Vomitoxin Purification Kit
PRODUCT DATA SHEET

Vomitoxin Purification Kit

Description

Deoxynivalenol is a toxic secondary metabolite produced by toxigenic fungi under suitable environmental conditions, and widely exists in agricultural products, food and feed products. Deoxynivalenol can cause acute or chronic poisoning in humans and animals. It is carcinogenic and teratogenic, and has a serious impact on human and animal health. Therefore, accurate and rapid detection of vomitoxin content in food and feed is of great significance for food safety monitoring.

Vomitoxin purification magnetic bead kit is an economical and fast tool for detecting vomitoxin. Abvigen can provide high quality vomitoxin 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.

Website: www.abvigen.com Phone: +1 929-202-3014 Email: info@abvigenus.com

Intended use

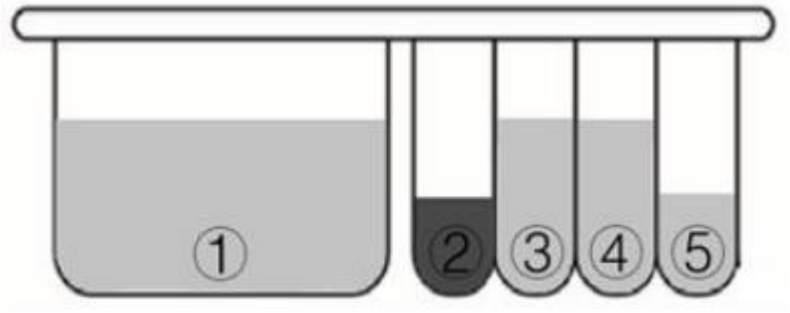
This product is suitable for the purification of vomitoxin (the main component is DON deoxyniverenol) in feed raw materials such as soybean meal, DDGS and feed products such as pigs, chickens and cattle.

Test principle

The purification principle of this product is to extract deoxynivalenol from the sample, the extraction liquid of deoxynivalenol is specifically adsorbed on the deoxynivalenol antibody on the surface of the magnetic bead, and the external magnetic field is used to complete the impurity washing and the elute purification process of the target object, with different terminal detection methods (high performance liquid chromatography, Ultra-high performance liquid chromatography (UHLC), LMS, etc.) can detect the content of deoxynivalenol in samples quickly, with high throughput and high precision.

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	Volume
①	Diluent	9 mL
②	Magnetic bead solution	0.7 mL
③	Cleaning solution 1	1 mL
④	Cleaning solution 2	1 mL
⑤	Eluate	0.9 mL

Storage conditions and expiration date

It is valid for 12 months at 2~8°C.

Material preparation

1 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, the sample can be crushed through the 20-mesh screen

Vortex oscillator

Centrifuge

Screen: 20 mesh

Centrifuge tube: 50 mL/1.5 mL

Measuring cylinder: 100 mL

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Syringe: 2 mL/1 mL

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

Filter membrane: Filter 0.22 μm organic phase

2 Reagents

PEG-8000

Water (H_2O) : distilled or deionized water

Usage method

1 Sample Treatment

After grinding the solid sample with a grinder, the solid sample was accurately weighed with 5 g (accurate to 0.01 g) of solid powder or liquid sample into a 50 mL centrifuge tube, adding 1 g PEG-8000 and 20 mL of extraction liquid (distilled water or deionized water), and swirling for 20 min. Then centrifuge (or let settle naturally) at 7000 r for 5 min.

2 Sample purification

Use 1 mL pipette gun to accurately remove 1.0 mL of extraction superserum and add it into the sample hole (1 hole) of the kit. Put the pre-divided strip into the mycotoxin automatic purifier and start the instrument. After the self-test is completed, enter the quick interface of program operation, select DON purification program, and click Run.

Note: Make sure that hole 1 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.

3 On-board preparation

Take 0.8 mL eluent in 5 holes, gently blow the eluent to near dry with nitrogen at 55°C, accurately add 0.4 mL initial mobile phase, vortex mixing for 30 s, 0.22 μm organic phase filter membrane, collect the filtrate in the lined tube, and then put the lined tube into the sample bottle for injection. The dilution is 2.

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

4 Computer Test

UPLC

Chromatographic reference condition

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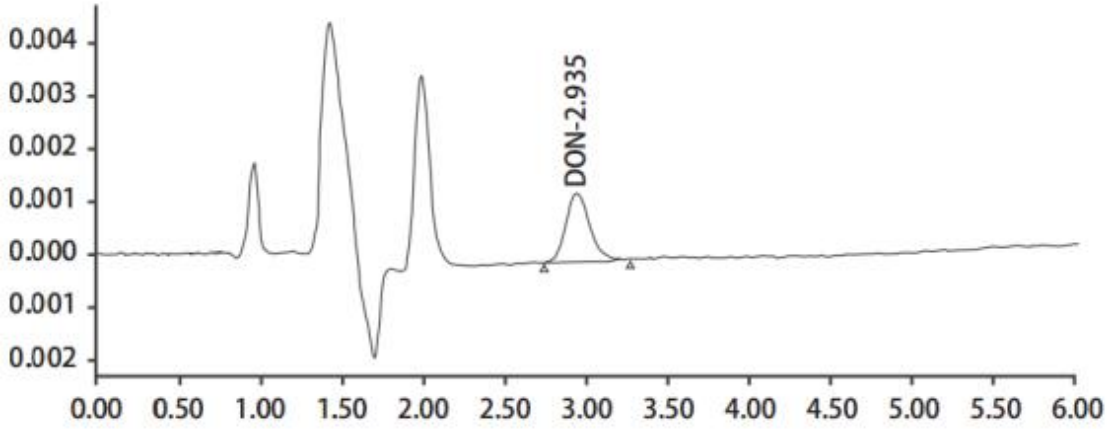
Column: C18 column (column length 50 mm or 100 mm, column inner diameter 2.1 mm, packing particle size 1.7 µm), or comparable performance column.

Uv detection wavelength: 218 nm.

Mobile phase: A: acetonitrile, B: water. Isoelution, A:B=10:90.

Flow rate: 0.2 mL/min, column temperature: 40°C, sample size: 10 µL.



HPLC

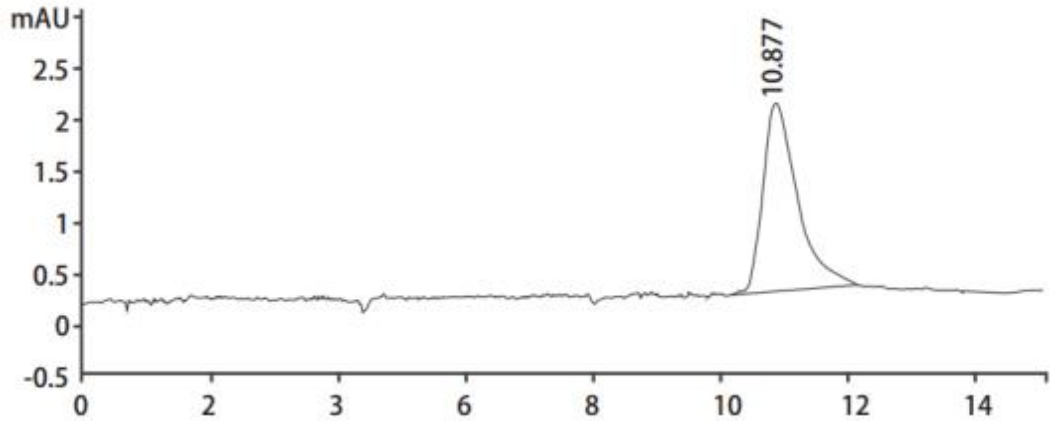
Chromatographic reference condition

Column: C18 column (column length 150 mm, column inner diameter 4.6 mm, packing particle size 5 µm), or comparable performance column.

Uv detection wavelength: 218 nm.

Mobile phase: A: acetonitrile, B: water. Isoelution, A:B=10:90.

Flow rate: 1.0 mL/min, column temperature: 40°C, sample size: 50 µL.



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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) It is recommended that the amount of sample extract in 1 well should be 1.0 mL;

(4) The maximum detectable amount (after correction for dilution): 1800 ng. 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.

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

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

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

(8) 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);

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

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

Ordering Information

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Email: info@abvigenus.com