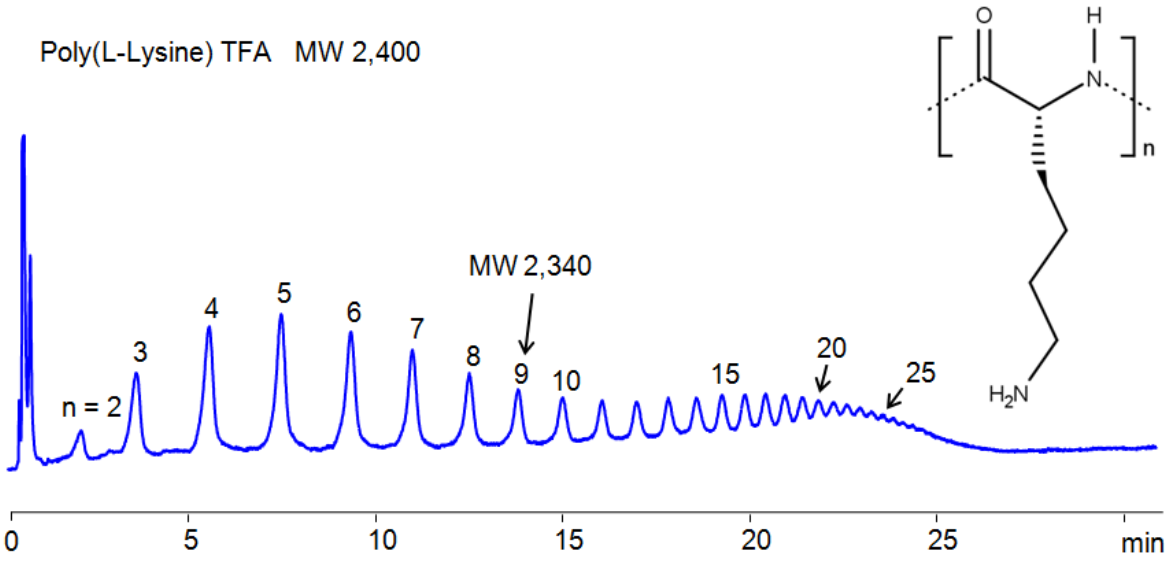
HPLC Method for Analysis of Low MW Polylysine on BIST™ B+ Column

https://sielc.com/hplc-method-of-low-mw-polylysine

Chromatogram



Column:	BIST™ B+
Column size:	4.6 × 50 mm, 5 µm
Column part number:	TBP-46.50.0510
Mobile phase:	Gradient ACN 60 → 30 in 15 min then 30 → 15 in 15 min
Buffer:	H_2SO_4 - 0.2%
Flow rate:	1.0 mL/min
Detection:	UV 205 nm

Description

· HPLC Method for Analysis of Polylysine on BIST B+ by SIELC Technologies .

Polylysine is a group of lysine homopolymers with the chemical formula (C 6 H 12 N 2 O) n . Due to its' high positive charge density, it is often used in drug delivery for complexes with negatively charged macromolecules. They have been especially useful in delivery of DNA and proteins.

Polylysine includes a large group of similar polymers with various uses. Some are used as food preservatives, while others are used for drug delivery in pharmaceuticals. Polymers with charged monomeric units, such as polylysine, are often difficult to separate using typical ion-exchange chromatography due to very strong and often irreversible interactions with the oppositely charged column surface. Therefore, an extremely high concentration of the buffer, up to several molar, is usually needed to facilitate an ion-exchange process. This high buffer concentration, however, is not desirable because of the significantly increased viscosity of the mobile phase and the salt formation in the pump components. With BIST™, these polymers can be separated and retained with relatively weak buffers (in the mM regime) and a fairly simple gradient. Using this new and unique analysis method, Polylysine can be retained and UV detected at 205 nm.

Method Parameters

Mobile Phase	Gradient MeCN

Buffer	H2SO4 – 0.2%
Flow Rate	1.0 ml/min
Detection	UV 205 nm
Class of Compounds	Peptide, Homopolypeptide
Analyzing Compounds	Polylysine

HPLC Column Used

BIST B+, 4.6 x 50 mm, 5 µm, 100 A, dual ended

Order this column at hplc-shop.de →