

SARS-CoV-2: Known/Suspected Specimens

CLINICAL AND RESEARCH BIOSAFETY GUIDELINES

It is critical that clinical specimens (i.e., blood, serum, feces, saliva, swabs) that are suspected or confirmed with SARS-CoV-2 (COVID-19) are handled, processed, and transported safely. This Fact Sheet details important biosafety key points to ensure safe operations with specimens with known/suspected SARS-CoV-2 sources, based on CDC and WHO recommendations.

WHAT IS THE RECOMMENDED BIOSAFETY LEVEL?

- CDC and WHO guidelines recommend BSL-2 with enhanced precautions for handling and processing of patient specimens in clinical and research activities.
- Work should be processed following Standard Precautions with proper hand hygiene and appropriate PPE.
- BSL-3 is required for viral work, including virus isolation, characterization and expansion, or use of live SARS-CoV-2 virus in functional assays. These activities require approval by the Institutional Biosafety Committee (IBC). MSK does not currently have a BSL-3 facility.

HOW CAN I PROTECT MYSELF FROM EXPOSURE?

1. Always use appropriate PPE, including disposable lab gown, double gloves and eye protection when handling clinical specimens.
2. Procedures generating aerosols, droplets or splashes (vortexing, cell sorting, ELISA plate washing) must be performed in a certified Class II Type A Biosafety Cabinet (BSC).
3. Specimen processing requiring centrifugation must use sealed centrifuge rotors or buckets.
4. Only non-viable specimens (by validated chemical or heat means) can be safely removed from the BSC for downstream processing. Common lysis buffers used in nucleic acid extraction have been validated by the CDC. *CDC 2019-Novel Coronavirus (2019-nCoV Real-Time RT-PCR Diagnostic Panel <https://www.fda.gov/media/134922/download>
5. All surfaces must be decontaminated using 70% ethanol, 10% bleach, or an EPA-registered disinfectant* for coronavirus, with the appropriate dilution and contact time. *EPA-Registered Disinfectants for Use Against SARS-CoV-2: <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
6. All contaminated waste must be decontaminated or containerized in a small biohazard bag/bin within the BSC before disposing into any other biohazard bag/bin located outside the BSC.
7. Use of sharps should be eliminated whenever possible.

WHAT IF I AM EXPOSED?

- › **Clean the wound** with soap and water for at least 5 minutes.
- › **Flush mucous membranes** with water/saline for 15 minutes.
- › **Immediately report the incident** to your supervisor and call EH&WS (646-888-4000) for a medical evaluation. Call the Urgent Care Center (212-639-7203) after normal work hours.
- › **Complete an Electronic Incident Report (EIR)** through OneMSK.

WANT TO KNOW MORE?

SARS-COV-2 Sample Type Risk Assessment

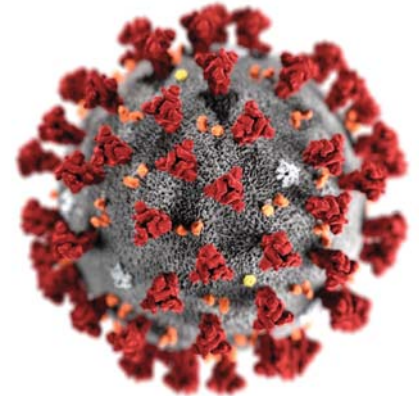
https://absa.org/wp-content/uploads/2020/04/ABSA2020_SARS-CoV-2_Sample_type_risk_assessment.pdf

CDC Interim Laboratory Biosafety Guidelines (COVID-19 Handling and Processing)

<https://www.cdc.gov/coronavirus/2019-nCoV/lab/lab-biosafety-guidelines.html>

WHO COVID-19 Technical Guidance on Laboratory Testing

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/laboratory-guidance>



NEED TO KNOW



1. All clinical, diagnostic, and research labs require site and activity specific risk assessments to identify and mitigate risks prior to work with suspected or confirmed SARS-CoV-2+ specimens.
2. All proposed research using SARS-CoV-2 related material requires IBC review and approval prior to initiation.
3. Routine diagnostic testing of specimens from suspected or confirmed SARS-CoV-2 patients must be handled in a BSL-2 laboratory following Standard Precautions with practices to control aerosols and splashes.
4. Clinical specimens must be double packaged (primary and secondary leak proof containers) whenever outside the BSC. Triple packaged when transporting externally as Biological Substance, Category B (UN3373).



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FOR MORE INFORMATION

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