

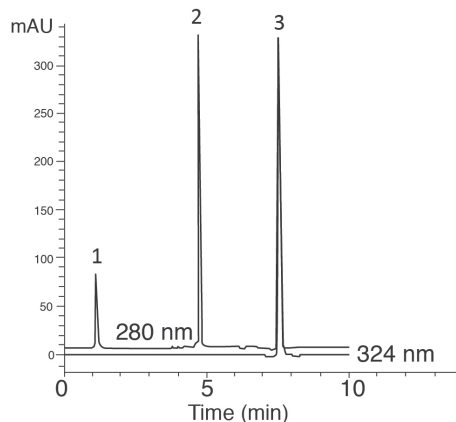
Applications of Cogent TYPE-C™ Columns

Pharmaceutical Applications continued

For many other Pharmaceutical applications go to www.mtc-usa.com and click on Knowledge Base.

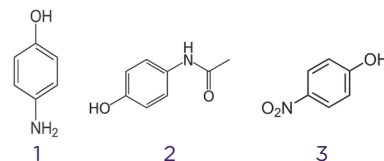
Acetaminophen and Major Impurities by RP

Figure 67.



Method Conditions

Column: **Cogent Bidentate C18™**, 4µm, 100Å
 Catalog No.: 40018-75P
 Dimensions: 4.6 x 75mm
 Mobile Phase: A: DI H₂O/ 0.1% formic acid
 B: Acetonitrile/ 0.1% formic

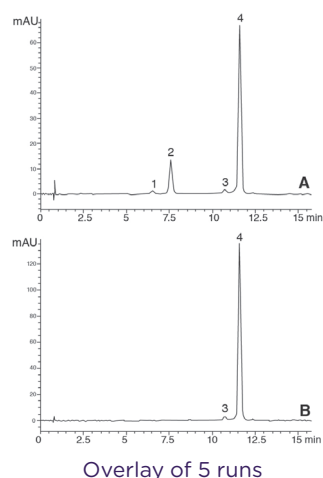


Gradient:	time (min.)	%B
	0	0
	1	0
	4	30
	6	30
	6.01	10
	10	10

Post Time: 3 min
 Injection vol.: 5µL
 Flow rate: 1.0mL/min
 Detection: UV 280 (4-aminophenol, acetaminophen) and 324nm (4-nitrophenol)
 Peaks: 1. 4-aminophenol 1.072 min
 2. acetaminophen 4.668 min
 3. 4-nitrophenol 7.588 min

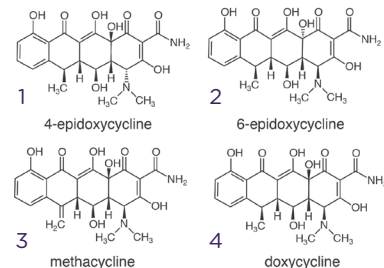
Doxycycline and Epimers using Shape Selectivity

Figure 68.



Method Conditions

Column: **Cogent UDC Cholesterol™**, 4µm, 100Å
 Catalog No.: 69069-7.5P
 Dimensions: 4.6 x 75mm
 Mobile Phase: A: DI H₂O/ 0.1% TFA
 B: Acetonitrile/ 0.1% TFA

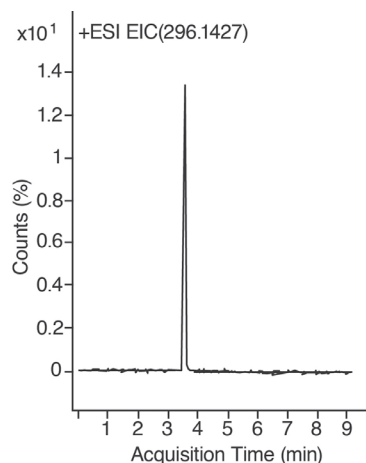


Gradient:	time (min.)	%B
	0	5
	12	30
	13	5

Temperature: 25°C
 Post Time: 3 min
 Injection vol.: 20µL
 Flow rate: 1.5mL/min
 Figures: A: Doxycycline forced degradation extract
 B: Doxycycline non-degraded extract
 Peaks: 1. 4-epidoxycycline
 2. 6-epidoxycycline
 3. methacycline
 4. doxycycline

Sumatriptan Tablets by LC-MS

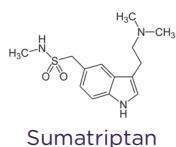
Figure 69.



Method Conditions

Column: **Cogent Diamond Hydride 2.6™**, 2.2µm, 120Å
 Catalog No.: 70200-05P-2
 Dimensions: 2.1 x 50mm
 Mobile Phase: A: DI H₂O / 0.1% (v/v) formic acid
 B: Acetonitrile/ 0.1% (v/v) formic acid
 Gradient:

time (min.)	%B
0	90
4	30
6	30
7	90



Post Time: 3 min
 Injection vol.: 1µL
 Flow rate: 0.4mL/min
 Detection: ESI - POS - Agilent 6210 MSD TOF mass spectrometer
 Sample: Six 25mg strength tablets of Imitrex® were crushed and a portion containing 40mg of the API was weighed out. The powder was suspended in an A:B (1:1) solvent mixture, vortexed, and filtered through a disposable 0.45µm filter (MicroSolv Tech Corp.). Sample for injection was diluted to final concentration of 0.0005µg/mL.
 Peak: Sumatriptan 296.1427m/z [M+NH₃]⁺