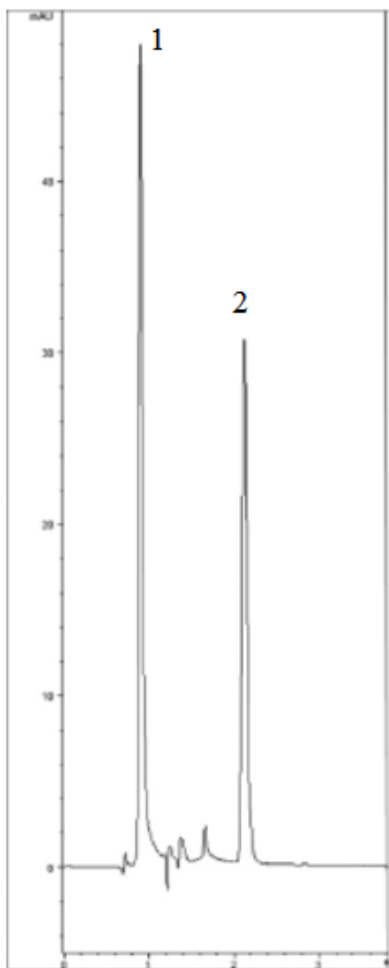




EDTA Analysis with HPLC - AppNote

EDTA does not have a significant Chromophore, so to achieve UV Detection, in the Method shown below we used 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.

Ethylenediaminetetraacetic acid 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: 98:2 DI H₂O/ Acetonitrile with 0.1% Acetic Acid (pH 3.5/2g/L Tetrabutylammonium Sulfate)

Temperature: 40°C

LOQ: 0.2µg / mL

Injection vol.: 20µL

Flow rate: 2mL / minute

Note: 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.

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