

Promote Urine AFM1 sub ppb preparation skill with immune affinity

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**Introduction:** There are strengthens potential to jump over to answering the need of urine AFM1 for public services

**Background:** high prevalence of AFB1 exposure in wet n warm climate countries associated with health burden need to convince peoples and doctors in promotion. **Problem:** marketing of LC tandem MS are not synergies with skill training in preparation of urine samples. **Objective:** Competitor in analyzer should be diminish and preparation skill should be promoted in quantifying AFM1 in sub ppb for public services.

**Method:** case report on sub ppb urine sample preparation

**Result:** 1. ppb not sub ppb 2. Six samples preparation/day

vs. min 120 sample/day till 1000 sample/day. 3. Quantification vs. qualification of AFB1/AFB1; AFG1/AFG2; AFM1/AFM2; other mycotoxin

**Discussion:** theory and hands on in IMERI/ medical physics department on purification, filtration, bound to IAC, washing with UP water; drying, the making of Eluent, Evaporation with Nitrogen Gas, Mobile Phase 1 ml,

**Conclusion:** 1 analyzer center minimal 100 preparation/ day and 15 preparation center near primary care because maximum each six preparation/ day last 6-8 hour for the immune affinity preparation.

**Keywords:** large amount sample for analyzing, very low amount of preparation, urine AFM1 for public services

1. Warth B, Sulyok M, Fruhmann P, Mikula H, Berthiller F, Schuhmacher R, et al. Development and validation of a rapid multi-biomarker liquid chromatography/tandem mass spectrometry method to assess human exposure to mycotoxins. *Rapid Commun Mass Spectrom RCM* 2012;26(13):1533–40.

2. Mitchell NJ, Kumi J, Johnson NM, Dotse E, Marroquin-Cardona A, Wang J-S, et al. Reduction in the urinary aflatoxin M1 biomarker as an early indicator of the efficacy of dietary interventions to reduce exposure to aflatoxins. *Biomarkers Biochem Indic Expo Response, Susceptibility To Chem* 2013;18(5):391–8.

3. Jonsyn-Ellis FE. Seasonal variation in exposure frequency and concentration levels of aflatoxins and ochratoxins in urine samples of boys and girls. *Mycopathologia* 2001;152(1):35–40.