



T2/HT2-V™ AQUA™
QUANTITATIVE STRIP TESTS

Instruction Guide



VICAM™

A Waters Business

CULTIVATING SUCCESS THROUGH SCIENCE™

For more than 30 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.



T2/HT2-V AQUA Kit (25).....176004555

T2/HT2-V AQUA KIT CONTENTS

T2/HT2-V AQUA Test Strips
(Pack of 25) 100000569
Strip Test Filters (25)..... 600001106
Micro-Pipette Tips, 100 µL 600001109
Extraction Tubes, 40 mL600000827
T2/HT2-V AQUA Barcode Set 715006693
T2/HT2-V AQUA Instruction Poster.... 715006808

**EXTRACTION SOLUTION &
OPTIONAL SUPPLIES**

AQUA Premix Solution (900 mL) 100000339
AQUA Premix Solution (3.6 L).....100000345
AQUA Premix Solution (18 L)..... 100000347
OR
AQUA Solution A100000336
AQUA Solution B 100000337
Strip Test vials (25) 600000813

**VERTU MYCOTOXIN BASIC
EQUIPMENT PACKAGE (BEQ)**

110V176002078
220V176002079

VERTU MYCOTOXIN BEQ CONTENTS

Vertu Reader, 110V & 220V 725000574
Printer, 110V & 220V 725000577
Vortex Genie II (110V)600001219
Vortex Genie II Sample Attachment.... 600001221
Digital Timer G4036
Micro-Pipettor, 100 µL 600001108
Filter Funnel, 65 mm (4 pack)36020
Strip Test Vial (25) 600000813
Strip Test Vial Rack600001107
Graduated Cylinder, 50 mL.....20050
Vertu Basic Instruction Guide 715005646
Graduated Cylinder, 25 mL600000937
Micro-Pipette Tips, 100 µL (25)..... 600001109
Strip Test Filters (25)..... 600001106
Extraction Tubes, 40 mL (25).....600000827

PRECISE...QUANTITATIVE...FAST

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VICAM's T2/HT2-V quantitative strip tests answer one of today's toughest agricultural safety and production challenges with a simple, water-based strip test that delivers precise quantitative results for T-2 and HT-2 in just minutes while eliminating the risks and expense associated with on-site solvent use and disposal. Ten times more toxic than vomitoxin (DON), T-2 and HT-2 are Type A Tricothecene mycotoxins which target the immune system of livestock, resulting in serious health complications such as skin lesions, hemorrhagic fever, and shock. T-2 has also been linked with the dangerous human disease alimentary toxic aleukia (ATA).

Global regulatory agencies recommend specific guidelines for T-2 and HT-2, enabling raw materials handlers and feed manufacturers to safeguard animal health, while ensuring optimal production and profitability. Enforceable limits range from 80 ppb in animal feed in China, up to 2,000 ppb recommended level for oat milling products intended for animal feed production in the EU. In addition, the EU recommends limiting T-2 and HT-2 to levels as low as 15 ppb for human foods intended for infants and young children, and up to 100 ppb for cereal processing products intended for human foods.

T2/HT2-V AQUA Strip Tests utilize the proven sensitivity and selectivity of VICAM's monoclonal antibodies to accurately detect and measure combined T-2 and HT-2 at levels as low as 10 parts per billion (ppb) and as high as 800 ppb. T2/HT2-V AQUA eliminates the need for hazardous solvents, using a water-based extraction procedure that requires no dilution step and develops in just 5 minutes. Results are displayed on the digital screen and may also be printed or transferred to a computer for storage and use as an integral quality assurance tool.

STORAGE AND SAMPLING

Storage Recommendations

Store Test Strips at 2–30 °C (36–86 °F).

Store AQUA solution at room temperature of between 20 °C (68 °F) and 25 °C (77 °C).

Strip test and sample extract should be at room temperature of between 20 °C (68 °F) and 25 °C (77 °F) before use. If strips have been refrigerated, leave strips at room temperature to equilibrate. Individual strips may equilibrate to room temperature in 20 minutes, whole packs of strips should be allowed up to 1 hour.

Sampling

Mycotoxins tend to occur in scattered locations in large grain 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 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 "Measure" 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

Preparation of Premixed Aqueous Extraction Solution

AQUA Premix solutions can be purchased from VICAM:

- 900 mL (for 25 tests) p/n 100000339
- 3.6 L (for 150 tests) p/n 100000345
- 18 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:

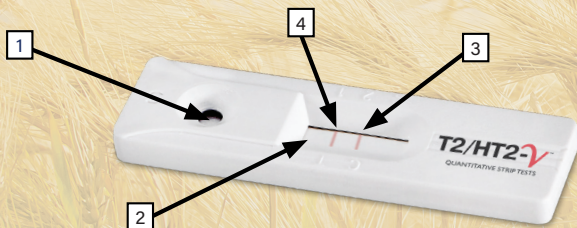
1. 540 mL purified water
2. 180 mL AQUA Solution A (one bottle VICAM p/n 100000336)
3. 180 mL AQUA Solution B (one bottle VICAM p/n 100000337)

Mix well.

Product Features

T2/HT2-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.



T2/HT2-V AQUA PROCEDURE FOR CORN AND WHEAT

1. Calibrate the Vertu reader by scanning in the T2/HT2-V AQUA barcode for the specific commodity and lot of strip test cassettes being used. The reader will beep once when the barcode is accepted. Make sure the lot number displayed on the reader is the same lot number as the strips.
2. Weigh 5 g +/- 0.1 g ground sample and place in extraction tube.
3. Add 25 mL AQUA Premix solution to the sample and vortex at maximum speed for 2 minutes. Shake to make sure sample is completely wet before vortexing.
4. Filter the extract through Strip Test Filter paper (part no. 600001106) into a clean extraction tube for no longer than 5 minutes. Collect greater than 100 μ L filtered extract.
5. Transfer 100 μ L of sample extract to the T2/HT2-V strip by dropping (~1 drop/second) vertically into the sample well.
6. Allow the strip to develop for 5 minutes on a flat surface and then insert the T2/HT2-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: 10-800 ppb

Limit of detection: 10 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. Do not open the strip test package until ready to put extract on the strip.
3. Press the center button on the keypad quickly and gently to read samples. Pressing and holding center button on Vertu reader will cause the reader to power down/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. Do not run test in a location where air from an air conditioner, heater or window will blow directly on the strips.



A Waters Business

KEY LOCATIONS

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Waters

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