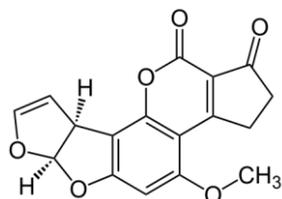


**Standard solution**

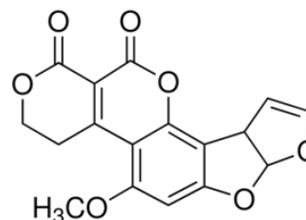
known concentration of Mycotoxin

Order-No: CH-03-L1-001

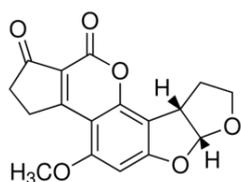
Lot: xxx xxx xxx xxx



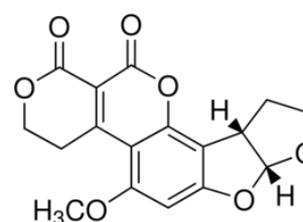
*Aflatoxin B1 (AFLA B1)*



*Aflatoxin G1 (AFLA G1)*



*Aflatoxin B2 (AFLA B2)*



*Aflatoxin G2 (AFLA G2)*

**Specification:**

Substance / Concentration/  
CAS-No.:

Aflatoxin B1 1 µg/ml, CAS-No.: 1162-65-8  
Aflatoxin B2 1 µg/ml, CAS-No.: 7220-81-7  
Aflatoxin G1 1 µg/ml, CAS-No.: 1165-39-5  
Aflatoxin G2 1 µg/ml, CAS-No.: 7241-98-7

Diluted in:

Acetonitrile, CAS-No.: 75-05-8

Volume:

1 ml

Storage conditions:

dark, at 2-8°C

Expiry date:

1 year after delivery

Certification:

Values are based on weight amount, purity and dilution steps, and confirmed by Kinetic Fluorescence Polarization.

Uncertainty in accordance with ISO Guide 31, ISO Guide 35 and Eurachem/CITAG Guides.

AFLA B1: ± 0.06 µg/mL

AFLA B2: ± 0.06 µg/mL

AFLA G1: ± 0.06 µg/mL

AFLA G2: ± 0.06 µg/mL

Calculation of uncertainty: (After the concentration of the gravimetric prepared solution was confirmed by kinetic fluorescent polarization, the uncertainty of the calibrant solution was calculated on the basis of preparation)	Uncertainty components	Description	Standard uncertainty (u)	
	Purity (P) of solid Aflatoxin B1	P = 100.0% ± 0.3%	u(P) = 0.3%	a
Purity (P) of solid Aflatoxin B2	P = 99.88% ± 0.02%	u(P) = 0.2%		
Purity (P) of solid Aflatoxin G1	P = 99.8% ± 0.2%	u(P) = 0.3%		
Purity (P) of solid Aflatoxin G2	P = 99.72 ± 0.3%	u(P) = 0.1%		
Weighing procedure weighted samples: m <sub>ws</sub> = 1 mg	repeatability: 0.03 mg linearity: 0.01 mg	u(m) = 0.03 mg	b	
Dilution procedure Performed by volume V <sub>fl</sub> = 1000 mL	calibration: 10 mL ± 0,01 mL repeatability: 0.01 mL	u(cal) = 0.02 mL u(rep) = 0.01 mL u(Vol.exp.) = 0.205 ml u(V) = 0.222 mL	c d e f	

<sup>a</sup> Maximum tolerance of purity (rectangular distribution) was divided by  $\sqrt{3}$   
<sup>b</sup> Estimation of this u-value is based upon the values for repeatability and linearity described in the user manual of the microbalance  
<sup>c</sup> A triangular distribution (division by  $\sqrt{6}$ ) was chosen for the calculation of u(cal)  
<sup>d</sup> Based on a series of ten weigh experiments; the value was used directly as a standard deviation  
<sup>e</sup> Based on the density of 0.7857 g/cm<sup>3</sup> at temperature T = 20°C and a maximum temperature variation of ± 3°C, of volume expansion, relative volume expansion coefficient of acetonitrile is 1370 \* 10<sup>-6</sup>/°C, volume expansion term (rectangular distribution) was divided by  $\sqrt{3}$   
<sup>f</sup> The three contributions are combined to give the u (V) =  $\sqrt{u(cal)^2 + u(rep)^2 + u(Vol.exp.)^2}$

Calculation of the combined uncertainty u<sub>c</sub> and the expanded standard uncertainty U:

$$c_{toxin} = \frac{m_{ws} \times P}{V_f} = 1 \mu\text{g/ml}$$

$$\frac{u_c(c_{toxin})}{c_{toxin}} = \sqrt{\left[\frac{u(P)}{P}\right]^2 + \left[\frac{u(m)}{m_{ws}}\right]^2 + \left[\frac{u(V)}{V_f}\right]^2} = 0.03$$

$$u_c(c_{toxin}) = c_{toxin} \times 0.03 = 1 \mu\text{g/mL} \times 0.03 = 0,03 \mu\text{g/ml}$$

Expanded uncertainty

$$U(c_{toxin}) = u(c_{toxin}) \times 2$$



225-H302-H312-H319-H332

P210-P280-P305 + P351 + P338

**Toxic and flammable.**

Contains: Aflatoxin B1, B2, G1, G2,  
Acetonitrile  
Volume: 1mL

Highly flammable liquid and vapour. Harmful if swallowed. Harmful in contact with skin. Causes serious eye irritation. Harmful if inhaled.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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