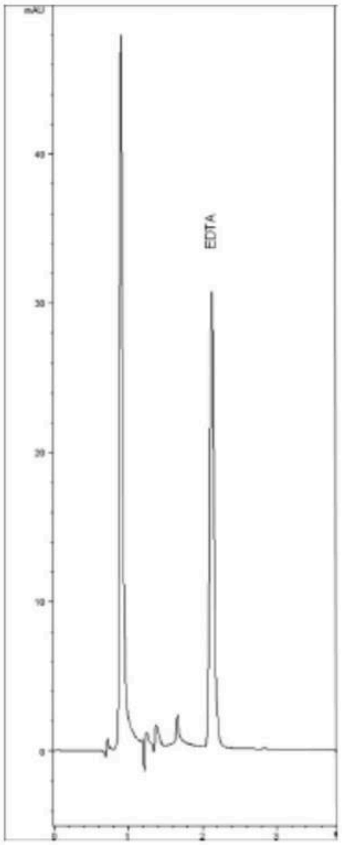
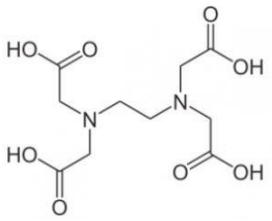
EDTA Analyzed with HPLC - AppNote

Very Sensitive Method for Measuring Ethylenediaminetetraacetic Acid

EDTA does not have a significant Chromophore, so to achieve UV Detection, this Method uses a Pre-Column reaction of a solution of Ferric Chloride with the sample. The resulting EDTA / Fe3+ has significant UV Absorbance making this a very sensitive Method.

With this Method, Peak Shapes and Selectivity can be achieved. EDTA is extremely difficult to analyze by itself however in its complexed form, it Chromatographs well from matrices such as river sediment and other solutions.





Peaks:

1. Water *(solvent front)*
2. EDTA Fe3+

Method Conditions

Column: Cogent HPS C8™, 5µm, 120Å
Catalog No.: 75008-15P
Dimensions: 4.6 x 150mm

Mobile Phase: 98% DI Water / 2% Acetonitrile / 0.1% Acetic Acid *(pH 3.5)* / 2g / L Tetrabutylammonium Sulfate
Temperature: 40°C
Limit of Quantitation: 0.2µg / mL
Injection vol.: 20µL
Flow rate: 2mL / minute
Detection: UV @ 258nm

Notes: *EDTA is a synthetic metal complexing reagent that is used in a wide variety of industrial applications. Used as a preservative, it has very low biodegradability thus remains in the environment for long periods of time. Found in sewer water, freshwater and ground water, it re-solubilizes precipitated toxic metals back into solution where they can be ingested by plants and animals.*

Attachment No 74 EDTA Analyzed with HPLC pdf 0.1 Mb Download File

MicroSolv Technology Corporation
9158 Industrial Blvd. NE, Leland, NC 28451
Tel: (732) 380-8900
Fax: (910) 769-9435
Email: customers@mtc-usa.com
Website: www.mtc-usa.com