

Diagnostic Tip of the Month: Using Window Screening as a Strainer for Isolation Material

Meg Williamson

Clemson University Plant Problem Clinic

In our lab, we use synthetic screening material as a strainer in the surface sterilization process.

Squares of window screen approximately 4 x 4 inches (figure 1) are cut out and stored near the isolation hood.

Isolation materials, such as roots, leaves or stem pieces, are placed in weigh boats, marked with the sample number. Those that need surface sterilization are covered with a screen prior to pouring in the 10% bleach solution (figure 2).

Generally, the tissues are surface sterilized for one minute and after that, the bleach solution is poured off, using the screen to retain the tissue in the boat (figure 3). After removing the bleach, sterile, distilled water is poured back into the boat to rinse the tissue. We let the tissue sit in the water for a few minutes before pouring it off through the screen again.

Diagnostic Tip of the Month

When the isolation procedure is finished, the screens and weigh boats are placed in buckets containing a somewhat stronger bleach solution so as to sterilize them. These can then be washed by hand or in a dishwasher and used again.

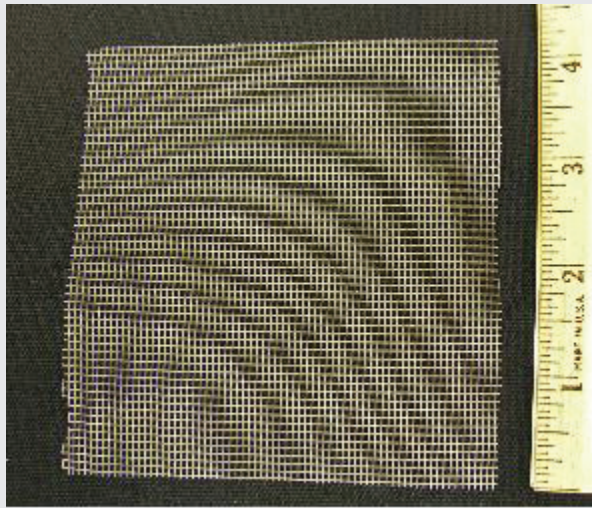


Figure 1. Square of window screen (4 x 4 in). Photo Meg Williamson

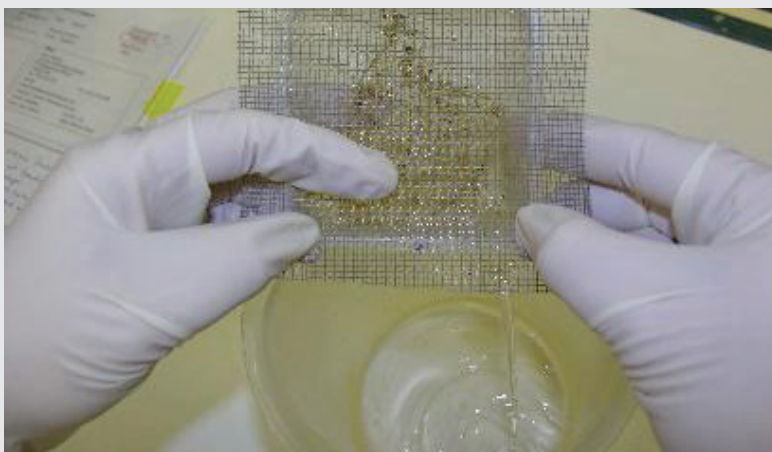


Figure 2 (left) Screen covering sample before surface sterilization. Figure 3 (right) Washing screens after use. Photos Meg Williamson