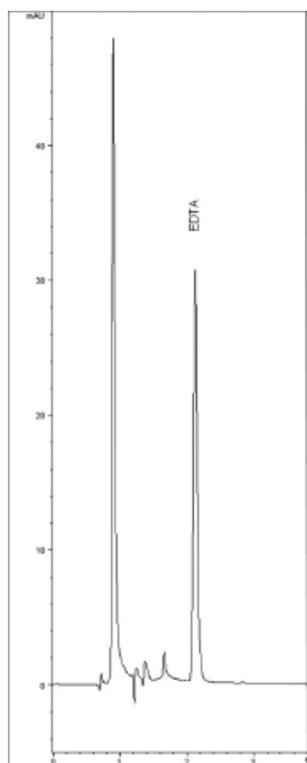
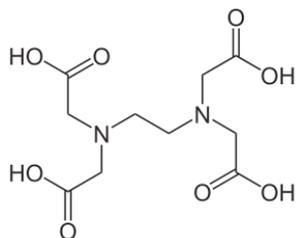


# Very Sensitive Method for EDTA

## Ethylenediaminetetraacetic acid



**Notes:** EDTA is a synthetic metal complexing reagent that is used in a wide variety of industrial applications. Used 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.

### Method Conditions

**Column:** Cogent HPS C8™, 5µm, 120Å

**Catalog No.:** 75008-15P

**Dimensions:** 4.6 x 150 mm

**Mobile Phase:** 98% DI H<sub>2</sub>O/ 2% acetonitrile/ 0.1% acetic acid pH 3.5/ 2 g/L tetrabutylammonium sulfate

**Temperature:** 40°C

**LOQ:** 0.2µg/mL

**Injection vol.:** 20µL

**Flow rate:** 2 mL/min

**Detection:** UV 258 nm

**Peaks:** 1. Water (solvent front)  
2. EDTA Fe<sup>3+</sup>

### 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/Fe<sup>3+</sup> 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.