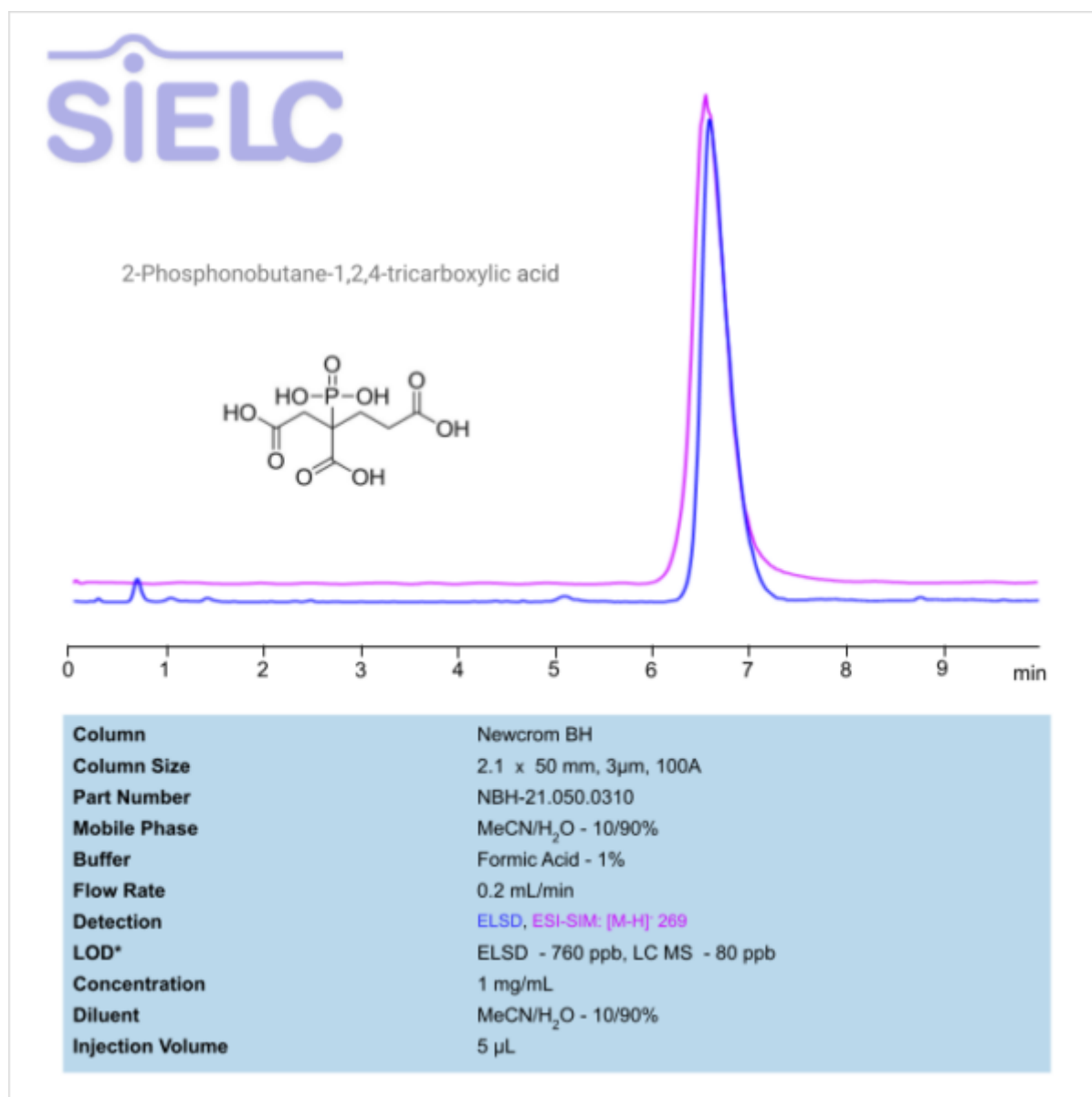


HPLC LC MS and ELSD Method for Analysis of 2-Phosphonobutane-1,2,4-tricarboxylic Acid on Newcrom BH Column

<https://sielc.com/hplc-elsd-determination-of-2-phosphonobutane-124-tricarboxylic>

Chromatogram



Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of 2-Phosphonobutane-1,2,4-tricarboxylic acid .

PBTC (2-phosphonobutane-1,2,4-tricarboxylic acid) is one of the most widely used scale inhibitors in the cooling water treatment industry. It works through binding with metal ions, therefore preventing them from forming scale. It is widely used especially due to performing well under harsh conditions like high temperatures and high alkalinity.

Using a mixed-mode column and a mobile phase consisting of acetonitrile (ACN) and water containing formic acid as a buffer, 2-phosphonobutane-1,2,4-tricarboxylic acid can be effectively retained and detected by LC–MS and ELSD.

Method Parameters

Mobile Phase

MeCN/H₂O – 20/80%

Buffer	Formic acid- 1.0%
Flow Rate	0.2 mL/min
Detection	ELSD, ESI-SIM: [M-H]1-269
Class of Compounds	Acid, Hydrophilic, Ionizable
Analyzing Compounds	2-Phosphonobutane-1,2,4-tricarboxylic acid

HPLC Column Used

Newcrom BH, 2.1 x 50 mm, 3 µm, 100 A, dual ended

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