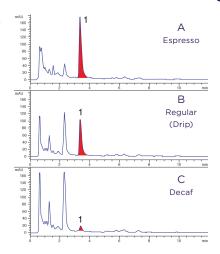
Applications of Cogent TYPE-C™ Columns

Food and Beverage Applications

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

Caffeine Content in Coffee Beverages by RP

Figure 52.



Method Conditions

Column: Cogent Bidentate C18 2.ō™,

2.2µm, 120Å

Catalog No.: 40218-05P-2 Dimensions: 2.1 x 50mm

Mobile Phase:

90% A: DI $\rm H_2O$ / 0.1% formic acid (v/v) 10% B: Acetonitrile/ 0.1% formic acid (v/v)

Injection vol.: 0.5µL

Caffeine

Flow rate: 0.3mL/min Detection: UV 254nm

Samples: Espresso, regular, and decaf coffee beverages were purchased from a local coffeehouse. The samples were filtered with 0.45µm nylon syringe filters (MicroSolv Tech. Corp.). A 1000ppm caffeine

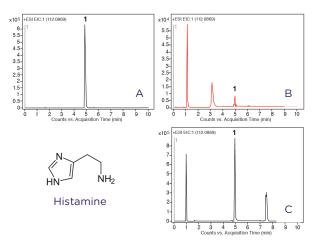
filters (MicroSolv Tech. Corp.). A 1000ppm caffeine reference standard solution was prepared in a diluent of 50/50 solvent A/solvent B. Dilutions were made from this stock solution to obtain concentrations of

100, 200, and 500ppm. t0: 0.8 min

Peaks: 1. Caffeine

Histamine Content of Red Wine by ANP

Figure 53.



Method Conditions

Column: Cogent Diamond Hydride™,

4µm, 100Å

Catalog No.: 70000-15P-2 Dimensions: 2.1 x 150mm Mobile Phase: A: DI H₂O / 0.1% formic acid

B: Acetonitrile/ 0.1% formic acid

Gradient: time (min.)

t:	time (min.)	%B
	0	80
	5	10
	7	10
	8	80

Post Time: 5 min Injection vol.: 1µL Flow rate: 0.4mL/min **Detection:** ESI - POS -Agilent 6210 MSD TOF mass

spectrometer Figures:

Fig. A: Histamine standard (112.0869m/z)

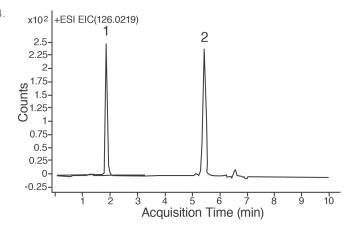
Fig. B: "Low histamine" Red Wine.
Sample was filtered with
0.45um nylon syringe filter
(MicroSolv Tech. Corp.)

Fig. C: "Regular" red wine. In addition to filtering, sample was diluted 1:5 due to strong histamine peak.

Peak: 1. Histamine (112.0869m/z)

Red Bull Energy Drink by ANP

Figure 54.

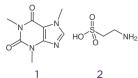


Method Conditions

Column: Cogent Diamond Hydride™,

4µm, 100Å

Catalog No.: 70000-15P-2
Dimensions: 2.1 x 150mm
Mobile Phase: A: DI H₂O / 0.1%
formic acid (v/v)
B: Acetonitrile / 0.1%
formic acid (v/v)



Gradient:

time (iiiii.)	70 D
0	95
1	95
6	30
7	30
8	95

Temperature: 25°C Post Time: 3 min Injection vol.: 1µL Flow rate: 0.4mL/min Detection: ESI - POS -Agilent 6210 MSD TOF mass spectrometer Peaks: 1. Caffeine 195.0877 m/z [M+H]* 2. Taurine 126.0219 m/z