T-2 Toxin (T2) Immunoaffinity Column

1. Application

This product is used for quantitative detection of T2 by using Scigiene Lateral Flow Test Kits or other Mycotoxin tests.

It is suitable for purification of T2 in samples such as cereal, feed and food, in order to reduce matrix interferenceand thus improve analysis accuracy. The purified extraction solution can be detected by Scigiene Lateral Flow Test Kits or other Mycotoxin tests.

2. Product Performance Column

Capacity：≥1500 ng/vialRecovery
Rate：85%~110%
Column Gel: **Agarose Gel**
Advantages **Large loading capacity, Monoclonal antibody site-specific conjugation,Easy to elute,**
High recovery rate.

3. Measuring Principle

Determination of T-2 toxin (T2) immunoaffinity column is based on the antigen-antibody reaction. T2 monoclonal antibody is coupled to agarose gel material. After extracting, filtering and diluting T2 in sample, sample extraction solution slowly passes through the Immunoaffinity Column. T2 in sample extraction solution combines with specific monoclonal antibody, meanwhile, impurities are eluted from immunoaffinity column along with washing solution. Finally, T2 is eluted by using methanol.

4. Product Composition

20 vial/box
1* manual

5. Sample Preparation and Purification

1). Weigh 20g pulverized sample, then add 100mL 80% methanol water (V/V), and then vortex mix them in homogenizer for 2 minutes or vibrate for 30 minutes and extract later.
2). Centrifuge at 5000r/min for 5 minutes or filter through glass fiber filter paper. Later, take 10mL filtrate, and thenadd 20mL water to dilute and mix well.
3). Filter by rapid qualitative filter paper, then collect filtrate.
4). Take 15mL filtrate for passing through immunoaffinity column.

Note:
1. For sample extraction solution (pH<6 or pH>8), it is necessary to adjust pH value to neutral (pH 7) and use **glassmicrofiber filter paper/quantitative filter paper.**
2. For samples that are difficult to filter because of turbidity, centrifuge samples for separation.

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6. Immunoaffinity Column Purification

Note: Do not let column liquid drain dry before step 4.

1) Take out Immunoaffinity Column microcolumn, then take off top plug and cut it. And then plug it back into the immunoaffinity column.

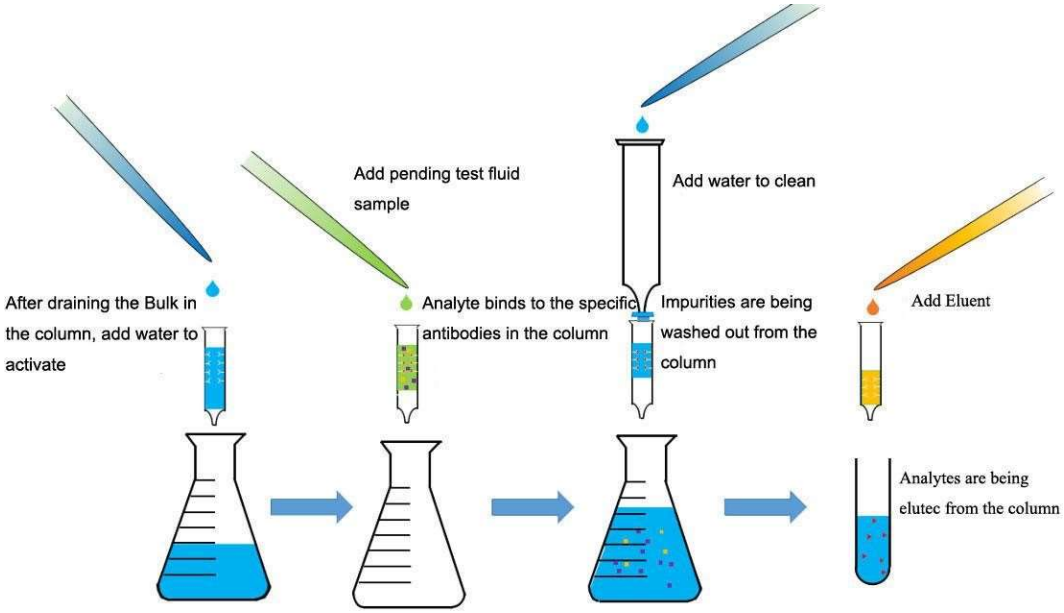
2) Connect the column with a glass syringe onto pump flow operation frame, then take off lower plug. Later, wash it once with 15mL water or phosphate buffer solution (PBS) at pH7.4 at a flow rate of 1-1.5mL/min.

3) Add sample extraction solution at a flow rate of 1-1.5mL/min.

4) Wash it twice with 15mL water or phosphate buffer solution (PBS) at pH 7.4 at a flow rate of 1-1.5mL/min, until 2~3 ml of air passes through the column to ensure that there is no residual liquid in the column.

5) Elute with 1mL methanol at a flow rate of 1mL/min, and use the sample bottle/glass tube to collect the eluent.

6) The collected eluent can be used for detection.



Immunoaffinity Column Operation Diagram

7. Note

1) T2 is harmful to human, so please wear gloves while operation. All glassware exposed to standard/sample shouldbe soaked overnight with 5% sodium hypochlorite solution.

2) Do not use expired immunoaffinity column.

3) Immunoaffinity column should be stored at 2~8℃. Do not freeze.

4) Please put immunoaffinity column at room temperature (25℃) for half an hour at least before use.

5) If content of T2 in sample is higher than column capacity, please decrease sample loading volume accordingly.

6) Make sure that pH value of sample extraction solution that passes the column is between 6 and 8. You can adjustit with hydrochloric acid solution or sodium hydroxide solution.

7) Amount of sample weighed and volume of extraction solution can be adjusted in proportion according to actual situation. It is recommended to take 10g sample in minimum.

Reference: National standard method: "GB 5009.118-2016 National Food Safety Standard Determination of T-2 Toxin in Food"

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8. HPLC Instrument Measurement Condition

Chromatographic Column: C18, 5μm， 4.6 mm×250 mm

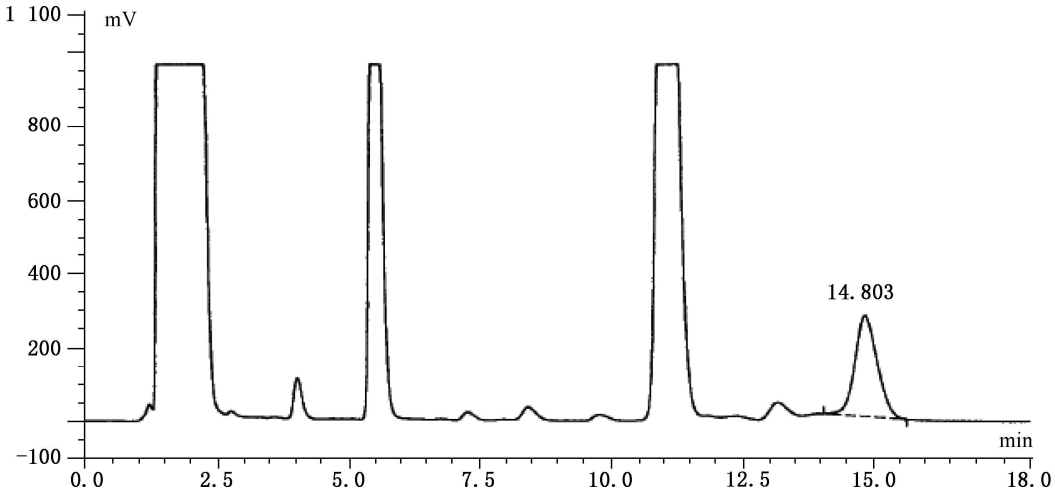
Mobile Phase: Acetonitrile: Water is 75:25 (V/V)

Flow Rate: 1.0mL/min

Detection Wavelength: Excitation Wavelength 381nm, Emission Wavelength 470nm

Sample Loading Quantity: 10μL

Column Temperature: 25℃



T-2 Toxin Standard Liquid Chromatogram

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