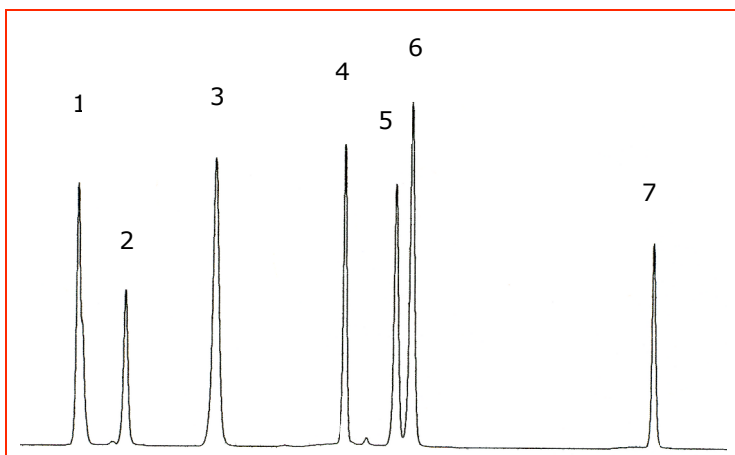


APPLICATION REPORT *astec*

LC003

Drug Discovery Application Separation of Hydrophobic Organic Acids

The result...



1. Cinnamyl Acetate (3.2 min.)
2. Cinnamyl Alcohol (4.1 min.)
3. Cinnamamide (trans-) (5.74 min.)
4. cis-2-Methoxy Cinnamic Acid (8.14 min.)
5. trans-Cinnamic Acid (9.09 min.)
6. trans-2-Hydroxy Cinnamic Acid (9.38 min.)
7. 2-Carboxy Cinnamic Acid (13.86 min.)

Column: CYCLOBOND I 2000 HP-RSP, 250x4.6mm

Gradient System:

A-100% MeOH

B-95/5/0.3/0.2 ACN/MeOH/HOAc/TEA

Time (min.)	%B	Flow
0	100	1
3	100	1
6	80	1
11	80	2
12	40	2
15	40	2
16	100	2
25	100	2

Ref: P.J. Simms et al, J. Chrom. A, 1052.
(2004) 69-75.

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- > Very low or practically insoluble organic acids.
- > Conventionally analyzed by reversed phase C18, but hydrophobic organic acids have low solubility in reversed phase mobile phases.
- > Peak splitting can occur because of precipitation in high aqueous sections of a reversed phase gradient.

The advantages...

- > Method is MS compatible (ESI, negative ionization mode)
- > Highly reproducible – very little loss in retention or resolution over 1500 injections
- > Also works well for fatty acids, sulphonic acids (mono- and di-substituted) and other small organic acids
- > Also separates *cis/trans* isomers

Note: Original work run on CYCLOBOND I 2000, 100x4.6mm column. Astec laboratories determined that the CYCLOBOND I 2000 HP-RSP, 250x4.6mm (Catalog No. 24024) offered the highest selectivity as seen above.