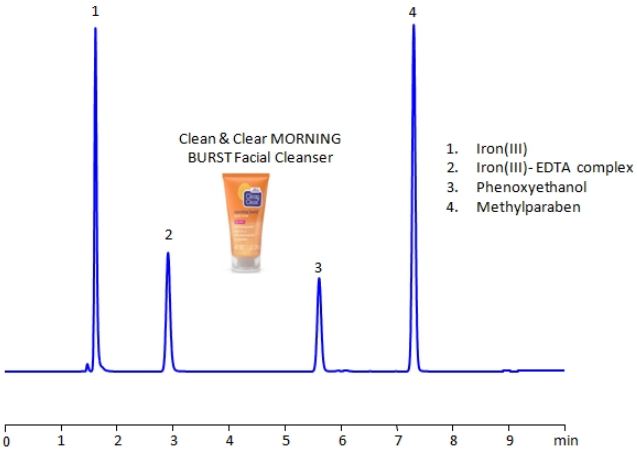
HPLC Determination of EDTA, Phenoxyethanol and Methylparaben in Facial Cleanser on Newcrom BH



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

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

Ethylenediaminetetraacetic acid (EDTA) is a synthetic amino acid with the chemical formula C10H16N2O8 . 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 C8H10O2 . 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.

Methylparaben, also known as Methyl 4-hydroxybenzoate, is a paraben with the chemical formula C8H8O3 . It is used as a preservative in food, cosmetics, and pharmaceuticals as it is said to have antimicrobial and antifungal properties. It is considered safe for use in low concentrations, but it may cause irritation or contact dermatitis in rare cases and for those who are allergic.

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

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

EDTA (Ethylenediaminetetraacetic Acid) , Methylparaben , Methylparaben sodium , 2-Phenoxyethanol 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

Column	Newcrom BH, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	Gradient MeCN – 2- 70%, 10 min
Buffer	H2SO4 – 0.1%
Flow Rate	1.0 mL/min
Detection	UV 260 nm

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