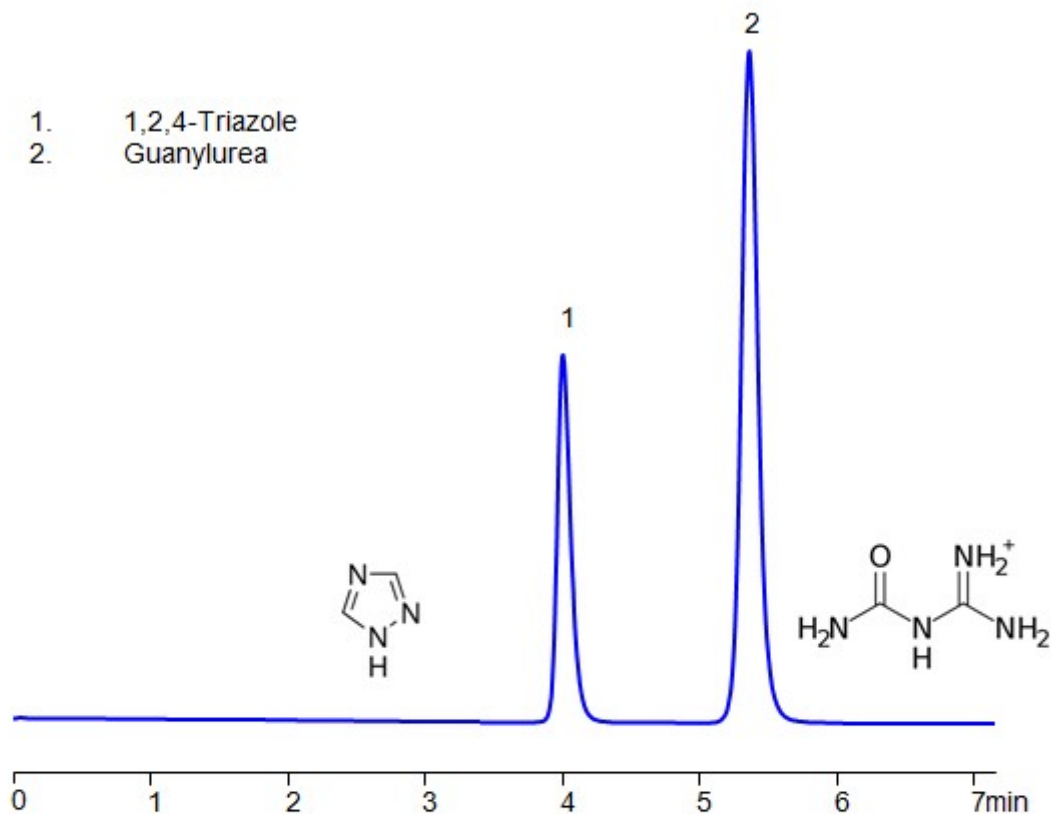


HPLC Method for Separation of 1,2,4-Triazole and Guanylurea on Primesep 100 Column

<https://sielc.com/hplc-method-for-analysis-guanylurea-triazole-2>

Chromatogram



Column:	Primesep 100
Column size:	4.6× 150 mm, 5 µm
Column part number:	100-46.150.0510
Mobile phase:	MeCN/H ₂ O – 10/90%
Buffer:	H ₂ SO ₄ - 0.2%
Flow rate:	1.0 mL/min
Detection:	UV 200 nm
Column Temp:	30C

Description

· HPLC Method for Analysis of Guanylurea , 1,2,4-Triazole on Primesep 100 Column by SIELC Technologies

Guanylurea , also known as guanidylurea, is a known degradation product of metformin. It had the molecular formula C₂H₆N₄O . When metformin undergoes biotransformation in the body, one of the metabolic pathways leads to the formation of guanylurea. This process is a part of the pharmacokinetics of metformin, where the drug is metabolized and eventually excreted from the body. It is derived from guanidine and urea, and it has interesting applications in the field of chemistry and materials science.

It's important to note that guanylurea's applications are primarily in the realm of crystal engineering and related studies. Its ability to participate in hydrogen bonding interactions makes it a valuable component in the design and manipulation of crystalline

materials for various purposes.

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

1,2,4-triazole is a heterocyclic compound with a chemical formula $C_2H_3N_3$. It is unique five-membered ring structure. Its versatility, biological activities, and ability to coordinate with metal ions make it a compound of interest in various scientific and medicinal applications. You can find detailed UV spectra of 1,2,4-triazole and information about its various lambda maxima by visiting the following link.

Guanylurea, 1,2,4-Triazole can be retained, separated and analyzed using a Primesep 100 mixed-mode stationary phase column. The analysis employs an isocratic method with a simple mobile phase comprising water, acetonitrile (MeCN), and sulfuric acid as a buffer. This method allows for detection using UV at 200 nm

Method Parameters

Mobile Phase	MeCN/H ₂ O – 10/90%
Buffer	H ₂ SO ₄ -0.2%
Flow Rate	1.0 ml/min
Detection	UV 200 nm
Samples	Guanylurea – 0.77mg/mL, 1,2,4-Triazole – 3.9mg/mL
Injection volume	3 µl
LOD*	Guanylurea – 5 ppb, 1,2,4-Triazole – 25 ppb
Class of Compounds	Aromatic amines, Ureas
Analyzing Compounds	Guanylurea, 1,2,4-Triazole

HPLC Column Used

Primesep 100, 4.6 x 150 mm, 5 µm, 100 Å, dual ended

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