



Systematic Entomology Laboratory

Instructions for Slide-Mounting Thrips



1. a. Adults- Place specimens in 5% NaOH
b. Larvae- Place specimens in 10% KOH.
2. Using a sharp probe or needle, make a small incision on the side of the abdomen. If several specimens are being prepared, vary the location of the incision so that among the specimens there are some complete left and right abdominal margins. Depending on their degree of sclerotization, specimens should be allowed to soak in the clearing agent for one half hour to 24 hours, long enough to allow the wings to be flattened and all appendages to be positioned such that they extend straight out from the body.
3. Transfer specimens into distilled water, adding one or two drops of 50% ethanol to break the surface tension of the solution.
4. With a small spatula or other tool, gently press down on abdomen and tease out body contents.
5. a. Do NOT stain adult specimens.
b. Stain larvae in a solution consisting of one drop of double stain and one drop of distilled water. Leave specimens in the unheated staining solution for 10 minutes to one hour.
6. a. Adults- Transfer specimens into 50% ethanol. Extend legs, antennae, and wings and allow specimens to soak overnight.
b. Larvae- Transfer stained specimens directly into 95% ethanol. Excess stain can be removed from over-stained specimens by soaking them in 70% ethanol for a few minutes.
7. Transfer specimens into 60% ethanol; soak for one hour.
8. Transfer specimens into 70% ethanol; soak for one hour.
9. Transfer specimens into 80% ethanol; soak for 20 minutes.
10. Transfer specimens into 95% ethanol; soak for five minutes.

11. Lift specimen with spatula. Touch bottom of spatula to tissue to absorb excess ethanol before transferring into one drop of clove oil. Soak specimen in clove oil for at least one half hour.
12. Place drop of Canada balsam in the center of a slide. Lift specimen from clove oil using spatula. Remove excess oil by touching bottom of spatula to tissue before transferring specimen to slide. The specimen should be arranged dorsal side up with the legs, wings, and antennae extending away from the body.
13. Carefully place coverslip over balsam. Place slide on hot plate (115°F) for about 15 seconds to spread balsam evenly.
14. Cure slides in a 110°F oven (40°C) for one month so the balsam is no longer soft. If no oven is available, slides can be left undisturbed for 2 months at room temperature.
15. Place a slide label to the left of the coverslip which contains the following information if available:

Genus

species Author

Host

Date(7-IV-2000)

STATE or COUNTRY, City, County

Collector

Specimen ID number

16. To remount a balsam mount place slide in histoclear to dissolve old balsam then follow mounting procedure.

Materials

The following list of tools and chemicals can be ordered from any available company. When individual company names are mentioned, this is done as general reference and does not represent an endorsement by the USDA.

- 95% EtOH
- 50-70% EtOH - Made from 95% stock
- 5% NaOH
- 10% KOH - Made by placing 14 pellets into 50ml of distilled water
- Double Stain - BioQuip, Gardena CA 310-324-0620
- Clove Oil
- Canada Balsam
- Histo-clear - National Diagnostics, Atlanta GA 800-526-3867
(citrus oil, available at most grocery stores, can be used as a substitute)
- Microscope slides
- 12mm cover slips
- small specimen dishes or stender dishes (about 2mm diameter)
- watch glass to cover specimen dishes
- Wilkey Microslide Tool set (BioQuip) or insect pins