Guidance for Face Coverings in the Laboratory

The University of Arizona has mandated the use of face coverings in all University of Arizona buildings (including hallways, public spaces, restrooms, and common areas), with the exception of those private offices, workspaces and formal meeting areas where physical distancing of at least six feet is possible; coverings must also be worn outdoors except where physical distancing of at least six feet is possible. Face coverings should not be used if the wearer has trouble breathing, any inability to tolerate wearing it, or is unable to remove it without assistance; contact the Disability Resource Center (DRC) for exemptions.

Face coverings, like cloth masks or surgical masks, are NOT respirators; face coverings are meant to prevent the wearer from contaminating their surroundings, while respirators are intended to protect the wearer from their surroundings. Face coverings are useful but are not guaranteed to prevent the wearer from exposure to COVID-19. Face coverings may be worn with the knowledge that they are likely to only, at most, filter out 20% of viral particles from the air. Traditional respirators, such as the N95 respirator, are protective but not appropriate for all workplaces and employees. In light of the current severe shortages of N95 respirators, they should be reserved for use by SARS-Cov-2 researchers, healthcare workers, and first responders.

- Face coverings are any material that covers the mouth of the wearer; they can be cloth masks, homemade or purchased, or even surgical masks.
- Workers should only ever use their own face covering; no swapping is permitted.
- Face coverings should be made of a washable, reusable fabric (such as a 100% cotton t-shirt or tea towel); disposable coverings are also acceptable.
- The number of times a face covering is donned and doffed each day should be as few as possible, as each time it is removed there is the potential for contamination to the inside of the face covering and thus an exposure to the wearer. Face coverings should, ideally, simply be swapped out each time they are donned (put on) and doffed (taken off).
- Proper hand hygiene must be used before and after touching the face covering, to prevent both contamination of the face covering and contamination of a worker’s hands.

Laboratory Specific Guidance

The use of face covering in a laboratory/research setting pose unique hazards to the wearer because of potential exposure to unique chemical, biological, and physical hazards. Some general concerns expressed about face coverings in the lab are:

- Capturing of hazardous vapors/gases/mists and collect particles of hazardous materials.
- Flammable hazard to the wearer.
- Vision obstruction from fogging safety glasses/googles.
- Reduction in the ability of the wearer to smell hazardous chemicals and be alerted that engineering controls (such as a fume hood) are not functioning properly.
In order to appropriately use these coverings and mitigate these and other potential hazards, the following guidance should be adhered to.

- **Laboratorians should always have more than one face covering available**, in the event that their face covering becomes contaminated through a chemical splash, fugitive vapors/gases, animal dander or excretions, etc.
- Workers should avoid touching their eyes, mouth, and face when wearing the face covering and until they have washed their hands after removal.
- **Face coverings should be made out of 100% cotton** (typical t-shirt material) when using flammables (OR of a flammable resistant material, such as Nomex).
- **Disposable coverings should be used until they become damaged, contaminated or wet.**
  - Disposable coverings used in a lab setting should be disposed of in the regular trash receptacle at the end of each day.
- **Reusable face coverings should be washed after each use, as per CDC guidance.**
  - Reusable coverings worn in public areas of campus can be worn until they become damaged, soiled, or wet.
  - Reusable face coverings should be taken home and laundered each night.
  - Reusable coverings should be machine-washed with warm or hot water and laundry detergent by the user. The coverings can be washed with other laundry items.
- **Reusable face coverings should not be taken home to be laundered if they have been exposed to chemical and/or biological contamination.** A laundry or dry-cleaning service should be contracted with for cleaning, similar to lab coats.
- Any face covering that appears to have deformation, holes, or other issues should be disposed of immediately; compromised or otherwise damaged face coverings should never be used.
- **Face coverings must always be donned (put on) and doffed (taken off) with clean hands.**
  - Always clean hands with soap and water prior to putting on, adjusting, or removing your face covering.
  - When removing the face-covering, follow the doffing procedure specific to your face covering. This will include using the ear loops, straps, or equivalent to take off face covering beginning from the back of your head and moving toward and away from your face.
  - Do not wear gloves when doffing and/or doffing your face covering.
  - There are many videos available, such as this video from Ohio Health on safe donning and doffing of face coverings, or this video on proper storage of face coverings from Newman Regional Health.
  - When removed and planning to don again (such as during a lunch break), coverings should be placed into a new/clean paper bag as per CDC recommendations, labeled with their initials and date/time, until used again to prevent contamination. Alternatively, any clean and dry location is acceptable (e.g. desk drawer).
Performing these tasks properly is imperative to ensuring that you do not increase your own risk of contracting COVID-19—improper donning and doffing can directly and indirectly expose you to any viral particles on your face covering, hands, and/or face.

- **Face coverings must NOT interfere with the sight of the wearer:** this includes not directly obstructing their view and not causing their protective eyewear to fog.
  - Protective eyewear is a minimal PPE requirement in the laboratory and should never be removed. If a face covering is causing fogging or interfering, the face covering should be altered or a new one procured that mitigates these issues.

- **Face coverings must NOT dangle or hang:** if a covering (e.g. bandana, balaclava, gaiter, etc.) is droops or is otherwise hanging off the wearer, it must be secured such that it will not be caught in equipment, prone to dipping in chemicals, catching fire, etc.

- **Face coverings are NOT a substitution for the use of proper engineering controls** (e.g. fume hood, glove box, etc) and will NOT protect the wearer like an N95 respirator.
  - Do not use the face covering as you would a respirator.
  - Continue to always follow the hierarchy of controls: PPE is the least desirable solution since it is prone to misuse and failure.

- **Face coverings may impair communication** with other laboratory workers, particularly those who may be hard of hearing and require facial/mouth movements for comprehension. Be sure to work with those employees to find a best means of communication when face coverings are worn.

- **Face shields are potential alternatives to face coverings:**
  - Face shields are more easily and readily cleaned and can be shared between laboratory users with proper hygiene measures.
  - Face shields do not:
    - Impede communication.
    - Absorb chemical vapors/gases/mists/etc.
    - Contribute to reduced visibility from direct blockage and/or fogging.

Face covering use in the lab will be highly dependent upon the type and scope of work being conducted. RLSS should be consulted with any questions, concerns, and to help design a face covering and process that will work for your lab and properly protect workers.
**References:**


Newman Regional Health: [https://youtu.be/ZHQN3YrmDqo](https://youtu.be/ZHQN3YrmDqo)

Ohio Health: [https://www.youtube.com/watch?v=o_k7VBV3czw](https://www.youtube.com/watch?v=o_k7VBV3czw)
