

NEW!

LC-MS/MS ANALYSIS OF AFLATOXIN M1 in MILK

Jasem® Method: A Big Step forwards in time and result

® Patent pending

Why is all over the world medical interest in Aflatoxin M1 so rapidly growing ?

Aflatoxins are a group of mycotoxins produced by certain fungi, especially Aspergillus flavus and A. parasiticus. There are four major naturally occurring aflatoxins: B1, B2, G1 and G2. Among them, aflatoxin B1 (AFB1) is notoriously the most common and toxic. The International Agencyfor Research on Cancer (IARC) (1993) of the World Health Organization (WHO) classified AFB1 as a Group 1 human carcinogen. Aflatoxin M1 (AFM1) is the hydroxylated metabolite of AFB1. For the first time, AFM1 was found in the milk of lactating animals that consume feedstuffs contaminated with AFB1 in the 1960s. For aflatoxin M1, the Scientific Committee for Food concluded that there is sufficient evidence that aflatoxin is notoxic carcinogen; its carcinogenic potency is estimated to be approximately 10 times lower than aflatoxin B1.

The European Community prescribes that the maximum level of AFM1 in liquid milk should not exceed **0.05 ppb** (European Commission 2001). Such low limits require highly sensitive methods for the detection and quantification of AFM1 in milk.

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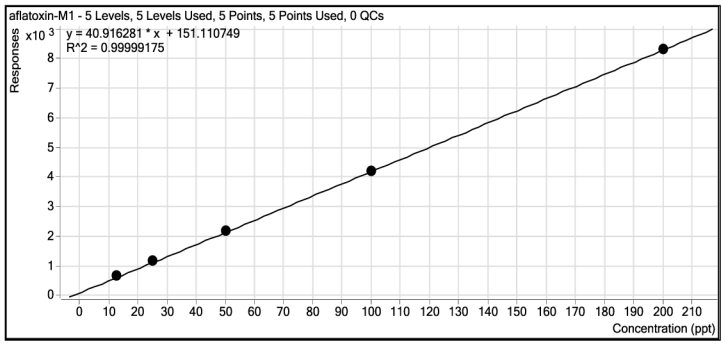
Features of Jasem® method

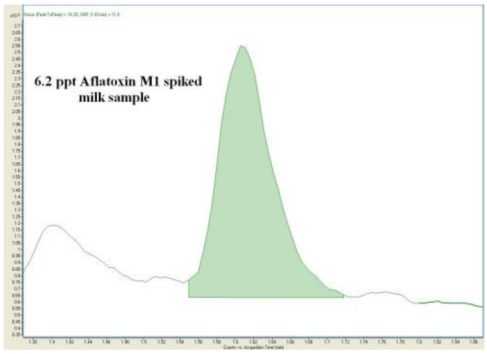
Benefits & Advantages of Jasem® method

- Very easy sample preparation
- No need for immunoaffinity column extraction
- Short run time
- Preventing source contamination

- Fast and easy sample preparation time 4 minutes (ref. method 1-1.5 hours)
- Lower cost of sample preparation step
- No need for cleaning and concentration steps
- Short run time with 6 minutes
- MS/MS method more selective and sensitive than standard LC-UV method

Aflatoxin M1 calibration curve from 12.5 ppt to 200 ppt





	R^2	LOQ (ppt)	LOD (ppt)
Aflatoxin M1	**0.9999**	**5**	**2**

Present Reference Method: AOAC (Association of Official Analytical Chemists) Official Method 2000.08 "*Aflatoxin M1 in Liquid milk".* This method is Immunoaffinity Column-Liquid Chromatographic-UV Method with at least 1-1.5 hours sample preparation time. Reference method is applicable to determination of aflatoxin M1 in liquid milk at >20 ppt.

Jasem® Method: Only **4** minutes sample prep time and **6** minutes LC-MS/MS run time!

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