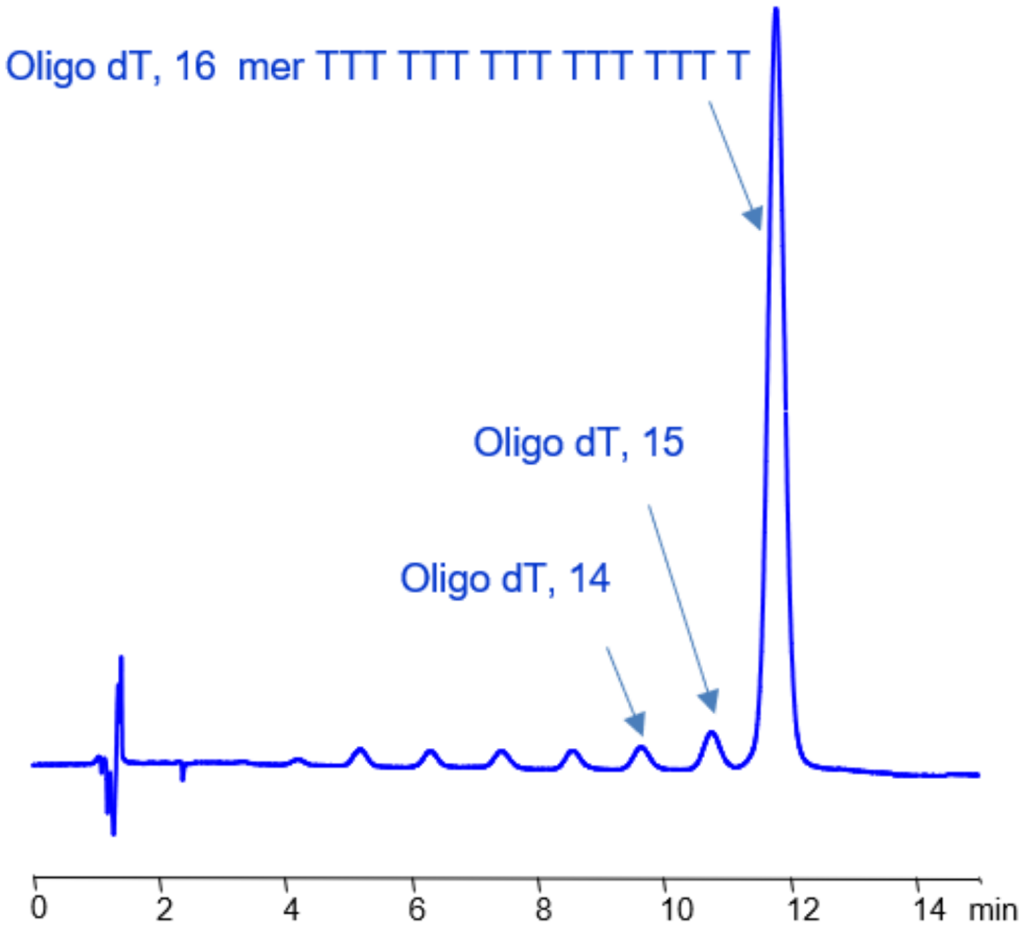
HPLC Method for Analysis of Oligo dT, 16 mer on BIST A Column

https://sielc.com/hplc-method-for-analysis-of-oligo16

Chromatogram



Column:	BIST A
Column size:	4.6 × 100 mm, 5 µm
Column part number:	TA-46.100.0510.C
Mobile phase:	Gradient MeCN - 50-35%, 15 min
Buffer:	TMEDA acetate - 20 mM pH 4.0
Flow rate:	1.0 mL/min
Detection:	UV 260 nm

Description

· Separation type: Bridge Ion Separation Technology, or BIST™ by SIELC Technologies · HPLC Method for Analysis of Oligonucleotides on BIST A Column by SIELC Technologies

16 T oligonucleotides are short DNA molecules that consist of 16 thymine (T) nucleotides. They are commonly used in research and diagnostic applications, such as PCR (polymerase chain reaction), DNA sequencing, and gene expression analysis.

The sequence of a 16 T oligonucleotide is specific and unique, allowing it to be used as a primer or probe to target a specific DNA sequence of interest. When used in PCR, 16 T oligonucleotides can anneal to the complementary single-stranded DNA template and serve as a starting point for DNA polymerase to extend the DNA sequence.

Additionally, 16 T oligonucleotides have been used in the design of biosensors and other diagnostic tools due to their high specificity and sensitivity. They can also be modified with different chemical groups to enhance their stability and binding affinity.

Overall, 16 T oligonucleotides are valuable tools in molecular biology and genetics research, enabling scientists to amplify, sequence, and detect specific DNA sequences with high accuracy and precision.

Using SIELC's newly introduced BIST™ method, this oligonucleotide can be retained on a negatively-charged, cation-exchange BIST™ A column. There are two keys to this retention method: 1) a multi-charged, positive buffer, such as TMEDA formate, which acts as a bridge, linking the negatively charged dye to the negatively-charged column surface and 2) a mobile phase consisting mostly of organic solvent (such as MeCN) to minimize the formation of a solvation layer around the charged analytes. Using this new and unique analysis method, oligonucleotide can be separated, retained, and detected at 260 nm.

Method Parameters

Mobile Phase	Gradient MeCN – 50-35%, 15 min
Buffer	TMEDA acetate pH 4.0 – 20 mM
Flow Rate	1.0 ml/min
Detection	UV 260 nm
Class of Compounds	Oligonucleotides
Analyzing Compounds	Oligonucleotides

HPLC Column Used

BIST A, 4.6 x 100 mm, 5 µm, 100 A, surface coated

Order this column at hplc-shop.de →