

## SARS-CoV-2 (COVID-19) Research Laboratory Biosafety Guidelines

Research Activities with Known or Likely Infected Specimens from Humans or Animal Models	Assigned Biosafety Level
<ul style="list-style-type: none"> <li>• Storage and laboratory work with seed stocks, working stocks or specimens<sup>1</sup> with the intent to grow or use live virus at GW.               <ul style="list-style-type: none"> <li>• Virus isolation, characterization and/or expansion</li> <li>• Viral cultures or isolates should be transported as Category A, UN2814, “infectious substance, affecting humans”</li> </ul> </li> <li>• Use of live SARS-CoV-2 virus in functional assays:               <ul style="list-style-type: none"> <li>• Plaque/Focus Forming Unit assays</li> <li>• Serologic virus capture/binding assays</li> <li>• Therapeutic MIC assays</li> <li>• Live cell sorting with intact virus</li> </ul> </li> <li>• Use of live SARS-CoV-2 virus in animal.</li> </ul>	<b>BSL-3/ABSL3<sup>2</sup></b>
<ul style="list-style-type: none"> <li>• Processing, aliquoting or preparing specimens<sup>1</sup> for research use and storage</li> <li>• Preparation of chemical- or heat-fixed specimens<sup>1</sup> for microscopic analysis</li> <li>• Nucleic acid extraction of specimens<sup>1</sup> for molecular analysis</li> <li>• Preparation of inactivated specimens for other laboratory assessments</li> <li>• Performing diagnostic tests (e.g. serology) that do not involve activities with the potential to propagate virus</li> <li>• Inoculating bacterial or mycological culture media</li> </ul>	<b>BSL-2 with enhancements<sup>3</sup></b>
<ul style="list-style-type: none"> <li>• Molecular analysis of already extracted nucleic acid preparations</li> <li>• Analysis of specimens<sup>1</sup> that have been inactivated by a method approved by GW Office of Laboratory Safety.</li> <li>• Final packaging of specimens<sup>1</sup> already in a sealed, decontaminated primary container for transport to collaborating laboratories for additional analyses</li> <li>• Specimens from suspected or confirmed cases should be transported as UN3373, “Biological Substance, Category B</li> <li>• Pathologic/microscopic examination of fixed specimens<sup>1</sup> (e.g. formalin-fixed tissues or glutaraldehyde-fixed grids).</li> <li>• Routine staining and microscopic analysis of fixed smears</li> <li>• Routine examination of bacterial and mycotic cultures</li> </ul>	<b>BSL-2</b>

\*Please note that all proposed research with SARS-CoV-2 (COVID-19) requires review by the Institutional Biosafety Committee (IBC) and will require approval of a Standard Operating Procedure (SOP) for the research, which will be coordinated by the Office Of laboratory Safety, [labsafety@gwu.edu](mailto:labsafety@gwu.edu)

<sup>1</sup> Specimens are defined as, but not limited to, blood, serum, plasma, tissues, feces, urine, sputum, mucosal swabs or washes/secretions collected from any species.

<sup>2</sup> Animal Biosafety Level-3 (ABSL-3)

<sup>3</sup> Required enhancements to standard BSL2 (BSL-2+) are outlined here: [BSL-2 \(+\) guidelines](#)