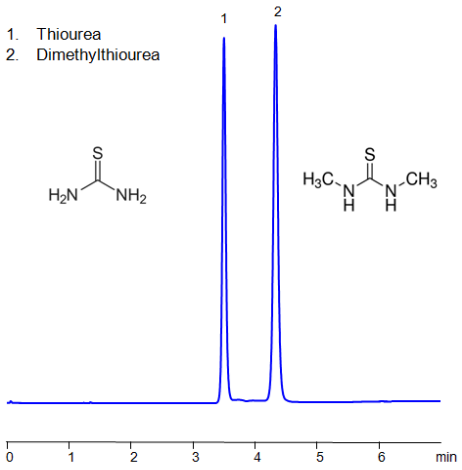
HPLC Method for Separation of Thiourea and Dimethylthiourea (DMTU) on Primesep P Column



Column:	Primesep P
Column size:	4.6 × 250 mm, 5 µm
Column part number:	P-46.250.0510
Mobile phase:	MeCN/H_2O – 10/90%
Buffer:	None
Flow rate:	1.0 mL/min
Detection:	UV 200 nm

Separation type: Liquid Chromatography Mixed-mode

Dimethylthiourea is an organic compound containing two methyl groups attached to a thiourea molecule. The chemical formula is (CH3)2NCSNH2. Like other thiourea derivatives, dimethylthiourea has a range of uses in various fields, including research and industrial applications.

In research, it's often used due to its properties as a good hydrogen bond donor and acceptor, allowing it to participate in a variety of reactions. For example, it can be used as a reducing agent in some types of reactions. It also has some interesting properties in terms of its electrical conductivity and its ability to absorb certain types of radiation, which make it useful in some niche applications.

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 P Mixed-mode phase column and a mobile phase consisting of water and Acetonitrile (MeCN) with no buffer, Thiourea and Dimethylthiourea can be retained, separated, and analyzed. This analysis method can be UV detected at 200 nm.

Method Parameters

Column	Primesep P, 4.6 x 250 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN -10%
Buffer	No
Flow Rate	1.0 mL/min
Detection	UV 200 nm

Quelle: https://sielc.com/hplc-method-for-thio-dmtu

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