

MSU Microscope Imaging of Biological Agents Policy

This document describes the policy and procedures for imaging of biological agents with microscopes at MSU. Adherence to this policy will ensure that employees, students, and members of the public are not exposed to biological agents.

Responsibility

Ensuring that microscopes are appropriately used, cleaned and decontaminated is the responsibility of the individual operating the microscope.

The MSU Biosafety Officer has established minimum requirements for proper decontamination of laboratory equipment that may have been exposed to biological materials, (see [MSU Biosafety Manual](#).)

Procedure

1. BSL1 and BSL2 biological agents (excluding fungus and spore-forming bacteria) and viruses can be live imaged using appropriate disinfection protocols known to inactivate the biological agent. See step four for more information on disinfection.
2. Spore-forming bacteria and all fungus, regardless of their containment level, must be contained (leak proof containers) or fixed prior to imaging.
3. If microscope is located in a different laboratory room, samples must be prepared in the host lab and transported to the microscopy lab per [MSU Transporting Biological Agents Policy](#).
4. The minimum personal protective equipment (PPE) to wear when operating a microscope with a live biological agent is a lab coat, and disposable gloves. Eye-protection must be worn when there is a splash hazard. Additional PPE may be required depending upon the specific biological agent used.
5. Use gloves when moving sample onto the stage. Remove gloves before touching the microscope or computer.
6. After imaging, don new gloves and place sample back into transport container.
7. After imaging, all microscopes and computer equipment used to image biological agents must be decontaminated with an appropriate disinfectant for the biological agent that is also safe for the instrument.
 - a. An appropriate disinfectant is one that has demonstrated decontamination efficacy with regard to the biological material of concern and has been shown to not create additional hazards during use.
 - b. Additional information is available through MSU's Pathogen Safety Data Sheets, the Biosafety Officer, or laboratory SOPs.
8. After disinfecting the instrument, remove gloves and wash hands.
9. Return sample to the host lab for disposal.