

COLLECTION OF FIREBLIGHT SYMPTOMATIC PLANT TISSUE FROM APPLE TREES

- If available, use bacterial ooze directly for sample preparation (Picture 1) or
- From young twigs, collect sample tissue taking both healthy and diseased tissue from the transition zone (Picture 2) or
- For older bark and active cankers, skim off bark using a knife to sample the cambium layer (Picture 3).

Note: Non active fire blight cankers, old strikes, or dead tissue do NOT work.

PREPARATION AND RUNNING OF SAMPLES

Ooze

- Add 4 drops of extraction buffer to clean cuvette.
- Touch a toothpick tip to ooze sample.
- Suspend toothpick into the cuvette or small plastic cup with extraction buffer.

Note: Too cloudy or opaque a solution can interfere with test efficacy.

Young shoots and older branches

- Collect approximately 1 cm x 0.5 cm (0.5g) of young twigs or cut/scrape cambium layer with sharp knife into small 0.1 cm thick longitudinal pieces and use about 5 pieces (0.2-0.5g).
- Add samples to BioReba collection bag or a plastic snack bag.
- Add 4 ml (cc) of extraction buffer from bottle provided.



- Crush samples in buffer with hammer on a solid surface, let debris settle.
- Alternatively, follow the kit directions, collect 0.25mm square of sample and tear/cut into pieces and add to bottle of buffer containing beads; shake 60 seconds.

RUNNING TEST

- Add 3 drops of sample, avoiding debris, on test strips using dropper provided (do not flood the well).
- Observe color of the lines on the test strips within 10 minutes (Picture 4).

INTERPRETING THE RESULTS

- If both a Blue test line (T) and a control line (C) are observed, the test is positive for fire blight (Picture 4)
- Test results are usually visible in 3-4 min.
- If the control line (C) is clearly visible but test line (T) does not appear within 10 minutes, the sample is fire blight negative (picture 4).
- If no lines appear, test is invalid and should be repeated.

Note: 10^6 fire blight bacterial cells per milliliter is the detection limit for this kit.

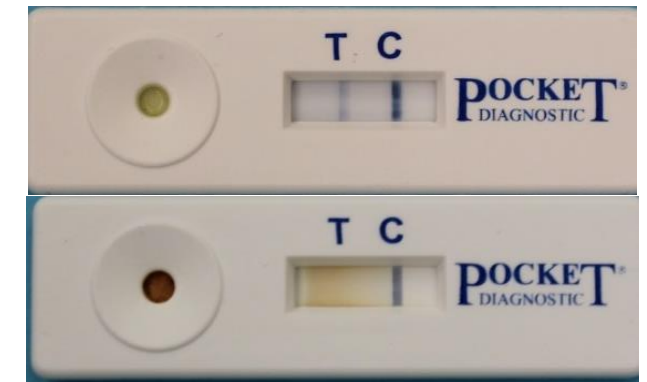
Picture 1. Bacterial ooze.



Picture 2. Transition zone between healthy and infected tissue.



Picture 3. Scraped bark to expose cambium layer of fire blight canker.



Picture 4. Positive (top) and negative (bottom) strips.



Materials needed: Pocket Diagnostic kit containing buffer with beads and dropper (www.pocketdiagnostic.com).
Additional items: knife, samples, and toothpicks.
Alternative materials: hammer, BioReba bag, or plastic snack bag.

Note: Kit can be stored at room temperature up to 40°C. Keep dry. Expiration date indicated on kit components.

Clean hands and any tools in between samples.

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Fire Blight Testing In the Orchard (*Erwinia amylovora*) Using Pocket Diagnostic® Abingdon Health

