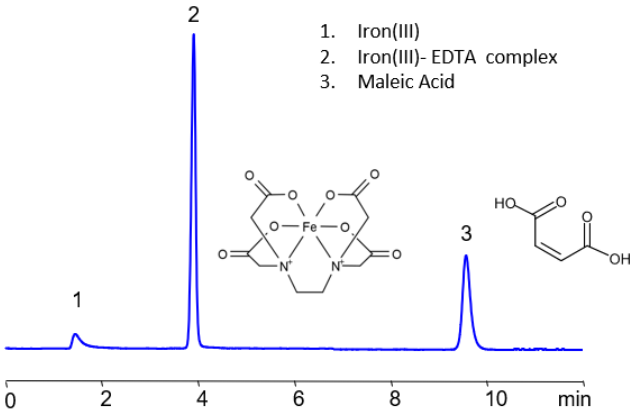
HPLC Method for Analysis of EDTA and Maleic Acid on Newcrom B Column



Column:	Newcrom B
Size:	4.6 x 150 mm, 3 µm, 100 A
Column part number:	NB-46.150.0310
Mobile phase:	H2O/H2SO4 -99.98/0.02 %
Flow:	1.0 mL/min
Detection:	UV 260 nm

High Performance Liquid Chromatography (HPLC) Method for Analysis of EDTA (Ethylenediaminetetraacetic Acid) , Maleic Acid , Iron(III) .

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

Maleic Acid , also known as cis -butenedioic acid , is a dicarboxylic acid with the chemical formula C4H4O4 . It is primarily used as a precursor to fumaric acid. It is is derived by hydrolysis of maleic anhydride or is produced by oxidation of benzene or butane. It is occasionally used to stabilize drugs through forming acid addition salts.

EDTA Standards Solution A: For the preparation of the EDTA standard solution, 5 mg of EDTA was accurately weighed and transferred into a 5 mL volumetric flask and dissolved in 0.001N NaOH water solution with sonication or magnetic stirrer mixing. Filtered The EDTA stock solution (1.0 mg/mL) should be stored in a cold dark place and can be used for a week to prepare standards of required concentration.

Iron(III) chloride Solution B: The standard stock solution of Iron(III) chloride (10 mg/ml) was prepared in water. 50 mg of FeCl3 was accurately weighed and transferred into a 5 mL volumetric flask and dissolved in water, with sonication if needed.

General procedure for Ferric EDTA complex analysis: To make a sample for analysis mix 100 µL Solution A (or unknown sample) with 100 µL Solution B and 800 µL of water. Place this mixture in a plastic HPLC vial for analysis. Setup instrument and column according to the method provided.

New more reliable method for EDTA analysis is available

Method Parameters

Column	Newcrom B, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	H2O – 99.98%
Buffer	H2SO4 – 0.02%
Flow Rate	1.0 mL/min
Detection	UV 260 nm

Quelle: https://sielc.com/hplc-method-for-analysis-of-edta-and-maleic-acid-on-newcrom-b-column