Entomology
How to Prepare Insect Killing Bottles and Vials

"Dry" (Ethyl Acetate) Bottles

1. Select at least two strong, clean glass bottles with lids that can close easily with a single turn. One bottle should be slim and sturdy or can be a medium-large test tube. One bottle should be large for large insects. You may also keep insects with scales separate from non-scaly insects.
2. Tape the bottom half-inch and rim of the jars. This reduces the chance of breaking and prevents shattering of glass and chemicals if breakage does occur.
3. Sprinkle about one inch of sawdust in the jar and pack it down.
4. Mix plaster of Paris (2:1 plaster:water volume) and fill jar to a height of 1 cm. Using a pointer, poke a hole as the plaster is setting up, before it becomes completely hard. (Cotton balls or foam will work for test tubes.) Plaster sets in 20-30 minutes.
5. Pour a small amount of Ethyl Acetate into the jar and allow it to thoroughly soak into the plaster. Wipe out any excess fluid to keep the jar dry. Periodically wipe the inside of the jar to keep it clean.
6. You must recharge your jar periodically to maintain killing power. Keep lids on tight when not collecting.
7. Label each jar with a POISON label. Keep out of reach of children. Avoid inhaling fumes.
8. Do not overload killing bottle with specimens. Have other jars available if you plan to collect a lot. Do not leave specimens in the jar too long, they will become brittle and discolor. They also may rot in the jar, making it unpleasant to use and the specimens useless.
9. If moths and butterflies are placed in the jars, the jars must be wiped out to avoid contaminating new specimens with their scales.
10. Remove specimens as soon as possible and pin them appropriately

Wet (Ethyl Alcohol) Vials

1. Vials of various sizes will be provided. You should have a few jars or test tubes for larger specimens and berlese samples.
2. Fill containers with 70% solution of Ethyl Alcohol. **Always keep vials full** or specimens will rot and slosh around. Keep lids tight so the EtOH does not leak out or evaporate.
3. Label each jar with a POISON label. Keep out of reach of children. Avoid inhaling fumes. Do NOT drink.
4. Periodically replace alcohol as it becomes discolored. You can use old alcohol for killing and sorting.
5. Do not carry around vials containing specimens, they will slosh around and disintegrate.
6. Small arthropods such as aphids, thrips, mites and ticks are put in 70% for killing and preserving. Really small specimens (<2 mm) should be mounted on slides. Large larvae or other very soft-bodied insects should not be killed in EtOH. They need to be boiled for 1 minute in water and fixed in Peterson's solution for 24 hours at room temperature. After 24 hrs, they are safe to store in 70% EtOH.
7. Prepare labels as instructed and put inside the vial with each specimen. See additional label handout and samples are available on the lab's computer.
8. Only 1 species / vial / location / day is acceptable. Do not store multiple species in the same vial or the same species collected on a different day or from different locations. If you can collect multiple groups in a vial, sort later.