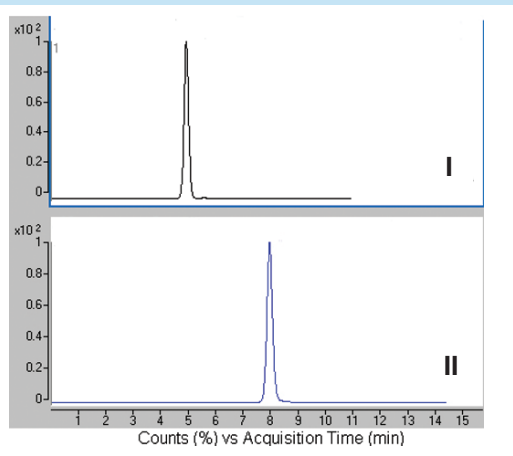
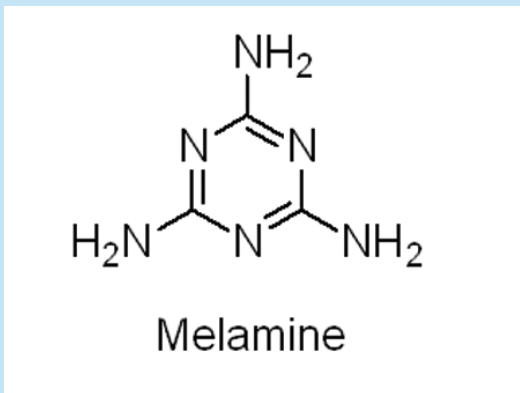


## Melamine at Trace Levels



**Note:** Several dogs and cats died or were seriously ill after consumption of pet foods which had been manufactured with adulterated wheat gluteins. After testing of the wheat gluteins it was determined that they contained significant levels of melamine and/or several related compounds. There is a need for an accurate and simple analytical method for health hazard evaluation of melamine, especially after traces of this compound were found in baby food as well.

**LC-MS method for analysis of trace levels of melamine. Excellent retention with simple MS compatible mobile phase**

### Method Conditions

**Column:** Cogent Diamond Hydride™ 4µm, 100Å.  
**Catalog No.:** 70000-15P-2  
**Dimensions:** 2.1 x150 mm  
**Solvents:** A: DI water + 0.1% formic acid  
 B: Acetonitrile + 0.1% formic acid  
**Mobile phase:** I: 60% B, isocraic  
 II: 70% B, isocraic  
 t<sub>0</sub> = 1.44 min  
**Flow rate:** 0.4 mL/min.  
**Sample:** Melamine m/z 127 (M<sup>+</sup>H<sup>+</sup>)  
 (166.7 µg/mL of compound in 50% acetonitrile / DI water + 0.1% acetic acid. Run 1:1000 dilution in 80% acetonitrile / DI water +0.1% acetic acid).  
**Injection:** 5 µL  
**Detection:** ESI – pos - Agilent 6210 MSD TOF MS.

### Discussion

In this application, melamine was analyzed under ANP conditions using a Cogent Diamond Hydride™ column. A high percentage of acetonitrile used in the mobile phase shows an increased sensitivity for the analyzed compound. The method is suitable for detection of melamine at trace levels. The unique chemical properties of melamine (base functionalities, causing the predominant form of the compound to be pH dependent) present challenges in obtaining retention and adequate sensitivity, when using LC-MS on standard HPLC columns.

For more information visit [www.MTC-USA.com](http://www.MTC-USA.com)

Cat. No.	Description
70000-15P-2	Cogent Diamond Hydride™HPLC Column, 100Å, 4µm, 2.1 x 150 mm