

## RETURN TO LABORATORY RESEARCH AT LOWER DENSITY CHECKLIST

- This guidance document provides a general laboratory safety checklist intended to aid you and your research team as you begin planning for laboratory research re-engagement and resuming laboratory operations.
- This checklist was developed to minimize potential disruptions and to ensure the safety of all individuals working in laboratory research facilities.
- For specific concerns relating to Biological, Chemical, or Radiological hazards, contact your [Research Building Liaison](#) from the Environmental Health and Safety Office (EHSO).
- Visit [www.ehso.emory.edu](http://www.ehso.emory.edu) for the most up-to-date information.

<i>Preventive Measures</i>	<i>Check</i>
Ensure all personnel have completed the mandatory <b>EHSO – Returning to Laboratory Research at Lower Density</b> training module and <b>Return to Work Registration</b> .	
Revise communication plans to include administrators, students, and research personnel.	
Review and follow the <a href="#">guidance provided by CDC</a> .	
Establish policies/procedures for physical distancing: <ul style="list-style-type: none"> <li>• Wearing mandatory cloth face coverings</li> <li>• Establish staggered schedules for areas with insufficient space to maintain 6-foot distancing and maximum density of one person per 250 square feet (e.g., AM vs PM, every other day, every other desk, etc.).</li> </ul>	
Create schedules for regular cleaning and <a href="#">disinfection</a> : <ul style="list-style-type: none"> <li>• Research laboratories and workspaces.</li> <li>• Shared research spaces (e.g., cold rooms, common rooms, any enclosed rooms, etc.).</li> <li>• Field locations.</li> <li>• Shared office spaces and meeting rooms.</li> <li>• Break areas/food preparation areas.</li> </ul>	
Review policies/procedures for shared facilities (e.g., microscopy areas, analytical laboratories, core facilities, etc.) for any new restrictions. <ul style="list-style-type: none"> <li>• Delays due to start-up procedures.</li> <li>• Shared facilities may have restricted schedules to accommodate physical distancing.</li> <li>• May need additional Personal Protective Equipment (PPE).</li> </ul>	

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<b>Preventive Measures (continued)</b>	<b>Check</b>
<p>Establish and implement physical distancing strategies:</p> <ul style="list-style-type: none"> <li>• Use remote collaboration tools whenever possible (e.g., video and phone conferencing, etc.).</li> <li>• Decrease density in lab and workspaces to ensure people work at least 6-feet apart.</li> <li>• Evaluate assignments/activities to reduce face-to-face interactions.</li> <li>• Stagger use of shared equipment to ensure maximum density of one person per 250 square feet. Implement a booking system with specific downtime blocked in to prevent physical encounters between personnel using the equipment.</li> <li>• Use signs and floor markings to identify 6-foot separation when queuing for use of shared equipment (e.g., chemical storage cabinets, microscopes, chemical fume hoods, waste disposal areas, etc.).</li> <li>• Identify areas of the lab that may be “pinch points” and adjust the workflow when possible.</li> <li>• Do not share lab benches, desk spaces or other work areas. To maintain 6-foot distance and maximum density of one person per 250 square feet, stagger bench space in a zig zag pattern and label areas of the bench that should be considered ‘out-of-bounds.’</li> <li>• Assign work processes - assigning specific tasks to the same person to restrict people movement across laboratories (e.g., confocal microscopy, cell culture, etc.).</li> <li>• Lab personnel are not to work alone. If this is not possible, use a virtual buddy system to check in/out.</li> <li>• Explore and plan for flexible arrangements.</li> </ul>	
<b>Laboratory Preparation</b>	<b>Check</b>
<p>Survey the laboratory for any unsafe conditions.</p> <ul style="list-style-type: none"> <li>• Biological and chemical leaks, spills, or releases.</li> <li>• Supplies, equipment, glassware, and other items left out prior to evacuating the lab.</li> <li>• Verify that infectious materials and toxins that were put away in storage are still secure.</li> <li>• Manage expired, outdated, peroxide-forming, self-reactive, or other reagents with a limited lifespan appropriately. <b>Evaluate reagent and chemical stocks for expiration and/or contamination. Dispose of expired or contaminated chemicals through <a href="#">EHSO Waste Collection</a>.</b></li> <li>• <b>Restart lab activities with empty waste containers. Dispose of any previously accumulated hazardous wastes.</b> <ul style="list-style-type: none"> <li>- Secure and correctly label chemical and radiological hazardous wastes for pickup.</li> <li>- Manage biological wastes appropriately. Package and secure Stericycle boxes for pickup.</li> </ul> </li> </ul>	
<b>General Laboratory Maintenance</b>	<b>Check</b>
<p>Review any ongoing experiments that were running prior to or during the lab evacuation/ramp-down that could have been affected by loss of electricity, water, or other services.</p>	
<p>Ensure that all refrigerators, freezers, and incubators are functioning properly (i.e., accurate temperature, humidity, CO2 level, etc.)</p>	

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<b>General Laboratory Maintenance (continued)</b>	<b>Check</b>
Ensure that essential equipment that was on emergency power is functioning properly.	
Review equipment operation safety. <ul style="list-style-type: none"> <li>• Review equipment manuals for safe startup instructions.</li> <li>• Review equipment state and safely release any stored-up energy sources.</li> <li>• Check inside of ovens/shakers for research materials (e.g., tubes, flasks, etc.) that may have been left behind.</li> <li>• Check for mold inside refrigerators, incubators and other equipment. Decontaminate if necessary.</li> <li>• Check incubator water tray/linings and refill if needed.</li> </ul>	
Confirm dewars and cryogen containers that were used for sample storage and critical equipment are still filled.	
Confirm that storage of perishable items that used alternate cooling methods (e.g., liquid nitrogen, dry ice, etc.), vulnerable items that were put in storage units that have power backup systems, or items that were stored in duplicate locations are still secured and safe.	
Check all compressed gas cylinders and house gas lines: <ul style="list-style-type: none"> <li>• Ensure cylinders/tanks are properly secured.</li> <li>• Check valves and regulators.</li> <li>• Verify amount of gas content remaining in cylinders/tanks.</li> </ul>	
Refresh all water sources (e.g., circulating water baths, aspirators, etc.).	
Ensure that sensitive electrical equipment that was shut off and unplugged is functioning properly.	
Ensure that unplugged non-essential electrical devices, particularly heat-generating equipment (e.g., hot plates, stir plates, vacuum pumps, or ovens) are functioning properly.	
<b>Engineering Controls</b>	<b>Check</b>
Visually check fire extinguishers and record date and initials on the tag.	
Ensure laboratory has <b>negative</b> directional airflow. <ul style="list-style-type: none"> <li>• Use a Kimwipe or tissue to confirm <b><u>air flows toward the interior of the lab</u></b> (i.e., away from non-lab spaces).</li> </ul>	
Ensure <b>biosafety cabinets</b> and <b>chemical fume hoods</b> are functioning properly. <ul style="list-style-type: none"> <li>• <b>Check the certification date, it should have been certified within the last 12 months.</b> <ul style="list-style-type: none"> <li>- <b>If BSC is expired, place a PO in Emory Express to have it certified.</b></li> <li>- <b>If CFH is expired, contact your <a href="#">EHSO Building Liaison</a>.</b></li> </ul> </li> <li>• A schedule may need to be established for chemical fume hood use to accommodate physical distancing. Confirm everyone in the laboratory understands how to schedule use.</li> <li>• Report all alarms to Facility Manager or Campus Services HVAC for evaluation.</li> </ul>	
Flush sinks/P-traps and eyewash equipment. <ul style="list-style-type: none"> <li>• Allow water to run continuously for 5 minutes.</li> <li>• After eyewash activation, record date and initials on Eyewash Activation Record form.</li> <li>• Ensure sinks are free of foreign objects or solid waste.</li> <li>• Ensure sinks are equipped with soap and paper towels.</li> </ul>	

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<b>Administrative Controls</b>	<b>Check</b>
Ensure all protocol approvals are up to date (Bio, Chem, Rad).	
Ensure trainings are up to date (Research Lab Safety, BBP for Research, Biosafety, and Radiation Safety, as applicable).	
Vaccination documents (Hepatitis B) <ul style="list-style-type: none"> <li>• Individuals handling human source materials, including human cell lines, need to check their own personal record in the Emory H.O.M.E. portal.</li> <li>• <b><u>Do NOT upload vaccination documentation in BioRAFT.</u></b></li> </ul>	
<b>Personal Protective Equipment (PPE) and Laboratory Supplies</b>	<b>Check</b>
Prepare for supply chain disruptions and limited availability. <ul style="list-style-type: none"> <li>• Recognize that order placement may be slower as the volume of requests increases.</li> <li>• Plan for limited quantity/sales restrictions of high demand items.</li> <li>• Plan for limited availability (including N95s, face shields, gowns, over gowns, and gloves).</li> <li>• Plan for some reagents having limited availability.</li> <li>• Plan for some consumables having limited availability.</li> <li>• <b>Communicate any special delivery instructions to vendors and carriers.</b></li> </ul>	
<b>Electronic Data</b>	<b>Check</b>
As necessary, restore any backed up secure data.	
As necessary, collect all data files (e.g., files reviewed and worked on during offsite activities) and save to laboratory's centralized electronic storage location(s).	
Turn on any non-essential/non-critical computers and equipment that were previously shut down to confirm they are functioning properly.	
Return stored laboratory notebooks, computers, or other electronic devices.	