Aflatoxin Purification Magnetic Particles Kit
PRODUCT DATA SHEET

Aflatoxin Purification Magnetic Particles Kit

Description

Aflatoxins are toxic metabolites of fungi such as *Aspergillus flavus* and *Aspergillus parasiticus*, with strong carcinogenicity, mainly found in cereals, nuts, cottonseeds, vegetable oils, and some products related to human blood and animal feed. Aflatoxins mainly include 4 kinds, respectively: B1, B2, G1, G2, of which the most toxic is Aflatoxins B1 (AFB1), it is the World Health Organization prescribed Ⅰ carcinogens, the toxicity is 68 times that of arsenic, is the first of the three pathogenic factors of liver cancer. Aflatoxin M1 is a hydroxylated metabolite of aflatoxin B1 and a strong carcinogen. Milk and its products are easily contaminated by aflatoxin M1. Therefore, accurate and rapid detection of aflatoxin content in food and feed is of great significance for food safety monitoring.

Aflatoxin purification magnetic bead kit is an economical and fast tool for detecting aflatoxin. Abvigen can provide high quality aflatoxin purification magnetic bead kits, the product has high repeatability between batches, which can meet the needs of different personalized materials such as research and development, testing and production of various customers.

For custom sizes, formulations or bulk quantities please contact our customer service department.

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Intended use

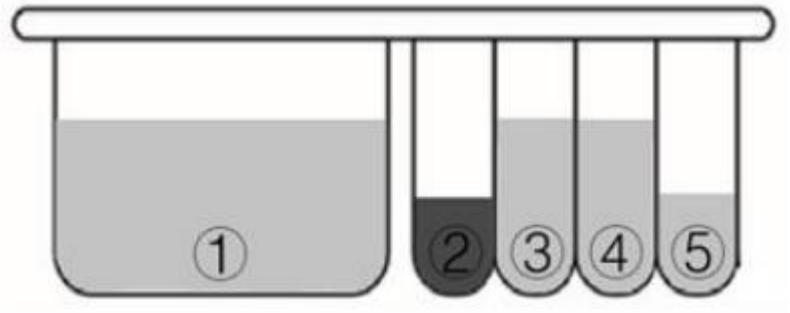
This product is suitable for purifying aflatoxin in feed samples.

Test principle

The purification principle of this product is to extract the aflatoxin in the sample, adsorb the aflatoxin specific in the extraction liquid on the magnetic bead surface of the aflatoxin antibody, use the external magnetic field to complete the whole process of target enrichment, impurity cleaning and target elution, with different terminal detection methods (high performance liquid chromatography, ultra-high performance liquid chromatography, liquid mass spectrometry, etc.), can quickly, high throughput, high precision detection of aflatoxin content in samples.

Major component

This product includes 20 pre-divided slats, 2 magnetic rod sets and 1 manual.



The components in the pre-assembled slats are as follows:

Hole site	Constituent
①	Diluent
②	Magnetic bead solution
③	Cleaning solution 1
④	Cleaning solution 2
⑤	Eluate

Storage conditions and expiration date

It is valid for 12 months at 2~8°C.

Material preparation

Equipment and Consumables

Fungal toxin fully automatic purification instrument

HPLC/UPLC, equipped with PDA or UV detector and data processing system

Derivative devices: such as photochemical derivators, electrochemical derivators, iodine derivators

Balance: Sensitivity 0.1 mg and 0.01 g

Mill: motor speed ≥ 1000 r/min

Screen: 20 mesh

Vortex oscillator

Centrifuge tube: 50 mL/1.5 mL

Measuring cylinder: 100 mL

Syringe: 2 mL/1 mL

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One set of single channel pipette: the maximum measuring ranges are 20 µL, 100 µL, 200 µL and 1000 µL respectively

Chromatographic sample bottle: 2 mL

Internal cannula

Filter membrane: Filter 0.22 µm organic phase

Usage method

1 Preparation of extraction solution

2 Sample Treatment

After the solid sample is ground with a grinder, the solid sample is accurately weighed with 5g (accurate to 0.01 g) of the solid powder or liquid sample in a 50 mL centrifuge tube, and 20 mL of the extraction liquid is added, and the sample is vorticated for 20 min, and then centrifuged at 7000 r (or allowed to settle naturally) for 5 min.

3 Sample purification

Use a 1 mL pipette gun to accurately remove extraction superserum and add it into the sample hole (1 hole) of the kit, put the kit into the mycotoxin automatic purifier and start the instrument. After the self-test is completed, enter the program quick interface, select purification program, and click Run.

Note: Make sure that the 1 hole is located on the left side of the instrument base. Incorrect placement will not only fail the experiment but also cause damage to the instrument.

4 Machine Extraction

Accurately remove eluent from 5 Wells, slowly blow the eluent to near dry with nitrogen at 55°C, accurately add 0.4 mL of initial mobile phase, swirl for 30 s to dissolve the residue, filter with 0.22 µm filter membrane, collect filtrate in sample vial (including internal intubation) for sample injection.

Note: Sample concentration = on-machine detection concentration * dilution ratio.

5 Computer Test

Notes

(1) The kit should be stored at 2-8°C, not frozen, and restored to room temperature before use;

(2) Pay attention to check the validity period of the kit before use, do not use after expiration;

(3) When the toxin content in the sample is higher than the maximum detectable amount, the volume of extracted liquid added at 1 well should be appropriately reduced and re-detected.

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(4) Use as soon as possible after tearing and sealing, so as not to reduce the accuracy of solvent volatilization;

(5) It is recommended to use certified matrix standard substances or quality control samples for quality control to ensure reliable process;

(6) Keeping the solvent consistent with the mobile phase during detection can eliminate the influence of the solvent effect;

(7) Mycotoxins can cause cancer, should wear gloves, masks and other protective equipment operation. Used containers and mycotoxin solution are soaked overnight in sodium hypochlorite solution (5% V/V);

(8) Do not use the pre-loading plate if it is found to leak.

(9) If the magnetic beads of this product are reunited, it is a normal phenomenon and does not affect normal use.

Ordering Information

Website: www.abvigen.com

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