

LABORATORY BIO-SAFETY GUIDELINES FOR HANDLING & PROCESSING SPECIMENS ASSOCIATED WITH SARS CoV

Essential step →

Clinical staff should label specimens appropriately and alert laboratory staff in a timely manner to ensure proper specimen handling. **Review the case with MDCH Bureau of Epidemiology (517-335-8165) to determine if it meets the case definition**

Use Standard Precautions/Universal precautions, wear lab coat and gloves PLUS Goggles and mask or face shield to:

Handle blood, serum, plasma and urine specimens if procedure does not involve any aerosolization. Any procedure with potential to generate aerosols should be performed in BSC. Use sealed centrifuge rotors or sample cups, which should be loaded and unloaded in BSC.

Use BSL-2 with standard BSL-2 work practices for:

- Routine examination of inoculated bacterial and mycotic cultures.
- Routine staining and microscopic analysis of fixed smears.
- Final packaging of specimens to transport to diagnostic laboratories for additional testing. Specimens should already be in a sealed, decontaminated primary container.
- Molecular analysis of extracted nucleic acid preparations.
- Electron microscopic studies with glutaraldehyde-fixed grids.
- Pathologic examination and processing of formalin-fixed or otherwise inactivated tissues.

BSL-2 with Class II BSC* for:

- Aliquoting and/or diluting specimens other than blood and urine
- Inoculating bacterial or mycological culture media.
- Performing diagnostic tests that do not involve propagation of viral agents in vitro or in vivo.
- Nucleic acid extraction procedures involving untreated specimens
- Preparation and chemical- or heat-fixing of smears for microscopic analysis.

* Any procedure or process that cannot be conducted in a BSC should be performed wearing gloves, lab coat, and acceptable respiratory and eye protection.

BSL 3 facility with BSL-3 work practices for:

- SARS –CoV propagation in cell culture.
- Initial characterization of viral agents recovered in cultures of SARS specimens.

Animal BSL-3 facilities and Animal BSL-3 work practices (including shower-out facilities) for:

- Inoculation of animals for potential recovery of the agent from SARS samples.
- Protocols involving animal inoculation for characterization of putative SARS agents

Acceptable methods of respiratory/eye protection

- A properly fit tested NIOSH approved filter respirator (N-95 or higher) and goggles;
- or powered air-purifying respirators (PAPRs) equipped with high efficiency particulate air (HEPA) filters.
- Accurate fit testing is a key component of effective respirator use.
- Personnel who cannot wear fitted respirators because of facial hair or other fit-limitations should wear loose fitting hooded or helmeted PAPRs.

- Decontaminate work surfaces with appropriate disinfectant upon completion of work and autoclave all disposable waste.

Ref: <http://www.cdc.gov/ncidod/sars/guidance/f/pdf/app5.pdf>