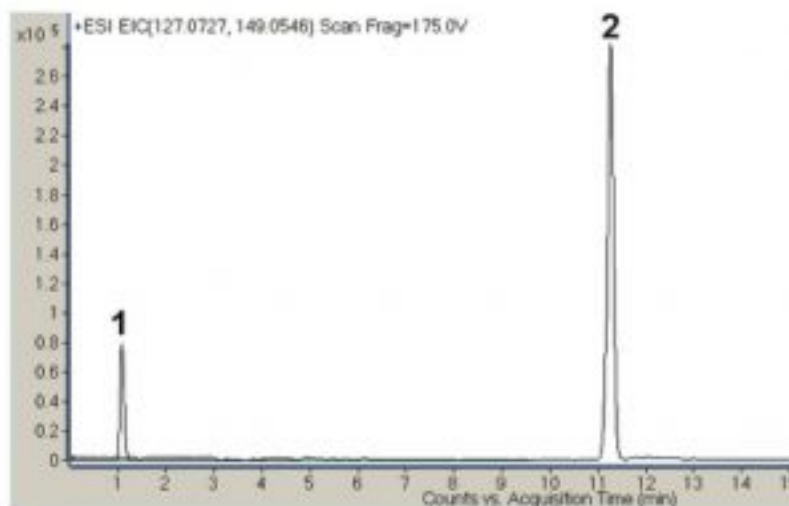
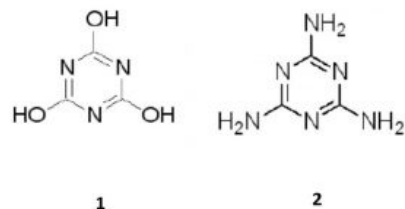


Cyanuric Acid and Melamine Analyzed with LCMS - AppNote

Simple Gradient Method with MS Detection

This Method by LCMS detection eliminates derivatization which may be necessary with GCMS Methods. Reversed Phased Methods may run into poor separation of the small and very polar Melamine, resorting to ion pairing reagents to improve separation. The use of these ion pairing reagents counterintuitively results in ionization suppression of the MS source.





Peaks:

1. Cyanuric acid NEG (M-H)⁻ 128.0102 m/z
2. Melamine POS (M+H)⁺ 127.0727 m/z

Method Conditions

Column: Cogent Diamond Hydride™, 4μm, 100Å

Catalog No.: 70000-15P-2

Dimensions: 2.1 x 150mm

Mobile Phase:

A: DI Water + 0.1% Acetic Acid

B: Acetonitrile + 0.1% Acetic Acid

Gradient:

Time (minutes)	%B
0	100



15

50

Post Time: 5 minutes

Flow rate: 0.4mL / minute

Detection: Agilent 6210 MSD TOF Mass Spectrometer

t₀: 0.8 minutes

Notes: Melamine is not a food product but was found in the past in pet food and also in infant food formulas. It was alleged that Melamine was added intentionally to protein products to gain protein content (testing is for Nitrogen content). Melamine itself has low or no toxicity however Melamine production byproducts often contain Cyanuric Acid, which together with Melamine causes toxicity (by forming insoluble crystals in the kidneys). Due to the adverse effects of Melamine/Cyanuric Acid contamination imported products for infants have to be tested for the presence of these potentially harmful compounds.



Attachment

No 93 Simple Method for Determinations of Cyanuric Acid and Melamine pdf 0.2 Mb [Download File](#)