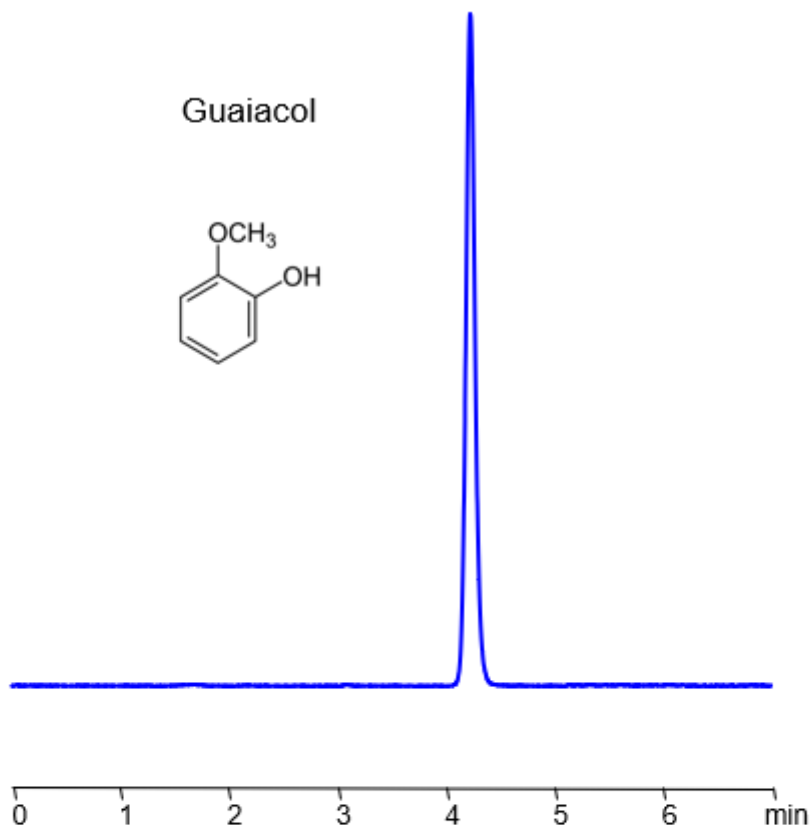


HPLC Method for Analysis of Guaiacol on Primesep 100 Column

<https://sielc.com/hplc-determination-of-guaiacol>

Chromatogram



Column:	Primesep 100
Column size:	4.6 × 150 mm, 5 µm
Column part number:	100-46.150.0510
Mobile phase:	MeCN – 10%
Buffer:	H ₂ SO ₄ - 0.2%
Flow rate:	1.0 mL/min
Detection:	UV 200, 275 nm

Description

Guaiacol is an organic compound with the chemical formula C₇H₈O₂. It is a naturally occurring substance derived from guaiacum or wood creosote and it is known for its characteristic smoky odor. It can be naturally found in guaiacum wood, creosote, and certain plants or produced synthetically through the methylation of catechol or other methods. Guaiacol appears as a colorless to pale yellow aromatic oil. It is used in various foods as a smoky flavoring. Medically, it has been used in expectorants and antiseptics. Guaiacol derivatives are also used in the pharmaceutical industry. It also serves as a precursor for the synthesis of other chemicals, such as vanillin. It is a phenolic compound, specifically a methoxyphenol. It has a molecular structure consisting of a benzene ring with methoxy (-OCH₃) and hydroxyl (-OH) groups attached. UV spectra of Guaiacol and

information about its various lambda maxima by visiting the following link.

Guaiacol can be retained 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 210 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, 275 nm
Peak Retention Time	4.21 min
Class of Compounds	Phenols
Analyzing Compounds	Guaiacol

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)