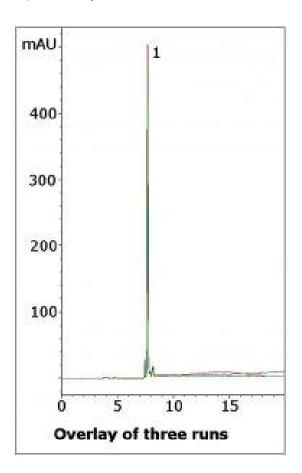


Nonylphenol Analyzed by HPLC - AppNote

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.



Nonylphenol

Method Conditions

Column: Cogent Silica-C™, 4µm, 100Å

Catalog No.: <u>40000-10P</u> **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.

t₀: 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.



Attachment

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Tel: (732) 380-8900 Fax: (910) 769-9435 Email: customers@mtc-usa.com

Website: www.mtc-usa.com