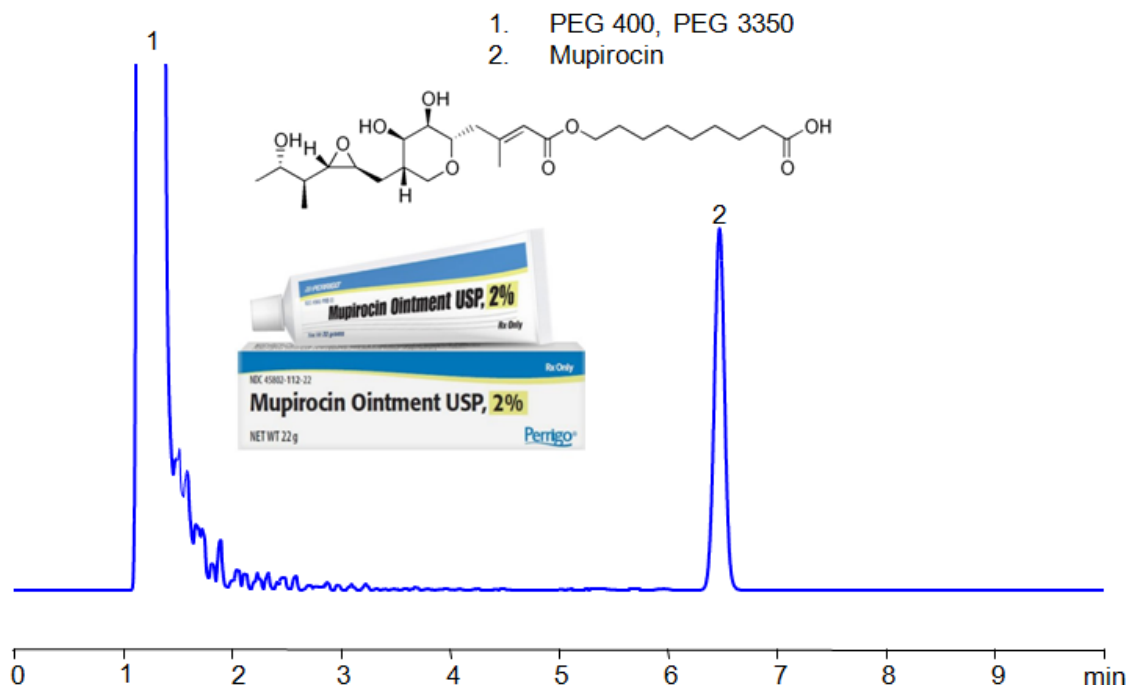


# HPLC Method for Analysis of Mupirocin in Pharmaceutical Dosage Form on Newcrom BH Column

<https://sielc.com/hplc-determination-of-mupirocin>

## Chromatogram



|                            |                                                                                                                       |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Column:</b>             | Newcrom BH                                                                                                            |
| <b>Column size:</b>        | 3.2 × 100 mm, 5 µm                                                                                                    |
| <b>Column part number:</b> | NBH-32.100.0510                                                                                                       |
| <b>Mobile phase:</b>       | Gradient MeCN –20-50 %, 10 min                                                                                        |
| <b>Buffer:</b>             | Ammonium Formate pH 3.0- 20 mM                                                                                        |
| <b>Flow rate:</b>          | 0.5 ml/min                                                                                                            |
| <b>UV detection:</b>       | ELSD, the nebulizer and evaporator temperatures 50°C,<br>with a gas flow rate of 1.6 Standard Liters per Minute (SLM) |

## Description

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Mupirocin is an antibiotic ointment with the chemical formula . It is commonly prescribed for skin infections caused by Staphylococcus and Streptococcus bacteria. It is effective against both methicillin-sensitive Staphylococcus aureus (MSSA) and methicillin-resistant Staphylococcus aureus (MRSA). commonly used for the treatment of bacterial skin infections. Here are some key points about mupirocin: Mupirocin works by inhibiting the bacterial enzyme isoleucyl-tRNA synthetase. This disruption prevents the bacteria from making necessary proteins, leading to its death. It is also used to eliminate nasal colonization of MRSA in some healthcare settings.

Mupirocin can be retained, separated, and analyzed on a mixed-mode [columns] column with a mobile phase consisting of water, Acetonitrile (MeCN), and Ammonium Formate. This analytical method can be detected with high resolution and peak symmetry with many evaporative detection methods, including Evaporative Light Scattering Detection (ELSD), Charged Aerosol Detector

(CAD), and Electrospray Ionization (ESI) for Mass Spectrometry (MS).

#### Method Parameters

|                            |                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>Mobile Phase</b>        | Gradient MeCN/H <sub>2</sub> O – 20-50%, 10 min                                                                    |
| <b>Buffer</b>              | Ammonium formate pH 3.0 –20 mM                                                                                     |
| <b>Flow Rate</b>           | 0.5 ml/min                                                                                                         |
| <b>Detection</b>           | ELSD, the nebulizer and evaporator temperatures 50°C, with a gas flow rate of 1.6 Standard Liters per Minute (SLM) |
| <b>Class of Compounds</b>  | Drug, antibiotic                                                                                                   |
| <b>Analyzing Compounds</b> | Mupirocin                                                                                                          |

#### HPLC Column Used

**Newcrom BH, 3.2 x 100 mm, 5 µm, 100 A, dual ended**

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