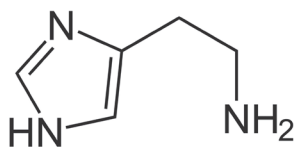
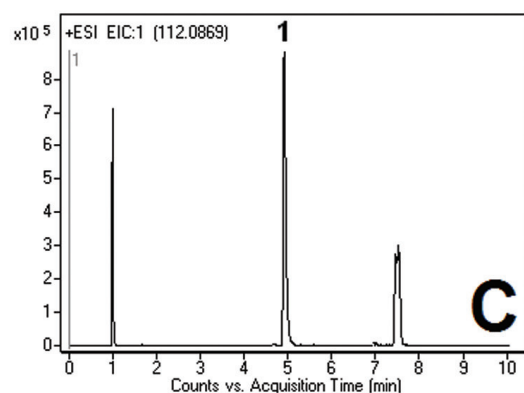
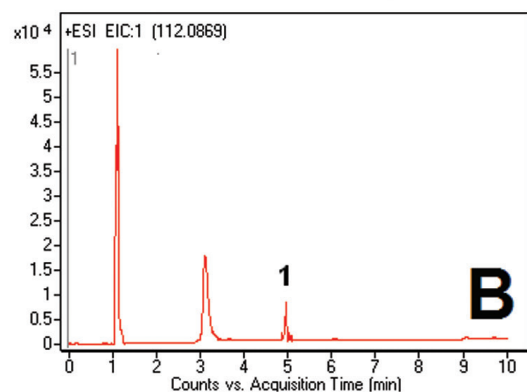
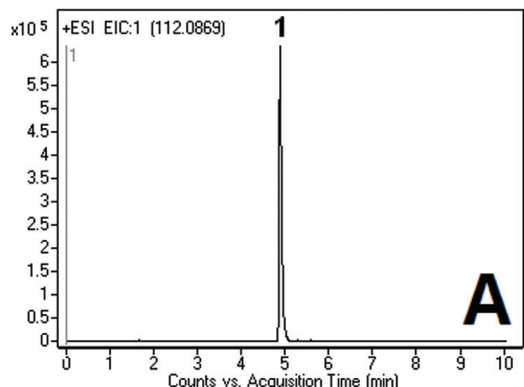


Demonstrating Low Histamine Content in Red Wine

Evidence of quality from real wine samples



Histamine

Method Conditions

Column: Cogent Diamond Hydride™, 4 μ m, 100Å

Catalog No.: 70000-15P-2

Dimensions: 2.1 x 150 mm

Mobile Phase: A: DI H₂O / 0.1% formic acid

B: Acetonitrile / 0.1% formic acid

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

Post Time: 5 min

Injection vol.: 1 μ L

Flow rate: 0.4 mL/min

Detection: ESI - POS - Agilent 6210 MSD TOF mass spectrometer

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

Fig. B: "Low histamine" red wine. Sample was filtered with 0.45 μ m 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 (112.0869 m/z)

t₀: 0.9 min

Discussion

Two red wine samples were tested for histamine using the Cogent Diamond Hydride column in an LC-MS method. The wine shown in Figure B was claimed to have virtually no histamine but had no analytical evidence to support it. The claim was verified using this simple LCMS method that produces an excellent histamine peak. The other wine in Figure C had to be diluted 5x, and even still the histamine peak was much larger than in Figure B.

The data shows that there are significant quantitative differences in the histamine content of various wines. Observing these differences is made possible using the Cogent Diamond Hydride column. The names of the two wineries are available upon request.