



Guidance for Working with COVID Specimens

All research related to specimens which may contain SARS-CoV-2/COVID19 must have:

1. Steering and Allocation Committee for the COVID-19 Bio-Repository approval to obtain patient specimens (if applicable)
2. IBC review/approval (if laboratory research)
3. COVID Official approval (during the re-start period)
4. IACUC and/or COMIRB review/approval (if applicable)
5. BSL3 Oversight approval (if BSL3 resources are requested or required by the nature of the research)
6. Have appropriate PPE (including respiratory protection) for the duration of the study
7. EHS/Biosafety approval of project specific SOP and facilities

CDC guidance for laboratories: <https://www.cdc.gov/coronavirus/2019-ncov/lab/lab-biosafety-guidelines.html>

Requirement for laboratory researchers with potential or (+) SAR-CoV-2 materials:

1. Enrollment in Occupational Health Program with updated information including working with SARS-CoV-2 materials (hospital employees notify Employee Health)
2. Daily symptom/fever watch

What can be done at the different biosafety levels:

Major considerations: viral load, potential for aerosol creation

BSL2: Aerosol producing procedures performed in a Biological Safety Cabinet (BSC), strict adherence to CDC best practices for BSC work (Appendix A, [Biosafety in Microbiological and Biomedical Laboratories](#))

Biological material, examples:

- Inactivated virus: if IBC approved inactivation method (should be a validated method with published data)
- Coronavirus strains categorized as risk group 2, cDNA of SARS-CoV-2 viral genes
- Nucleic acids extracted with a method that is validated to inactivate the virus
- Antibody neutralization assays (no live virus)
- Some blood processing may be performed, depending upon the risk assessment and additional mitigation strategies developed with Biological Safety

BSL2+: All biological materials are handled in a BSC, regardless of the potential for aerosol production

Biological material, examples:

- Patient samples which are known (+) or potentially (+) manipulated, prepared for transport;
- Airway, lower pulmonary specimens (unless patient has screened negative for SARS-CoV2)

Procedures:

- Cell sorting of unfixed materials (might have to be done with more stringent BSL3 PPE, procedures)
- Homogenization of unfixed tissues
- Some processed samples/components may be sent to BSL3s, or the COVID-19 Bio-Repository Core facility; some may be shipped to other laboratories, studies

Researchers can apply to the Bio-Repository Core Facility to obtain patient samples, components

Steering and Allocation Committee reviews these requests,

Apply through Redcap, <https://redcap.ucdenver.edu/surveys/?s=ALDKDYDPT7>