

Diagnostic Tip of the Month: Clear Tape Techniques for Plant Disease Diagnostics

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Clear tape can be used to capture fungal structures or arthropods from plant material.

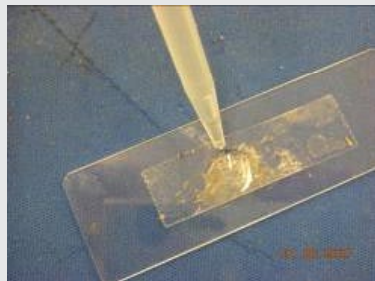


Clear tape with sample acts as a coverslip when gently pressed on top of a drop of water that has been placed on a glass slide.

Upon initial examination of a plant sample (prior to any washing), transparent tape can be used to ‘capture’ fungal spores, mycelium or arthropods that might be present on the surface of plant stems, roots, leaves, flowers or rotting fruit.

The clear tape acts as the coverslip, when gently pressed on top of a drop of water that has been placed on a glass slide.

“Tape mounts” with ‘captured’ microbes, when viewed with the magnification made possible by a compound microscope (100x-400x), will often reveal tell-tale signature signs that assist in an initial diagnostic assessment.



The microbe ‘free’ side of the tape is pressed onto a slide and a drop of water and coverslip are placed on top of the exposed capture surface.

A lesser-known technique involves the use of double-sided transparent tape. Double sided clear tape provides an even better microscopic mount (fewer air bubbles). The microbe ‘free’ side of the tape is pressed onto a slide and a drop of water and coverslip are placed on top of the exposed capture surface. The mount is easily viewed and does not dry out as quickly as the standard single-sided tape mount.

The tape technique also works well to capture fungal mycelium and spores from the surface of culture plates, such as when attempting to confirm the isolation of oak wilt via the presence of Chalara type spores.

Share this tape technique with your local high school biology teachers and make their CSI labs a whole lot easier !!



Microbes captured on tape.



Clear tape technique works well for cultures too.

Photos Gail Ruhl, Purdue University