



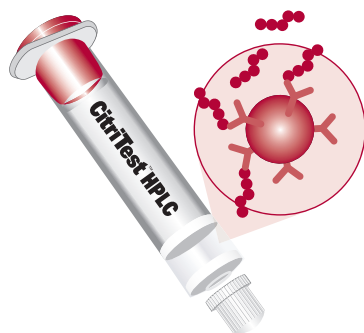
## Precise Numerical Results

Citrinin, a toxin from a naturally occurring mold, contaminates rice, wheat, flour, barley, maize, rye, oats, peanuts, and fruit. It is also a widespread contaminant of red rice, which is not only a dietary staple in many Asian countries, but also a main ingredient in many other food products. It is also used in the popular herbal supplement red yeast rice extract which is used to reduce cholesterol levels.

Produced by *Aspergillus ochraceus*, *Monascus* and *Penicillium citrinum*, citrinin has been known to cause kidney damage and mild liver damage in livestock and is suspected to cause kidney and liver damage in humans. Because of concerns over citrinin contamination, Japan has issued an advisory limit of 200 ppb and the European Union has a recommended limit of 100 ppb.

Using monoclonal antibody-based affinity chromatography, CitriTest™ HPLC is an HPLC test for the detection of citrinin using immunoaffinity columns. Performed in less than 20 minutes, CitriTest HPLC can measure levels of citrinin as low as 10 ppb and as high as 500 ppb.

An ideal cleanup step for any HPLC, CitriTest HPLC has a long shelf life and provides precise numerical results in parts per billion levels. The preferred test of laboratories around the world, no other test comes close for speed, quantification, and specificity.



### BENEFITS

**Exclusive** – Specifically for HPLC use

**Convenient** – Uses same methods as other VICAM tests

**Durable** – Long shelf life

**Quick** – 20 minutes to isolate toxin\*

**Wide Range** – Detects levels as low as 10 ppb and as high as 500 ppb

### Cultivating Success Through Science™:

#### Extract Sample

- Grind and weigh sample
- Add methanol/water mixture
- Blend or shake then filter

#### Dilute and Filter

- Dilute extract

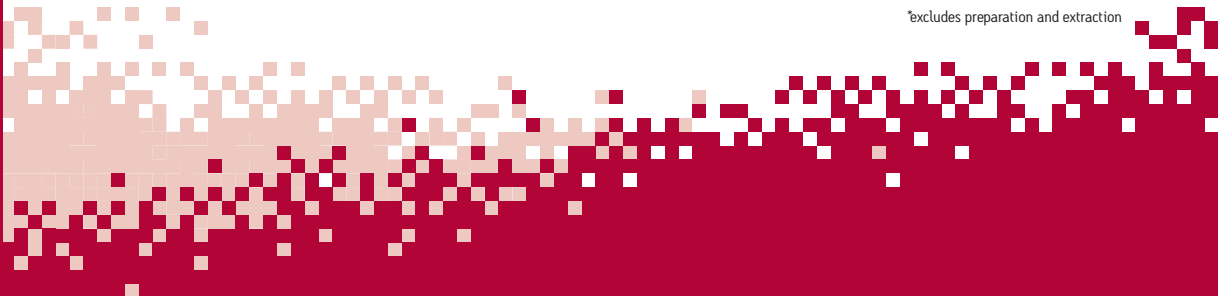
#### Absorb and Elute

- Pass filtrate over CitriTest HPLC affinity column
- Wash column
- Elute citrinin and collect in cuvette

#### Measure

- Inject into HPLC
- Determine citrinin concentration

\*excludes preparation and extraction



## ORDERING INFORMATION

Cat. No.	Description	Cat. No.	Description
G1070	CitriTest HPLC Columns (25 per box)	23040	Vortex Mixer
G1112	10X Concentrate of 0.1% Tween PBS, 150 ml	31955	Microfiber Filters, 1.5µm, 11 cm (100)
G1113	10X Concentrate of PBS, 150 ml	35016	Methanol, HPLC Grade (4 x 4 L)
G1118	WB Column Coupling (6)	100000185	CitriTest HPLC Kit (100 Columns + 1 Set Standards)
G1130	Acetonitrile (4 x 4 L)		
20050	Graduated Cylinder, 50 mL		
20250	Graduated Cylinder, 250 mL		
21020	Single Position Pump Stand <sup>†</sup>		

**Also required; must be sourced locally:**

O-phosphoric acid, HPLC grade  
Distilled, Reverse Osmosis, or Deionized Water

<sup>†</sup>Multiple position pump stands available

Subject to change without notice.

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The analytical methods presented in this data sheet have been researched and developed by VICAM to be used exclusively with CitriTest HPLC products. These methods have been validated in the VICAM laboratories to perform to the specifications indicated in the CitriTest HPLC procedures. The user assumes all risk in using CitriTest HPLC procedures and products. VICAM makes no warranty of any kind, expressed or implied, other than that CitriTest HPLC products conform to Waters' printed specification and quality control standards. Waters will, at its option, repair or replace any product, or part thereof, which proves to be defective in workmanship or material. VICAM's undertaking to repair or service such products is exclusive and is in lieu of all other warranties whether written, oral, expressed, or implied, including any implied warranty of merchantability or fitness for a particular purpose. VICAM shall have no liability for anticipated or lost profits or any loss, inconvenience or damage whether direct, indirect, incidental, consequential or otherwise, to person or property, or for strict liability or negligence arising from or in connection with the use of these assay procedures or CitriTest HPLC products.

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