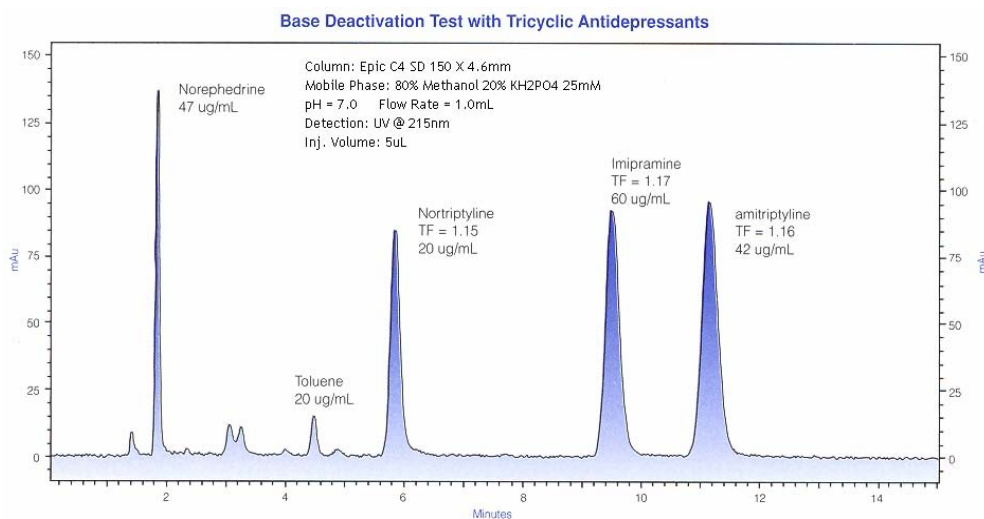


At ES Industries we have developed the Epic line of HPLC columns to meet the demands of the most challenging chromatographic applications. The superior performance of the Epic line of HPLC column packing materials is the product of high density (HD) bonding. Through refinements in our process and catalyst development we have achieved bonding densities in excess of 4 $\mu\text{mol}/\text{m}^2$. This breakthrough HD methodology affords the HPLC chromatographer both the performance and flexibility to carry the HPLC analysis from the method development stage through quality control implementation. With our Epic line of packings the chromatographer is now in control of the chromatography.

The Epic C4 SD column allows the chromatographer to make complete adjustments of organic modifier, buffer selection and pH range. In addition, it is compatible with all LC-MS mobile phases and buffer systems. By controlling these parameters development of high resolution rugged HPLC analysis are no longer the products of compromise. We have applied our HD bonding to C4 SD stationary phase to give the chromatographer the ultimate in flexibility. Epic C4 SD uses an ultra-high purity metal free spherical silica support. The unique chemical structure provides for stable retention under high aqueous conditions as well as provide the best peak shape for the most difficult to chromatograph amine compounds. In addition Epic C4 SD and all of the Epic products under goes strict quality control testing using our specific test criteria as outlined in our Quality Focus program.

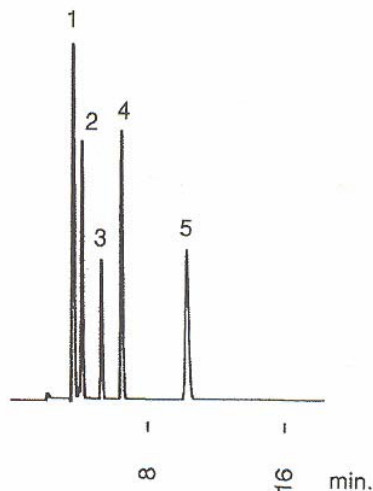
Specifications: Pore Size = 120Å; Surface Area = 350m²/g; Carbon = 12%; pH range = 1-10



Epic C4 SD 5u 150 X 4.6mm

1. Benzamide
2. Phenol
3. Anisole
4. Toluene
5. Anthracene

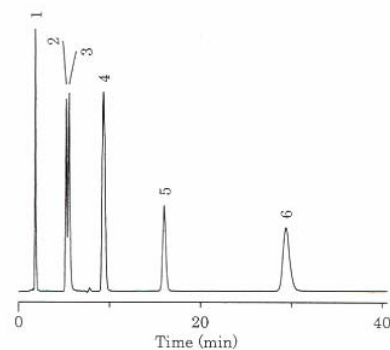
Eluent :
methanol/water
(75/25)
Flow Rate :
1.0mL/min
Detection : uv
@ 254 nm



Analysis of Amitriptyline

Epic C4 SD 5u 150 X 4.6mm

Sample :
Uracil
(0.014mg/mL)
Butyl Paraben
(0.020mg/mL)
Propranolol
(0.48mg/mL)
Dipropyl
Phthalate
(0.20mg/mL)
Naphthalene
(0.10mg/mL)
Acenaphthene
(0.19mg/mL)
Amitriptyline
(0.09mg/mL)
Sample Volume : 5 uL



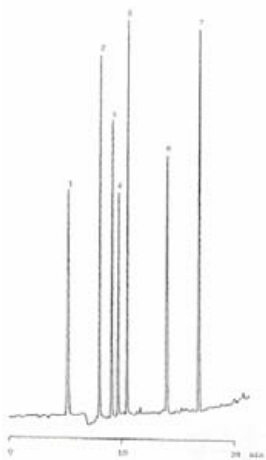
Flow Rate : 1.0mL/min
Eluent : Methanol / 20mM Phosphate buffer
(pH7.0)=65/35
Oven Temp : 40°C
Detector : UV 254nm

Pyrones

Epic C4 SD 5u 150 X 4.6mm

1. 5-Hydroxy-2-hydroxymethyl-4-pyrone
2. 4-Pyrone-2-carboxylic acid
3. 2-Pyrone-5-carboxylic acid
4. 3-Hydroxy-2-methyl-4-pyrone
5. 4-Hydroxy-6-methyl-2-pyrone
6. 3-Hydroxy-2-methyl-4-pyrone propionate
7. 3-Hydroxy-2-methyl-4-pyrone isobutyrate

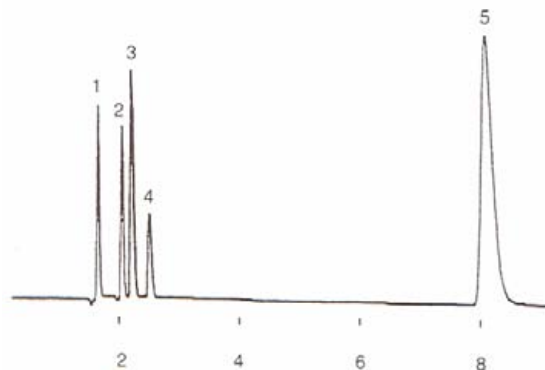
Eluent: A:CH₃CN B:0.05%
H₃PO₄
A/B 0/100 (20 mins) 50/50
Flow Rate: 1.0mL/min
Detector: UV @ 270nm



Cough / Cold Medicine

Epic C4 SD 5u 250 X 4.6mm

1. Maleate
2. Phenylpropanolamine
3. Pseudoephedrine
4. Scopalamine
5. Chorpheniramine
Eluent : AcN/0.05M KH₂PO₄ pH 3.2 (15/85)

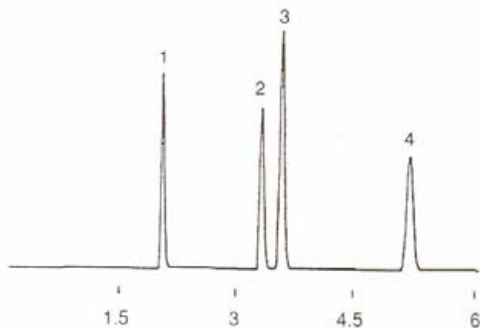


Flow rate : 2.0 mL/min
Detection : UV at 254nm

Anilines

Epic C4 SD 5u 120A 250 X 4.6mm

1. Phenol
2. Dimethylaniline
3. Toluene
4. Diethylaniline



Eluent: Acetonitrile/Water (60/40)
Flow rate: 2.0 mL/min
Detection: UV at 254 nm