

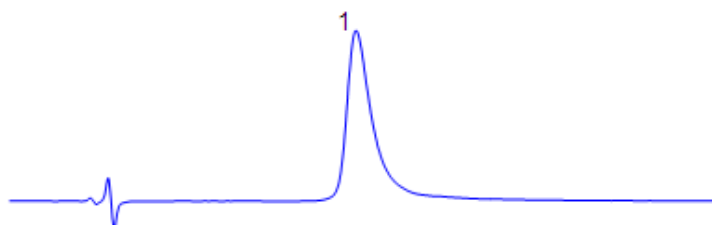
HPLC UV Analysis of Copper Ions in Salt Mixture

<https://sielc.com/Application-HPLC-UV-Analysis-of-Copper-Ions-in-Salt-Mixture>

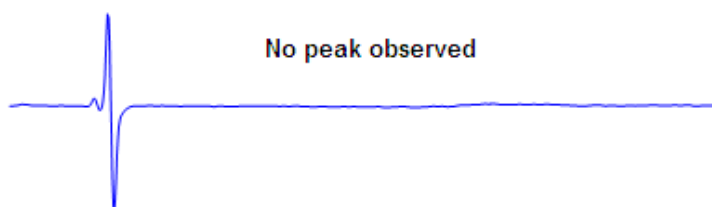
Chromatogram

1. Copper Ion (copper sulfate)

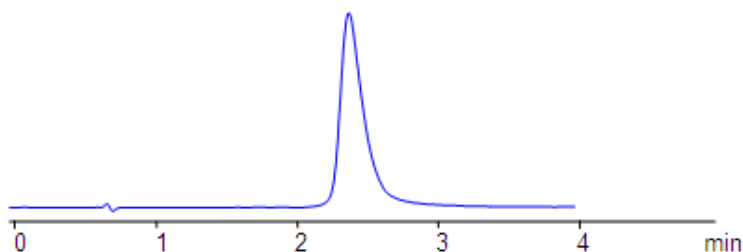
Column: Primesep SB
Size: 4.6 x 50 mm
Flow: 1.0 mL/min
Detection: UV 310 nm



Mobile phase: 30% MeCN, 50 mM AmAc no pH with EDTA (0.5 mg/mL)



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Mixture of CuSO₄ (2 mg/ml), NaCl (5 mg/ml), KCL (1.0 mg/ml), CaCl₂ (0.2 mg/ml)

Description

A unique approach for analysis of copper ions in a high salt content matrix was developed using EDTA as a visualization agent. Since copper ions can form colored complexes with EDTA, this property can be used for selective analysis of copper in the mixture with other cations, which do not form a colored complex with EDTA. Copper ion can be monitored by UV while other metals pass through the column undetected by UV. This method can be used to analyze copper ion at parts per million concentrations.

Method Parameters

Mobile Phase	MeCN/H ₂ O – 30/70%
Buffer	AmAc, EDTA
Flow Rate	1.0 ml/min

Detection	UV, 310 nm
Class of Compounds	Ions
Analyzing Compounds	Copper

HPLC Column Used

Primesep SB, 4.6x50 mm, 5 µm, 100A

[Order this column at hplc-shop.de →](http://hplc-shop.de)