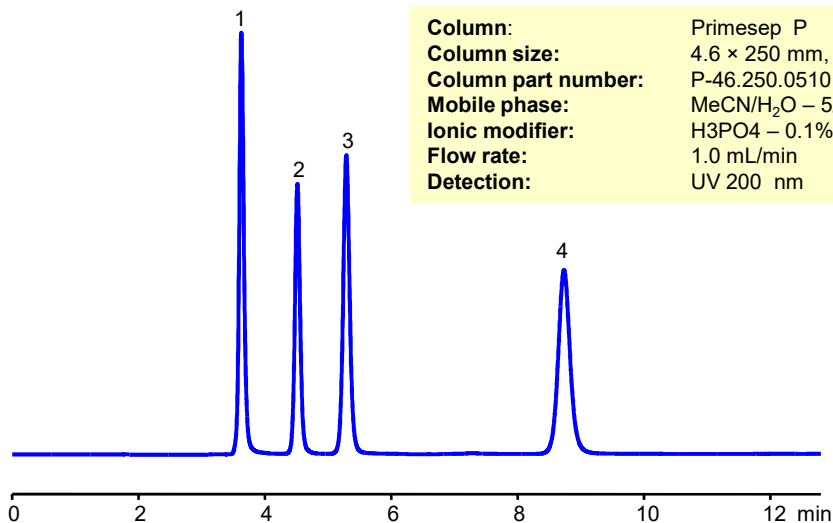


Cool Applications

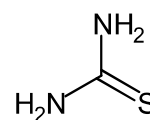
"Making Tough LC Applications Look Cool"

HPLC Method for Separation of Thiourea, Thiouracil (TU), Methylthiouracil (MTU) and Propylthiouracil (PTU) on Primesep P Column

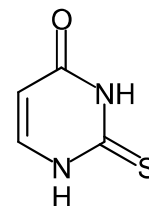


Column:	Primesep P
Column size:	4.6 × 250 mm, 5 μm
Column part number:	P-46.250.0510
Mobile phase:	MeCN/H ₂ O – 5/95%
Ionic modifier:	H ₃ PO ₄ – 0.1%
Flow rate:	1.0 mL/min
Detection:	UV 200 nm

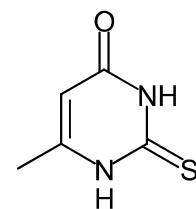
1. Thiourea



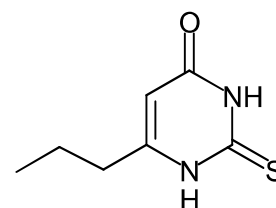
2. Thiouracil (TU)



3. Methylthiouracil (MTU)



4. Propylthiouracil (PTU)



Application Comments

Thiourea and its derivatives, including Thiouracil, Methylthiouracil, and Propylthiouracil, play crucial roles across a wide range of applications. From their use in medicine to manage thyroid disorders as well as their contributions in the industrial processes and scientific research, these compounds demonstrate the diversity and potential of sulfur-containing organic molecules.

Their retention and separation necessitate a specialized column and/or mobile phase. Here, we show a very simple approach using an isocratic method with UV detection that allows for quick and efficient separation of the most common thiourea derivatives. Primesep P column used in the method is a unique mixed-mode column with cation-exchange properties and capable to pi-pi interaction with aromatic molecules.

Having a small amount of phosphoric acid as the only ionic modifier in the mobile phase simplifies mobile phase preparation.

If speed of analysis needs to be further increased, smaller particles and a shorter column can be used. This separation material is also available in a solid core particle format.

The method can be used for many other polar molecules.

Visit www.sielc.com to learn more about Primesep P column.