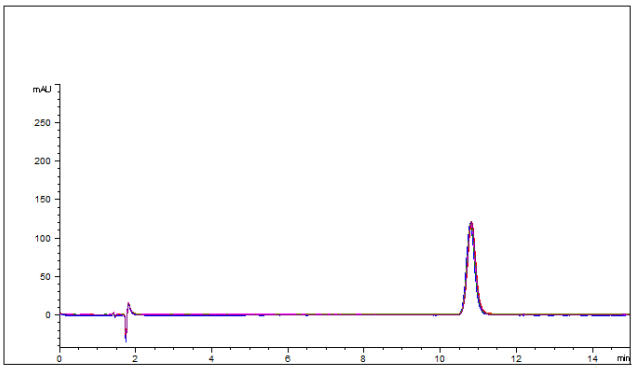
Elemental Sulfur analyzed with HPLC – AppNote

Analyzing elemental Sulfur content

A simple and reproducible method has been developed for analysis of elemental Sulfur. The data below, ***(an overlay of 5 chromatograms)*** illustrates how the compound can be adequately retained in HPLC with good precision and peak shapes using this straightforward method.



Peak: Sulfur

Method Conditions:

Column: Cogent Bidentate C18™, 4µm, 100Å.

Catalog No.: 40018-15P

Dimensions: 4.6 mm x 150 mm

Mobile Phase: (90:10) Acetonitrile / DI water with 0.1% formic acid.

Injection vol.: 3 µL

Flow rate: 1.0 mL / minute

Detection: UV @ 263 nm

Sample Preparation: 0.5 mg/mL Sulfur (7704-34-9) in DCM

%RSD: <0.1%

t_0: 1.7 minutes

K': 5.2

Notes: This method could be used for determination of elemental Sulphur in soils, using DCM as the extracting solvent.

Note 2: Capacity was determined using the following equation: $k = (t_R-t_0) / t_O$

t_R = Retention time of an analyte peak

t_O = Retention time of non-retained peak

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