

Isolating a Potato Killer: Verifying *P. infestans* infection of Healthy Tuber: Day Seven

Preparation: Retrieve your potato “sandwich” from your container. Observe the white fuzz growing on top of the sample. This is *P. infestans* mycelium and sporangia. Anything growing on the sides of the potato “sandwich” or underneath are bacterial or fungal contaminants since they attack the potato through different mechanisms.

Laboratory Procedure:

1. Remove parafilm and lid or open your plastic bag. Using forceps, place your potato samples one by one onto a watch plate.
2. Place your watch plate underneath the dissection microscope. Look for the white mycelium that has emerged from the **center top** of one or more of the three potato slices.
3. Using the dissection microscope, observe the mycelium for evidence of sporangia. See Figure 4 below.

(**Going further** – you may want to observe your sample under the compound light microscope at a higher magnification.)

4. Sketch what you see in the *Data* portion of your lab sheet and record the total Magnification.
5. Make sure to label structures that you see. (If you need a review of Oomycete structure, look at the *Observations* portion of your lab sheet or ask the teacher for help.)

Laboratory Cleanup:

6. Upon recording your data, place potato samples into the teacher waste container of bleach to kill the pathogens. Place the watch glass, forceps (and/or microscope slides) separately into the wash container your teacher has set out for you.
7. Using the bleach solution, clean the container (or plastic bag) you used. Wipe up your lab station using paper towels.
8. Begin your analysis/conclusion questions after you have completed your cleanup.

Figure 4: Structures of *P. infestans* at 400x magnification.

Source: Chia-Hui Hu, Dr. Ristaino Lab at NSCU

