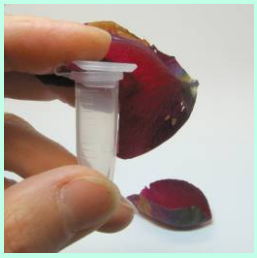
QuickStix™ Kit for *Botrytis* in Ornamentals

Highlights:

- *Results in 10 minutes or less*
- *Simple protocol*
- *Highly specific for* Botrytis

Contents of Kit:

- *25 QuickStix Strips packed in a moisture-resistant canister*
- *25 Disposable Tissue Extractors (each consisting of a tube with punch cap and pestle)*
- *EB8 Extraction Buffer*



Collect two sample punches, including suspected spot(s)

Grind the tissue with pestle

Add 12 drops of buffer and grind again

Catalog Number AS 049 OR 25

Intended Use

The EnviroLogix QuickStix Kit for *Botrytis* in Ornamentals screens for the presence of *Botrytis cinerea,* often called gray mold or botrytis blight in ornamentals. The strip can detect the presence of *Botrytis cinerea* at an early stage, when it is difficult to differentiate symptoms from other bacterial, viral or fungal infections and/or insect damage.

How the Test Works

This test is for use on leaf or petal tissue that is suspected to be infected with *Botrytis*. To detect infected tissue with the EnviroLogix QuickStix Strip, samples must be extracted with the buffer provided.

Each QuickStix Strip has an absorbent pad at both ends. The protective tape with the arrow indicates which end of the strip to insert into the extraction tube. The sample travels up the membrane strip and is absorbed into the larger pad at the top of the strip. The portion of the strip between the protective tape and the absorbent pad at the top of the strip is used to view the reactions as described under "Interpreting the Results".

Sample Preparation

Sampling Requirement: Take a petal or leaf sample that includes a contiguous suspect spot or area of 4-5 mm in size. At least one of the two punch samples (Step 1) must include this size of a spot/area to ensure accurate detection. The punch cap results in a sample of approximately 10 mm diameter.

Important: Allow buffer to come to room temperature before using.

1. Sandwich a section of petal or leaf tissue between the cap and body of the Disposable Tissue Extractor tube. Snap **two** circular punches by closing the cap. Push the sample down into the tapered bottom of the tube with the pestle and grind for 30 seconds. Write the sample identification on the tube with a waterproof marker.
2. Holding the dropper bottle vertically, add 12 drops of buffer to the tissue sample. Re-grind the tissue by rotating the pestle against the sides of the tube with twisting motions. Continue this process for 20 to 30 seconds, or until the leaf tissue is well ground. Remove and discard pestle.

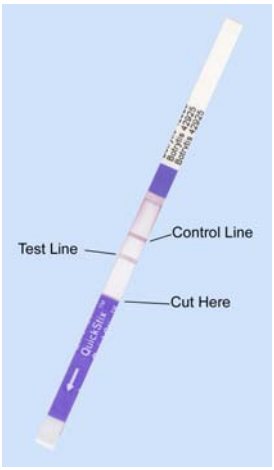
How to Run the QuickStix Strip Test

1. Allow refrigerated canisters to come to room temperature before opening. Remove the QuickStix Strips to be used. Avoid bending the strips. Reseal the canister immediately.
2. Place the strip into the extraction tube. The sample will travel up the strip. Use a rack to support multiple tubes if needed.
3. Allow the strip to develop for a full 10 minutes before making final assay interpretations. Positive sample results may appear much more quickly. Read and interpret the results as close as possible to the ten-minute time point, while the strip is still in the extraction tube.
4. To retain the strip, cut off and discard the bottom section of the strip covered by the arrow tape.

Add a test strip, wait 10 minutes

Any pink test line is considered positive

Interpreting the Results



Development of the Control Line within 10 minutes indicates that the strip has functioned properly. Any strip that does not develop a Control Line should be discarded and the sample re-tested using another strip.

If the sample extract contains *Botrytis*, a second line (Test Line) will develop on the membrane strip between the Control Line and the protective arrow tape. The results should be interpreted as positive for *Botrytis*.

If no Test Line is observed at 10 minutes, the results should be interpreted as negative.

Kit Storage

This QuickTox Kit should be stored refrigerated. Note the shelf life on the kit box. The kit may be used in field applications; however, prolonged exposure to high temperatures may adversely affect the test results. Do not open the desiccated canister until ready to use the strips.

Cross Reactivity

The antibody used to produce this kit was found to be reactive with:

- *Botrytis cinerea* (various isolates)
- *B. byssoidea*
- *B. allii* (various isolates)
- *B. fabae*
- *B. squamosa*
- *B. stokesii* (*tulipae*; various isolates)
- *B. streptothrix*
- *B. tulipae*
- *B. aclada*
- *B. elliptica*
- *Monilinia fructicola*
- *M. laxa*
- *M. lambertella*
- *Sclerotinia* spp.

The antibody used to produce this kit was found to be not reactive with:

- *Alternaria infectoria*
- *Alternaria alternata*
- *Aspergillus niger*
- *Aureobasidium pullulans*
- *Cladosporium macrocarpum*
- *Cladosporium herbarum*
- *Cladosporium paeoniae*
- *Coniella fragaria*
- *M. hiemalis*
- *Rhizopus* spp.
- *Stemphyllium* spp.
- *Trichoderma harzianum*
- *T. viride*
- *Ulocladium* spp.

Precautions and Notes

- This kit is designed for screening the presence or absence of *Botrytis* and is not meant to be quantitative.
- Important Note: The kit will detect its target pathogen regardless of the pathogen's viability. It should not be used to determine the efficacy of treatment efforts, because although the pathogen may be rendered non-viable, the protein is still present and will cause a positive result.
- As with all tests, it is recommended that results be confirmed by an alternate method.
- The assay has been optimized to be used with the protocol provided in the kit. Deviation from this protocol may invalidate the results of the test. Compositing or pooling of samples is not recommended and may result in false negative results.
- A negative result does not preclude the presence of *Botrytis* infection in other areas or at other times.

- A strong positive result may safely be interpreted in as little as 5 minutes after sample addition. It is not safe, however, to conclude that a sample is negative before a full 10 minutes has elapsed. A weakly positive sample may require the full 10 minutes for a distinct Test Line to appear.
- Protect all components from hot or cold extremes of temperature when not in use. Do not leave in direct sunlight or in vehicle. A small portable cooler is recommended for field testing applications to protect the kit from extreme temperatures.

For Technical Support Contact Us At:

EnviroLogix
500 Riverside Industrial Parkway
Portland, ME 04103-1486
USA
Tel: (207) 797-0300
Toll Free: 866-408-4597
Fax: (207) 797-7533

e-mail:
horticulture@envirologix.com

website:
www.envirologix.com

LIMITED WARRANTY

EnviroLogix Inc. ("EnviroLogix") warrants the products sold hereunder ("the Products") against defects in materials and workmanship when used in accordance with the applicable instructions for a period not to extend beyond a product's printed expiration date. If the Products do not conform to this Limited Warranty and the customer notifies EnviroLogix in writing of such defects during the warranty period, including an offer by the customer to return the Products to EnviroLogix for evaluation, EnviroLogix will repair or replace, at its option, any product or part thereof that proves defective in materials or workmanship within the warranty period.

ENVIROLOGIX MAKES NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The warranty provided herein and the data, specifications and descriptions of EnviroLogix products appearing in EnviroLogix published catalogues and product literature are EnviroLogix' sole representations concerning the Products and warranty. No other statements or representations, written or oral, by EnviroLogix' employees, agents or representatives, except written statements signed by a duly authorized officer of EnviroLogix Inc., are authorized; they should not be relied upon by the customer and are not a part of the contract of sale or of this warranty.

EnviroLogix does not warrant against damages or defects arising in shipping or handling, or out of accident or improper or abnormal use of the Products; against defects in products or components not manufactured by EnviroLogix, or against damages resulting from such non-EnviroLogix made products or components. EnviroLogix passes on to customer the warranty it received (if any) from the maker thereof of such non-EnviroLogix made products or components. This warranty also does not apply to Products to which changes or modifications have been made or attempted by persons other than pursuant to written authorization by EnviroLogix.

THIS WARRANTY IS EXCLUSIVE. The sole and exclusive obligation of EnviroLogix shall be to repair or replace the defective Products in the manner and for the period provided above. EnviroLogix shall not have any other obligation with respect to the Products or any part thereof, whether based on contract, tort, strict liability or otherwise. Under no circumstances, whether based on this Limited Warranty or otherwise, shall EnviroLogix be liable for incidental, special, or consequential damages.

This Limited Warranty states the entire obligation of EnviroLogix with respect to the Products. If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in full force and effect.

License

EnviroLogix has developed this kit using proprietary reagents.