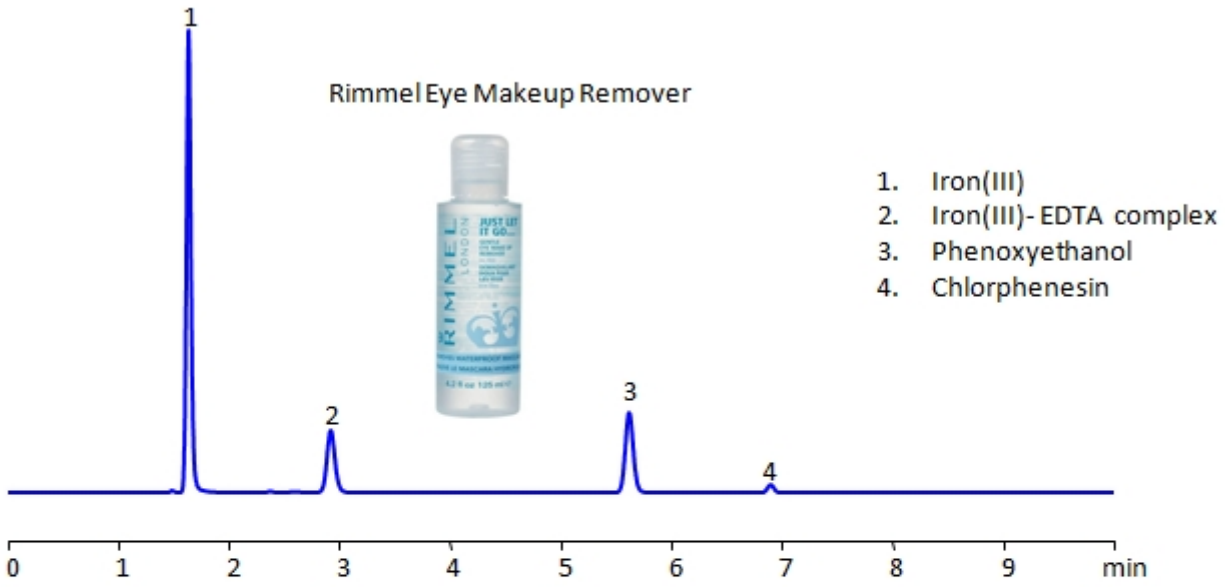
HPLC Determination of EDTA, Phenoxyethanol and Chlorphenesin in Eye Makeup Remover on Newcrom BH Column

https://sielc.com/hplc-determination-of-edta-phenoxyethanol-and-chlorphenesin

Chromatogram



Column:	Newcrom BH
Column size:	4.6 × 150 mm, 5 µm
Mobile phase:	Gradient MeCN – 2-70%, 10 min
Buffer:	H2SO4 – 0.1%
Flow rate:	1 ml/min
UV detection:	260 nm
Injection volume:	5 µL
Sample:	100 mg of sample, 300 µL of 10 mg/mL FeCl3*6H20, and 600 µL of water. Filtered the solution through 0.45µm filter

Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of Chlorphenesin , 2-Phenoxyethanol , EDTA (Ethylenediaminetetraacetic Acid) .

Ethylenediaminetetraacetic acid (EDTA) is a synthetic amino acid with the chemical formula C 10 H 16 N 2 O 8 . It is typically used in industry to sequester metal ions, which helps prevent change of colors in textiles and uneven bleaching in paper. Due to it being a chelator, it is also used to soften water during laundry, remove hydrogen sulfide from gas streams, as well as treat mercury and lead poisoning.

Phenoxyethanol is a synthetic compound with the chemical formula C 8 H 10 O 2 . It is said to have antimicrobial and preservative properties, leading to wide use of it in cosmetics, medicine, and biocides. It is considered safe in the US and Europe at limited concentrations.

Chlorphenesin is a synthetic preservative with the chemical formula C 9 H 11 ClO 3 . It is often used in cosmetics, pharmaceuticals, and hygiene products. It’s preservative properties prevent yeast, fungi, and bacteria from growing in cosmetics

as well as lead to it’s occasional use as an anti-fungal treatment. While it is approved for use in United State as the European Union at low concentration, it is banned in Japan. In higher concentrations it can cause nausea, vomiting, and even seizures.

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

Chlorphenesin , 2-Phenoxyethanol , EDTA (Ethylenediaminetetraacetic Acid) can be retained and analyzed using the Newcrom BH stationary phase column. The analysis utilizes a gradient 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	Gradient MeCN – 2- 70%, 10 min
Buffer	H2SO4 – 0.1%
Flow Rate	1.0 ml/min
Detection	UV 260nm
Class of Compounds	Acid, Hydrophilic,Preservatives
Analyzing Compounds	Chlorphenesin,2-Phenoxyethanol,EDTA (Ethylenediaminetetraacetic Acid)

HPLC Column Used

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

Order this column at hplc-shop.de →