Ochra-V® AQUA™

QUANTITATIVE STRIP TESTS

Instruction Guide

VICAM®

A Waters Business

CULTIVATING SUCCESS THROUGH SCIENCE™

For more than 20 years, VICAM has been the global provider of choice for next-generation food safety technology and rapid mycotoxin test solutions.

The goal of securing the world's food supply requires knowledge, cooperation, and collaboration. To advance that objective, VICAM works closely with government regulatory agencies, international standards bodies, major food industry laboratories, and leading research institutions around the world. With a global scientific and distribution presence, VICAM has access to the latest research advances, industry expertise, and regulatory information needed to design solutions that maximize food safety and quality at every stage of the global food supply chain.

As the trusted partner of the agricultural industry, VICAM is proud to consistently deliver the superior products, responsive service, and individualized support for your industry-specific goals.

Ochra-V AQUA Kit (25 tests).....176004087

OCHRA-V AQUA KIT CONTENTS

Ochra-V Strip Tests (25).....100000284
Strip Test Filters (25).....600001106
Micro-Pipette Tips, 100 µL.....600001109
Extraction Tubes, 40 mL.....600000827
Ochra-V Barcode Set.....715005477
Ochra-V Instruction Guide.....715005478

EXTRACTION SOLUTION & OPTIONAL SUPPLIES

AQUA Premix Solution (900 mL).....100000339
AQUA Premix Solution (4 L).....100000345
AQUA Premix Solution (20 L).....100000347
OR
AQUA Solution A.....100000336
AQUA Solution B.....100000337
Strip Test vials (25) (for samples over 30 ppb).....600000813

Vertu Mycotoxin Basic Equipment Package, 110V.....176002078

Vertu Mycotoxin Basic Equipment Package, 220V.....176002079

BASIC EQUIPMENT PACKAGE CONTENTS

Vertu Reader, 110V & 220V.....725000574
Printer, 110V & 220V.....725000577
Vortex Sample Holder.....600001136
Digital Timer.....G4036
Micro-Pipettor, 100 µL.....600001108
Filter Funnel, 65 mm (4 pack).....36020
Strip Test Vial (25).....600000813
Graduated Cylinder, 50mL.....20050
Vertu Basic Instruction Guide.....715002543
Micro-Pipette Tips, 100 µL (25).....600001109
Strip Test Filters (25).....600001106
Extraction Tubes, 40 mL (25).....600000827


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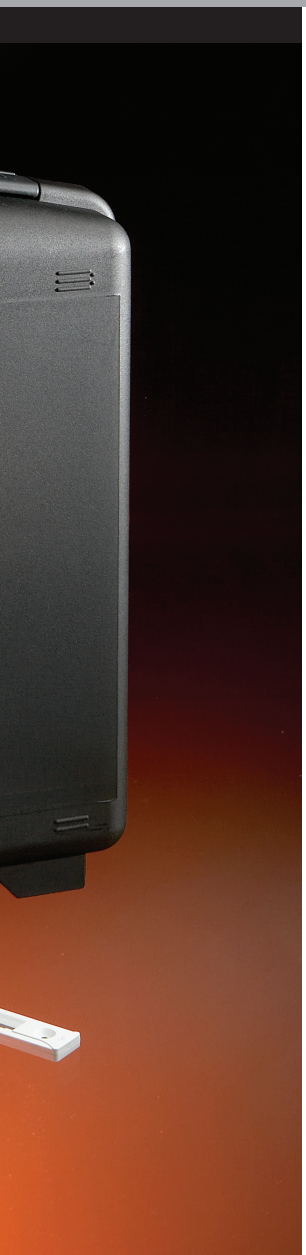
Vertu
Lateral Flow Reader



Ochratoxins are the metabolites of fungi such as Aspergillus ochraceus and Penicillium viridicatum. Three forms of ochratoxin have been isolated: A, B, and C — of which ochratoxin A (OTA) has been found to be most abundant in nature. OTA is found in many foods such as cereal grains, beans, coffee, grapes, beer, and red wine. The mold may continue to produce OTA after harvest, in storage and during shipment if temperature and moisture exceed safe levels. OTA may even be present in a foodstuff without any visual evidence of mold.

OTA is considered a nephrotoxin and a potent renal carcinogen in rodents. Several countries have set regulatory limits for OTA in cereals, cereal-derived products, wine, dried fruit, spices and coffee. The legal limit for OTA established by European Commission is 5 ppb and 3 ppb in unprocessed cereals and processed cereals, respectively.

VICAM's Ochra-V® AQUA test is a competitive lateral flow immunochromatographic assay (LFIA), using ochratoxin specific monoclonal antibodies. The LFIA technology is well established and widely used in diagnostic testing. Ochra-V AQUA test is a quantitative method for rapid detection of ochratoxin in wheat or other suitable sample types. Calibration is required for each lot of Ochra-V strip tests and performed using the scannable 2-D barcode which is included in the kit.

Storage Recommendations

Strip tests must be refrigerated. Store at 2 °– 8 °C (36 °– 46 °F).

Strip test and sample extract should be at room temperature of between 20 °C (68 °F) and 25 °C (77 °F) before use.

Sampling

Mycotoxins tend to occur in scattered locations in large grain or coffee loads and may be detectable in only a small percentage of kernels in a lot. The uneven distribution of contaminated kernels can cause test results to vary significantly from sample to sample. It is therefore essential to take a representative sample from the lot. Product must be collected from different locations in a static lot based on a probing pattern. The probe must draw from the top to the bottom of the lot. The samples obtained from the probes must be ground and mixed well and a subsample taken for testing. Grind samples so that 95% passes through a 20 mesh sieve. Contact your local regulatory authorities or VICAM for more information on sampling.

The information contained in each barcode includes the test name, test lot number, method of scanning, parameters of measure, and algorithm for result calculation. This information is specific to each lot of strip test cassettes and varies from barcode to barcode ensuring the accuracy, precision, and reliability of each test.

The lot number and test type displayed on the Vertu reader must match the label information on the strip test package. If the reader has just been turned on, confirm that “Scan” is selected on the display screen and then press the center button on the keypad. If the reader has already run a test, use the arrow keys to select “NT” and then press the center button.

When the scanner is ready to read the barcode, the reader will beep 3 times. Press the yellow trigger on the barcode scanner and aim the laser beam point at the barcode for the test you are running. When scanning the barcode, it may be necessary to adjust the distance between the scanner and the barcode while pressing the yellow trigger. When the barcode is scanned, the reader will beep once and the display screen will show the correct information.

Preparation of Premixed Aqueous Extraction Solution

AQUA Premix solutions can be purchased from VICAM:

- 900 mL (for 25 tests) p/n 100000339
- 4 L (for 150 tests) p/n 100000345
- 20 L (for 750 tests) p/n 100000347

Alternatively, to make 900 mL of AQUA Premix Solution, combine the following reagents in a glass or plastic container in the order listed below:

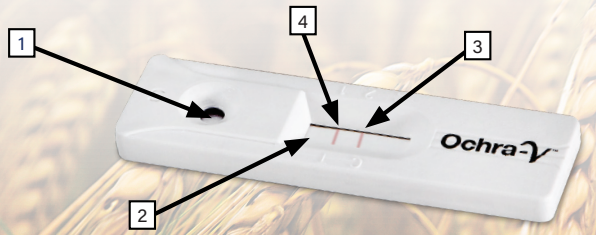
1. 540 mL purified water
2. 180 mL AQUA Solution A (one bottle VICAM p/n 100000336)
3. 180 mL AQUA Solution B (one bottle VICAM p/n 100000337)

Mix well.

Product Features

Ochra-V Strip Test Cassette

1 Sample Well
2 Results Window
3 Control Line
4 Test Line



Pipette Terms

Aspirate – to draw the sample up into the pipette tip
Blow out – to empty the tip completely

Pipetting Techniques

1. Press the operating button to the first stop.
2. Dip the tip into the solution and slowly release the operating button to "wet" the tip.
3. Press the operating button to the first stop again and slowly release the operating button. Wait 1–2 seconds and then withdraw the tip from the liquid, touching it against the edge of the reservoir to remove excess liquid.
4. Dispense the liquid into the receiving vessel by gently pressing the operating button to the first stop and then press the operating button to the second stop. This action will empty the tip. Remove the tip from the vessel, sliding it up the wall of the vessel.
5. Release the operating button to the "Ready" position.
6. Please consult the chart for visual instructions on operating the pipette. Be sure to always hold the pipette in a vertical position.

Pipette Positions

1. Press pipette button down to first stop and place the tip into liquid.

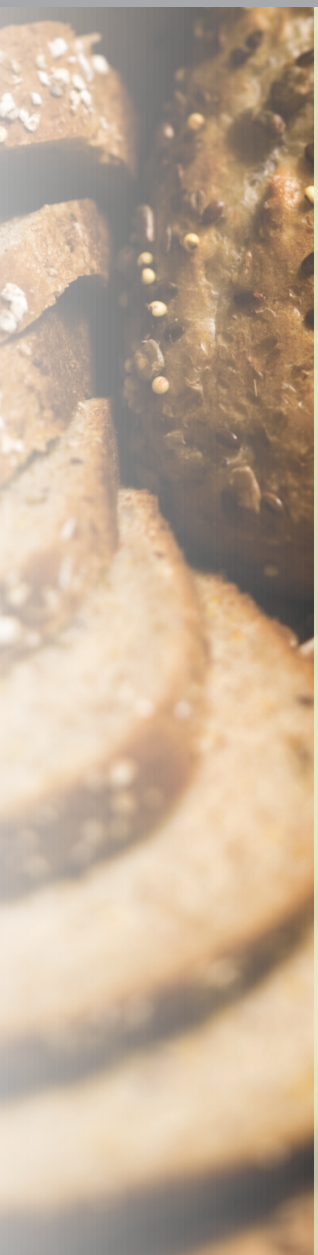
2. With tip in liquid, slowly aspirate (draw up) by letting button return to "Ready" position.

3. Dispense liquid into receiving vessel by pressing button to first stop and then to second stop. This will blow out the tip.

OCHRA-V PROCEDURE FOR WHEAT AND GREEN COFFEE

1. Calibrate the Vertu reader by scanning in the Ochra-V AQUA barcode for wheat or green coffee for the lot of strip test cassettes being used. The reader will beep once when the barcode is accepted.
2. Weigh 5 g +/- 0.1 g ground wheat or green coffee and place in extraction tube.
3. Add 25 mL AQUA Premix solution to the sample and vortex at maximum speed for 2 minutes.
4. Filter the extract through Strip Test Filter paper (part no. 600001106) into a clean extraction tube for two minutes.
5. Transfer 100 µL of sample extract to the Ochra-V strip test cassette by dropping (~1 drop/second) vertically into the sample well.
6. Allow the strip test to develop for 5 minutes on a flat surface and then insert the Ochra-V strip into the Vertu Reader (circular opening side in first).
7. Press the center key on the reader to take a reading.
8. To print the result, use the arrow keys to move the cursor to “P” in the upper left hand corner of the display screen. Then press the center button on the keypad.
9. To run the next sample, use the arrow keys to move the cursor to “NT” and press the center button on the keypad. If using the same lot of strip test cassettes, insert the next sample. If using a different lot, scan in the new barcode before inserting the next sample.

   Assay range: 0–30 ppb
   Limit of detection: 2 ppb



1. When scanning in the barcode, make sure the red + in the center of the barcode scanner is positioned in the center of the barcode. It may be necessary to adjust the height of the barcode scanner to position it correctly for scanning.
2. Make sure to scan the wheat barcode when testing wheat and the green coffee barcode when testing green coffee.
3. Press the center button on the keypad quickly and gently to read samples. Pressing the center button on the keypad long and hard will turn the instrument off.
4. Make sure the sample is fully mixed with the extraction solution during the sample extraction and that no dry sample material is visible in the extraction tube.
5. Purified water can be reverse osmosis purified, distilled or deionized water.
6. All strips should have a visible control line.
7. Do not run test in a location where air from an air conditioner, heater or window will blow directly on the strips.

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The analytical methods presented in this data sheet have been researched and developed by VICAM to be used exclusively with Ochra-V AQUA products. These methods have been validated in the VICAM laboratories to perform to the specifications indicated in the Ochra-V AQUA procedures. The user assumes all risk in using Ochra-V AQUA procedures and products. VICAM makes no warranty of any kind, expressed or implied, other than that Ochra-V AQUA products conform to VICAM's printed specification and quality control standards. VICAM 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 Ochra-V AQUA products.

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