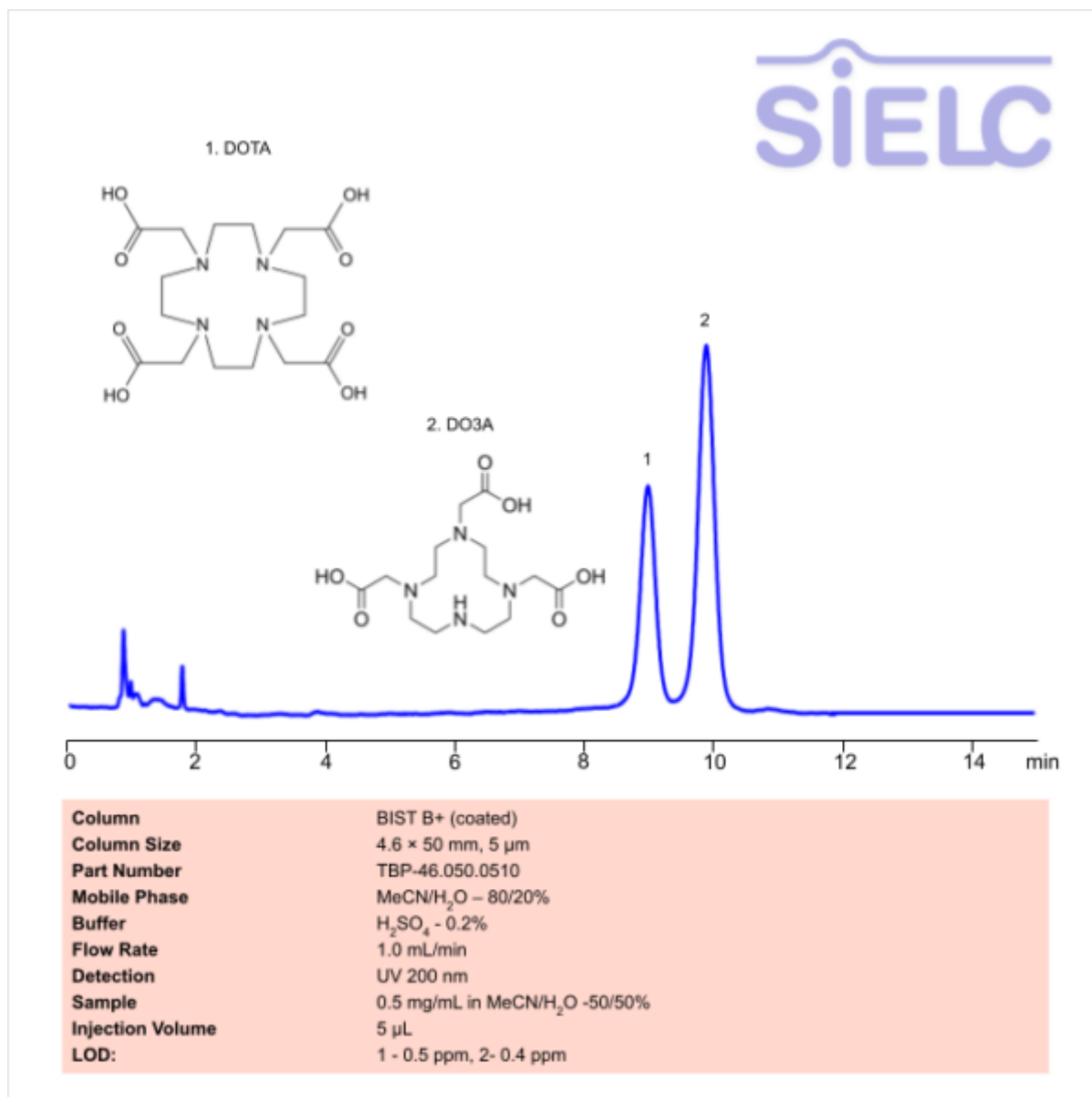


HPLC Method for Separation of DOTA and DO3A on BIST B+ Column

<https://sielc.com/hplc-method-for-separation-of-idota-do3a-2>

Chromatogram



Description

· High Performance Liquid Chromatography (HPLC) Method for Analysis of Tetraxetan (DOTA) , DO3A .

DOTA is a macrocyclic chelating agent with the chemical formula C₁₆H₂₈N₄O₈. DOTA is actually an acronym for 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid. It is used to bind metal ions, partially due to its stability. It is often employed in biomedical applications including but not limited to MRI contrast agents and targeted cancer therapy. You can find detailed UV spectra of DOTA and information about its various lambda maxima by visiting the following link.

DO3A is a derivative of DOTA with the chemical formula C₁₅H₂₄N₄O₇Na. It is primarily used in pre-clinical research as a chelator, which binds radiometals, lanthanides, and manganese.

Tetraxetan (DOTA) , DO3A can be retained and analyzed using the BIST B+ stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN) with a sulfuric acid buffer. Detection is performed using UV.

Method Parameters

Mobile Phase	MeCN/H ₂ O – 80/20%
Buffer	H ₂ SO ₄ – 0.2%
Flow Rate	1.0 ml/min
Detection	UV 200
Limit Of Detection*	1 – 0.5 ppm, 2- 0.4 ppm
Class of Compounds	Chelating Agent
Analyzing Compounds	Tetraxetan (DOTA), DO3A

HPLC Column Used

BIST B+, 4.6 x 50 mm, 5 µm, 100 Å, surface coated

[Order this column at hplc-shop.de →](#)