

Micr-22 Lab Midterm Study Guide Revised Fall 2018

- Lab 1:** Vocabulary.
Microscope operation.
How to calculate total magnification.
Metric conversions among the prefixes kilo-, centi-, milli-, micro-, and nano-.
Cell shape and arrangement names.
Review Questions at end of lab.
- Lab 2:** Vocabulary.
How to pour a petri plate.
Names for colonies on agar (whole-colony, margin, elevation terms).
Review Qs at end of lab.
- Lab 3:** Steps of aseptic technique.
Names for growth in broths, on slants.
Review Qs at end of lab.
- Lab 4:** Steps in making a smear.
Procedure for making a simple stain.
General appearances of *Serratia marcescens* and *Staphylococcus aureus* (color on slant, shape and arrangement of cells)
Review Qs at end of lab.
- Lab 5:** Steps in making a Gram stain, acid-fast stain, endospore stain (chemicals, relative amounts of time).
How to interpret results of these stains (mainly by color).
Possible explanations for unexpected results of stains.
Review Qs at end of lab.
- Lab 6:** Vocabulary.
General appearance of *Saccharomyces cerevisiae* under microscope.
Purpose and appearance of HardyCHROM™ Candida plate.
Mycelium colors of *Rhizopus*, *Penicillium*, and *Aspergillus*.
Appearance of *Rhizopus*: aseptate hyphae, sporangium, sporoangiospores, and zygospores.
Appearance of *Penicillium*: septate hyphae, conidiophore, conidiospores/conidia.
Appearance of *Aspergillus*: septate hyphae, conidiophore, conidiospores/conidia.
Appearance of ringworm fungus: multicellular spores.
Appearance of *Coccidioides immitis*: arthroconidia.
Appearance of *Pneumocystis jiroveci* cysts.
Appearance of lichen: fungal hyphae and algae cells.
Review Qs at end of lab.
- Lab 7:** Appearance of protozoa: unique characteristics of each species.
Diseases caused by each.
Review Qs at end of lab.