

C18

Mechanisms of Separation

Hydrophobic binding interactions

Strength of Interaction

Strong

Shape selectivity

Weak

Target Analytes

Analytes differing in hydrophobicity

Polar, moderately polar, and non-polar analytes

Uncharged acids and bases

Ionized acids or bases using ion-pairing

Recommended Applications

Analytes differing in hydrophobicity

Homologous compounds differing by $-CH_2$

FIGURE 16: Pesticides in Water

Conditions

Column: ACE 3 C18, 150 x 2.1mm
 Part Number: ACE-111-1502
 Mobile Phase: A: 0.1M CH_3COONH_4
 B: MeCN
 Flow Rate: 0.3 mL/min
 Gradient: T(mins) %A %B
 0 90 10
 40 20 80
 47 10 90
 49 90 10
 Temperature: 40° C
 Detection: UV, 220nm (pendimethalin at 245nm)
 Injection Volume: 25µl
 Sample: 0.05µg/l standards in 10:90 MeCN/H₂O

Compounds

1. Desisopropylatrazine
2. Desethylatrazine
3. Simazine
4. Cyanazine
5. Atrazine
6. Internal standard
7. Sebuthylazine
8. Propazine
9. Terbutylazine
10. Prometryn
11. Terbutryn
12. Alachlor
13. Pendimethalin

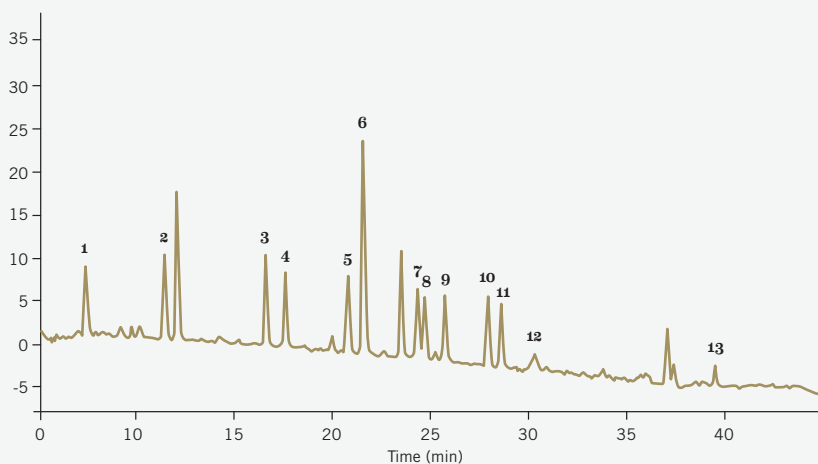


FIGURE 17: Antihistamines and Expectorants

Conditions

Column: ACE 5 C18, 150 x 4.6mm
 Mobile Phase: 45:55 MeOH/20mM KH_2PO_4 (pH 3.0)
 Flow Rate: 1.0 mL/min
 Temperature: Ambient
 Detection: UV, 220nm
 Injection Volume: 0.4µl

Compounds

1. Maleic acid
2. Salicylamide
3. Guaifenesin
4. Guaiacol
5. Chlorpheniramine maleate
6. Dextromethorphan

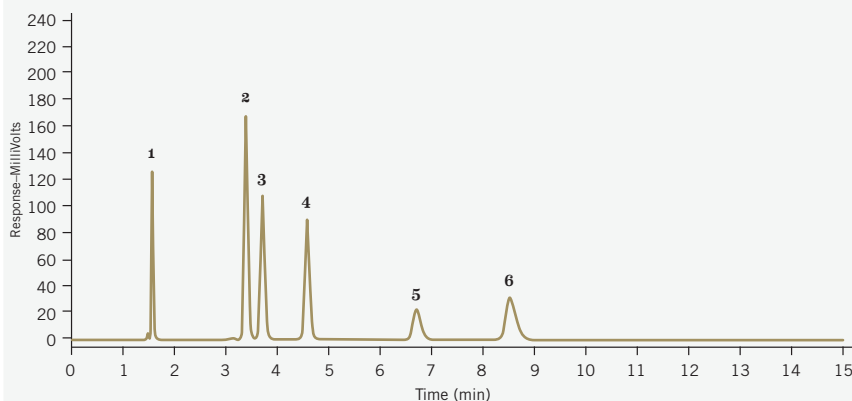


FIGURE 18: Ibuprofen and Related Impurities

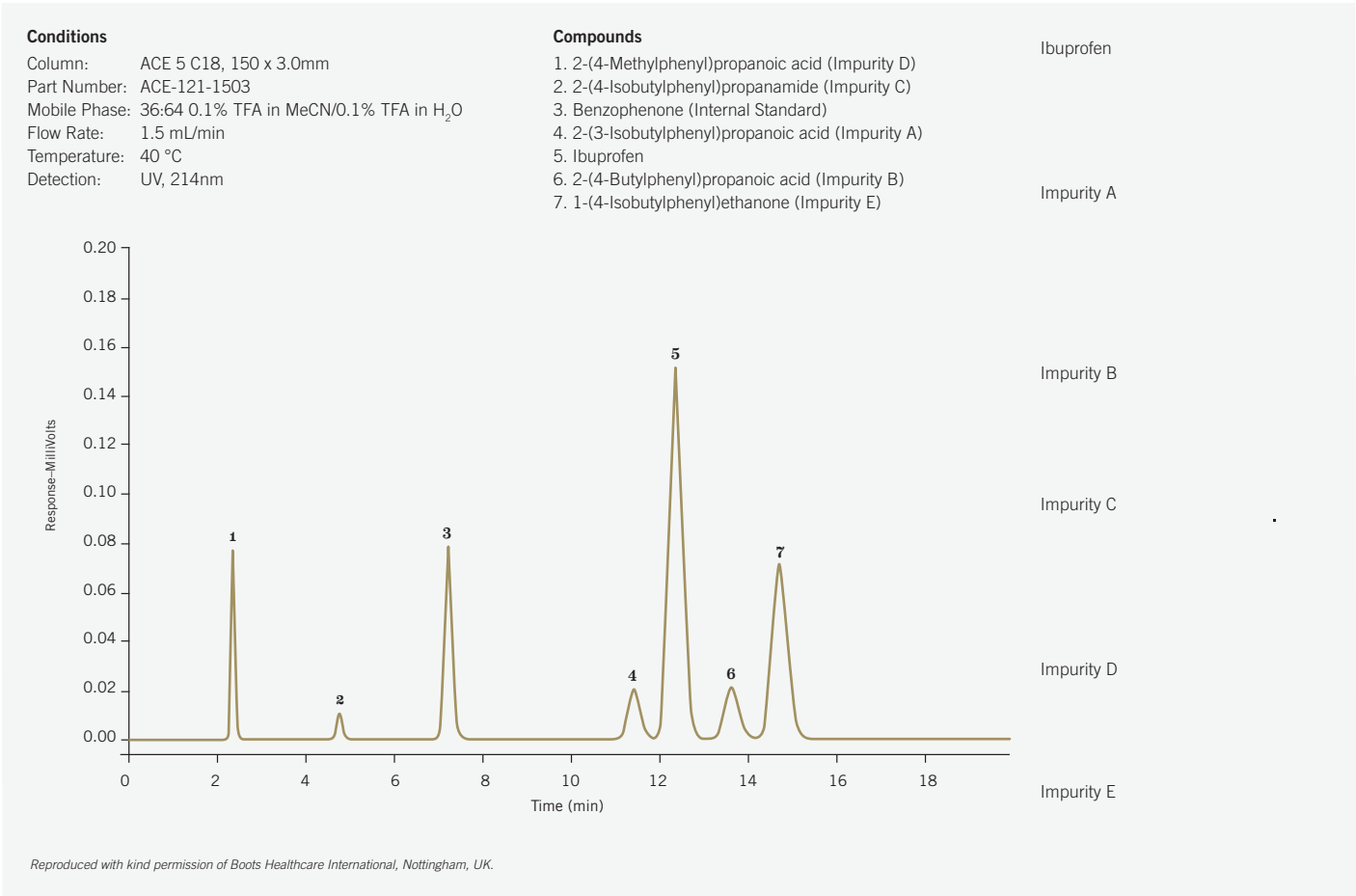


FIGURE 19: Tryptic Digest of BSA

