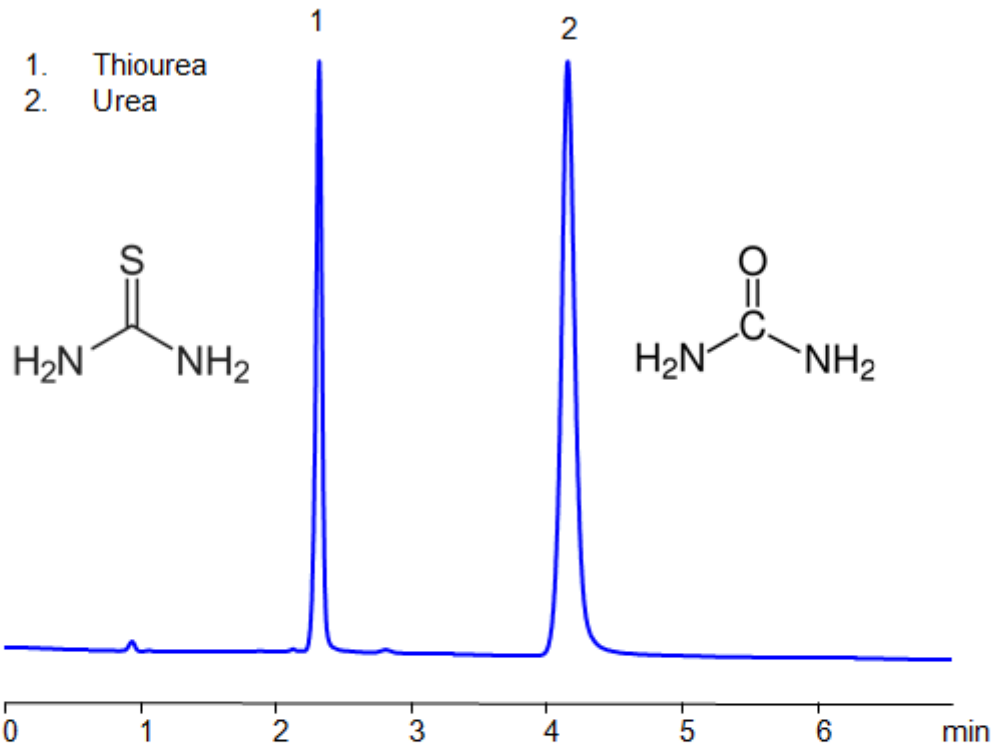
HPLC Method for Separation of Urea and Thiourea on Primesep S Column

https://sielc.com/hplc-method-for-thio-urea

Chromatogram



Column:	Primesep S
Column size:	4.6 × 150 mm, 5 µm
Column part number:	S-46.150.0510
Mobile phase:	MeCN/H_2O – 90/10%
Buffer:	None
Flow rate:	1.0 mL/min
Detection:	UV 200 nm

Description

· Separation type: Liquid Chromatography Mixed-mode

Urea (CO(NH2)2) is a white crystalline solid that is widely used as a fertilizer due to its high nitrogen content. It is also used in the production of plastics, resins, and adhesives. Urea is also used in the manufacturing of animal feed, and as a raw material in the production of many industrial chemicals. In addition, it is also used as a component in certain skin creams and cosmetics due to its moisturizing properties.

Thiourea is a versatile chemical compound with the formula (NH2)2CS. It is structurally similar to urea, except that the oxygen atom is replaced by a sulfur atom. It is a white crystalline solid when pure.

Thiourea is used in a variety of applications. It is a reagent in organic synthesis, often used in the toning of silver-gelatin photography prints, as a component of hair preparations and bleaches, and as a radioprotective agent in cancer therapy.

In agriculture, thiourea is used as a soil treatment agent to promote germination and stimulate flowering and fruiting.

Using a Primesep S normal-phase column and a mobile phase consisting of water and Acetonitrile (MeCN) with no buffer, Thiourea and Urea can be retained, separated, and analyzed. This analysis method can be UV detected at 200 nm.

Method Parameters

Mobile Phase	MeCN -90%
Buffer	No
Flow Rate	1.0 ml/min
Detection	UV 200 nm
Class of Compounds	Amide, Urea
Analyzing Compounds	Thiourea,Urea

HPLC Column Used

Primesep S, 4.6 x 150 mm, 5 µm, 100 A, dual ended

Order this column at hplc-shop.de →