

## HPLC Method for Analysis of Methionine on Primesep 100 Column



Separation type: Liquid Chromatography Mixed-mode SIELC Technologies

Methionine is an essential amino acid, meaning the body cannot synthesize it, so it must be obtained through the diet. It's crucial for many bodily functions, including:

**Protein Synthesis:** Methionine is a building block for proteins.

**Methylation:** It acts as a precursor to S-adenosylmethionine (SAMe), which is involved in methylation processes that are vital for DNA regulation, detoxification, and neurotransmitter production.

**Antioxidant Function:** Methionine contributes to the synthesis of cysteine, which is a precursor to glutathione, one of the body's most important antioxidants.

**Liver Health:** It's also important for liver function and fat metabolism.

Dietary sources of methionine include meat, fish, dairy products, and some nuts and seeds. Methionine levels can be particularly important in contexts like growth, tissue repair, and maintaining healthy skin and nails.

Methionine can be retained, separated and analyzed using a Primesep 100 mixed-mode stationary phase column. The analysis employs a gradient method with a simple mobile phase comprising water, acetonitrile (MeCN), and sulfuric acid as a buffer. This method allows for detection using UV 200 nm.

You can find detailed UV spectra of Methionine and information about its various lambda maxima by visiting the following link .

## Method Parameters

<b>Column</b>	Primesep 100, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
<b>Mobile Phase</b>	MeCN – 35%
<b>Buffer</b>	H2SO4 – 0.05%
<b>Flow Rate</b>	1.0 mL/min
<b>Detection</b>	UV 200 nm
<b>Limit of Detection</b>	40 ppb

Quelle: <https://sielc.com/hplc-method-methionine>