



Cogent Diol™

Unique Separation & SFC

Cogent Phase	Particle Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)	Endcapped	Optimum pH Range	Recommended Max. Temp. (°C)	USP Code
Diol	4	100	390	9-10	No	2.0 – 8.0	80	N/A
Diol 2.0™	2.2	120	340	9-10	No	2.0 – 8.0	80	N/A

For further details on 2.0 columns, please see page 25. For ordering information, see page 31.

The Cogent Diol HPLC stationary phase structure has a single, direct silicon-carbon point attachment to the silica-hydride surface. The phase is suitable for the reversed-phase or ANP analysis of polar compounds and is LC-MS compatible. Columns show extremely fast equilibration between gradient runs and have been successfully used in studies of pathways in human pathology and many other studies. Cogent Diol is also suitable for use in SFC.

Figure 24.

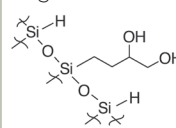
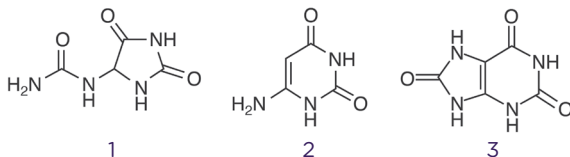
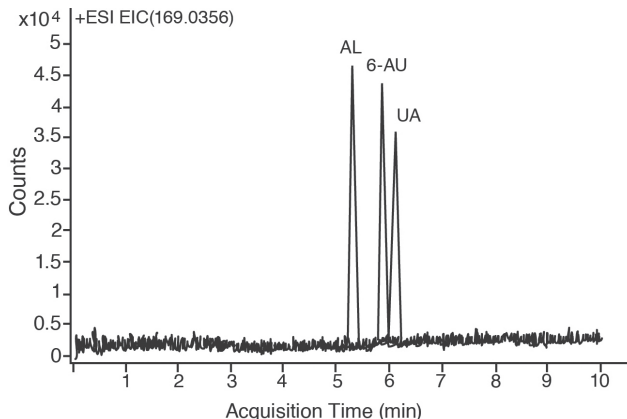


Figure 25. x10⁴ +ESI EIC(169.0356)



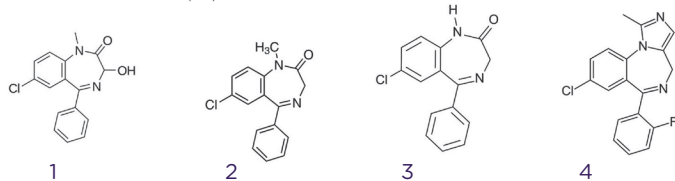
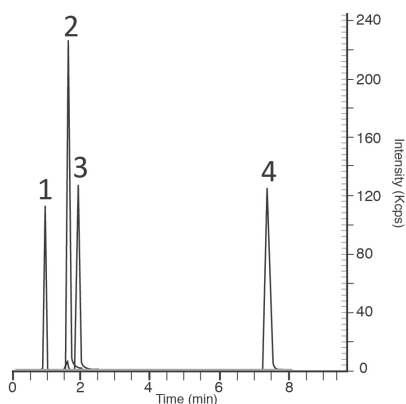
Method Conditions

Column: Cogent Diol, 4µm, 100Å
Catalog No.: 40060-15P-3
Dimensions: 3.0 x 150mm
Mobile Phase: A: DI H₂O / 0.1% formic acid (v/v)
 B: Acetonitrile / 0.1% formic acid (v/v)
Gradient:

time (min.)	%B
0	95
6	30
7	30
8	95

Injection vol.: 1µL
Flow rate: 0.4mL/min
Sample: Standards of the uric acid and its main metabolites were prepared in DI water at concentrations of 20 micro g/mL each. The sample for injection (a mixture of the three compounds) was diluted by a factor of 3.
Peaks: 1. Allantoin 159.0513m/z [M+H]⁺
 2. 6-aminouracil 128.0455m/z [M+H]⁺
 3. Uric acid 169.0356m/z [M+H]⁺

Figure 26.



Method Conditions

Column: Cogent Diol 2.0, 2.2µm, 120Å
Catalog No.: 40260-05P-2
Dimensions: 2.1 x 50mm
Mobile Phase: A: DI H₂O / 0.1% formic acid (v/v)
 B: Acetonitrile / 0.1% formic acid (v/v)
Gradient:

time (min.)	%B
0	85
6	70
7	20
9	20
10	85

Post Time: 3 min

Injection vol.: 1µL
Flow rate: 0.4mL/min
Detection: ESI - Pos - Perkin Elmer AxION 2 TOF mass spectrometer
Peaks: 1. Temazepam 301.0739m/z [M+H]⁺
 2. Diazepam 285.0790 [M+H]⁺
 3. Nordiazepam 271.0633 [M+H]⁺
 4. Midazolam 326.0855 [M+H]⁺

Figure 26 shows the separation of four benzodiazepines in urine by ANP.