



Interim Biosafety Guidelines When Handling Primary Materials

The ongoing challenges presented by the novel coronavirus disease, COVID-19, is increasing the risk associated with working with primary human and non-human primate specimens. The high demand for personal protective equipment (PPE) (masks & gowns) in reaction to COVID-19 has reduced the availability of PPE. As a result, primary human specimens should not be worked with on the bench top. The Institutional Biosafety Committee (IBC) is issuing the following guidance for working with primary human and non-human primate samples/specimens in the laboratory to help protect researchers and the general public from potential exposure to infectious materials.

Procedural Changes:

Until further notice, the IBC is instituting that all work with primary human and non-human primate materials will be performed using Biosafety Level 2 (BL-2) precautions, including materials that were previously downgraded to BL-1.

Actions Needed:

Follow Universal Precautions (outlined below) when handling samples/specimens that may potentially harbor coronavirus; e.g. saliva, mucosal swabs, fecal materials, and blood, all of which may contain potentially infectious materials.

Experiments and analytical procedures, such as the following activities, must be handled using Universal Precautions:

- Using automated instruments and analyzers
- Staining and microscopic analysis of fixed smears
- Examination of bacterial cultures
- Pathologic examination and processing of formalin-fixed or otherwise inactivated tissues
- Molecular analysis of extracted nucleic acid preparations
- Final packaging of specimens for transport to diagnostic laboratories for additional testing. Specimens should already be in a sealed, decontaminated primary container
- Using inactivated specimens, such as specimens in nucleic acid extraction buffer
- Performing electron microscopic studies with glutaraldehyde-fixed grids

Universal Precautions:

Use a certified Biosafety Cabinet (BSC) whenever possible when working with primary human and non-human primate materials.

- If your IBC was approved to work on the bench with PPE in lieu of a BSC, collaborate with another laboratory that has a certified BSC to use even if not currently listed in your IBC registration (update IBC registration as necessary).
- PPE – Wear laboratory coats or gowns, gloves, and eye protection when working in a BSC.
- Hand hygiene - Wash hands for at least 20 seconds after removing PPE.
- Follow routine laboratory practices and procedures for decontamination of work surfaces and management of laboratory waste.

Droplet or Aerosol Producing Procedures:

Of particular concern is the risk associated with procedures that have a high likelihood to generate aerosols or droplets (e.g pipetting, vortexing, etc.). These procedures should take place in a certified Class II BSC.

Centrifuge equipment requirements and procedures:

- Centrifuge safety cups or sealed centrifuge rotors should be used to reduce the risk of exposure to laboratory personnel.
- Alternatively, samples should be placed in O-ring sealed tubes.
- Safety cups or O-ring tubes should be loaded and unloaded in the BSC. If the centrifuge being used does not have safety cups and if O-ring tubes are not available, the centrifuge should be moved into the BSC.

For procedures that cannot take place in a BSC:

- PPE requirements: surgical mask and safety glasses or a face shield and safety glasses, gloves, and a lab coat or gown

These guidelines were adapted from the CDC [Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with Coronavirus Disease 2019 \(COVID-19\)](#).