



# Automated Extraction of Aflatoxin M<sub>1</sub> from Milk According to AOAC Method 2000.08 Using the Gilson GX-271 ASPEC® System

Application Note FB0916

## Talking Points

### What is the challenge or hurdle that is being faced by the researcher?

Mycotoxins are found as contaminants in a variety of foods. Regulatory agencies throughout the world categorize aflatoxin as a serious health risk and have established maximum levels for the occurrence of this toxin in food products. Food testing laboratories face the challenge of meeting regulatory requirements and implementing reliable and reproducible methods for identification of toxins and other hazards in order to ensure a safe food supply.

### How does this product enable the researcher to generate reliable and reproducible results?

The Association of Official Analytical Chemists has established a method for detection of Aflatoxin M<sub>1</sub> in milk. Sample preparation by this method requires cleanup by immunoaffinity column and analytical chromatography with fluorometric detection. The Gilson GX-series of automated solid phase extraction cartridge (ASPEC®) liquid handlers was used to automate the sample preparation and cleanup method, freeing skilled personnel for more valuable tasks.

### What are the data that demonstrate the Gilson product solution?

The results (Table1) are in accordance with current regulations in terms of recovery levels, intermediate precision, and repeatability. LOD and LOQ are in agreement with published norms. Figure 3 shows the simplicity of the automation on the GX-271 ASPEC®. Figure 4 shows a chromatogram for Aflatoxin M<sub>1</sub> purified using this method.

## Intended Audience

- Food Testing Laboratories and Regulatory Agencies
- Labs currently isolating Aflatoxin M<sub>1</sub> via a manual method
- Suppliers of Immunoaffinity columns



## Configuration

- GX-271 ASPEC (PN: 2614007)