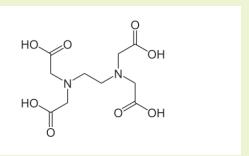
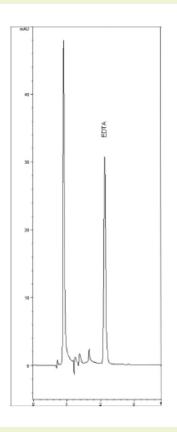


Very Sensitive Method for EDTA

Ethylenediaminetetraacetic acid





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

Method Conditions

Column: Cogent HPS C8™, 5µm, 120Å

Catalog No.: 75008-15P

Dimensions: 4.6 x 150 mm

Mobile Phase: 98% DI H₂O/ 2% acetonitrile/ 0.1% acetic acid pH 3.5/ 2

g/L tetrabutylammonium sulfate

LOQ: 0.2µg/mL
Injection vol.: 20µL
Flow rate: 2 mL/min
Detection: UV 258 nm

Temperature: 40°C

Peaks: 1. Water (solvent front)

2. EDTA Fe3+

Discussion

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.

Excellent peak shapes and selectivity make the Cogent HPS C8 a great choice for this method.

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.