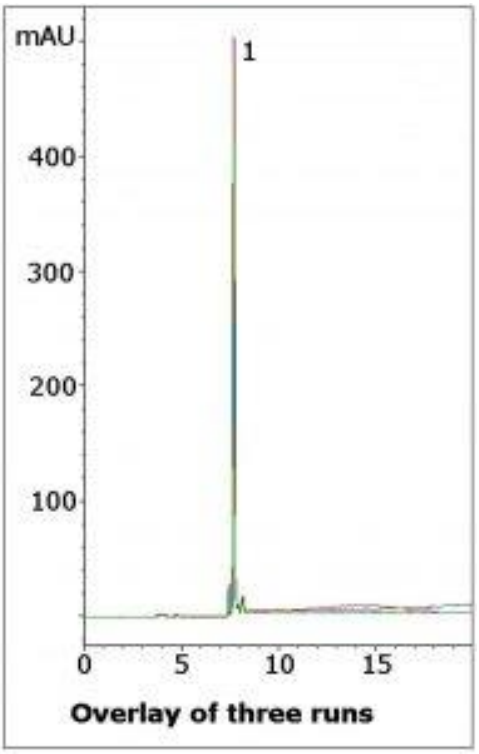
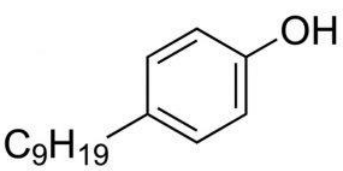
Nonylphenol Analyzed by HPLC - AppNote

Separation of Isomer Peaks

Nonylphenol is a very hydrophobic compound and is suitable for analysis by Normal Phase. It is produced commercially by Acid-catalyzed Alkylation of Phenol with a mixture of nonenes. Therefore a variety of product isomers are possible, with different branching of the C9 group and position of the chain on the ring.

Normal Phase HPLC is well-suited to isomer separations and in this method, separation was observed between the main peak and two smaller peaks. Three runs are shown to illustrate the repeatability, which is often a concern with Normal Phase Methods that use ordinary Silica Columns.





Main Peak:

Nonylphenol

Method Conditions

Column: Cogent Silica-C™, 4µm, 100Å
Catalog No.: 40000-10P

Dimensions: 4.6 x 100mm

Mobile Phase:
A: Ethyl Acetate
B: Hexane

Gradient:

Time *(minutes)*	%B
0	100
4	100
19	90
20	100

Post Time: 3 minutes
Injection vol.: 1µL
Flow rate: 1.0mL / minute
Detection: UV @ 277nm

Sample Preparation: Nonylphenol reference standard dissolved in a Hexane diluent.
t_0: 1.3 minutes

Note: *Nonylphenols are used in synthesis as a starting material for various surfactants. They are subjected to Ethoxylation to produce Alkyl-Phenol Ethoxylates.*

COGENT HPLC Columns™

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