



## PAPR Use Fact Sheet and Checklist

Proper use of powered air purifying respirators (PAPR) is critical to ensure users do not acquire illnesses from exposure. Several individuals at this university have experienced changes in health status (Q-fever titers, etc.) due to improper use of respiratory protection, including PAPRs.

**Anyone who uses a PAPR but does not part of one of the groups below must contact EHS for assistance.**

- BSL-3: 3M Breathe Easy (stored in EHS office, Building 401)
- Facilities Management: 3M TR-600 (Ed1 SAB closet, Water Treatment staff, CUP); 3M GVP (PRF, Fluid Shop); and North Primair (building inspectors)
- OLAR: 3M Air-Mate

PAPRs can use a variety of filters/cartridges to remove different contaminants. For proper protection, the wearer must know the contaminant to select the proper filter/cartridge. PAPRs equipped with high efficiency particulate air (HEPA) filters provide 99.97% particulate filtration efficiency. Each unit includes: 1) hood, helmet, or headpiece, 2) breathing tube, 3) PAPR blower/filtration unit with battery pack and belt.

### Battery Charging

Continuous charging for longer than one week may decrease battery life. All PAPRs must be charged according to the manufacturer's instructions. Many batteries require a minimum of 16 hours to attain a full charge.

### Airflow Testing

Each PAPR must be tested monthly and prior to use

1. Connect the airflow indicator tube to the PAPR; for Breathe Easy or TR-600, breathing tube must be removed; for GVP or Primair, the airflow indicator connects to the breathing tube. Ensure the airflow indicator tube is perpendicular to the floor.
2. Attach appropriate filter/cartridge and REMOVE any filter/cartridge caps; turn on the PAPR.
3. If the floating ball inside the airflow indicator tube does not rise above the appropriate marking (typically 6 CFM), the airflow is insufficient. Do not use the PAPR until the unit is serviced.

### Decontamination Procedures

1. While wearing gloves, remove the filters/cartridges if applicable (some units do not require filter removal, e.g., Air-Mate). Do NOT clean cartridges/filters as damage may result.
2. Wipe external surfaces (headpiece, blower/filtration unit, and battery pack) with an approved disinfectant for the contaminant of concern by applying the disinfectant to a cloth/rag, or use a pre-wetted wipe. Do not spray the PAPR blower/filtration unit directly.
3. If the hood/helmet is shared, wipe the inside of the hood/helmet with an alcohol wipe.
4. Wipe the outside of the breathing tube with the approved disinfectant. The breathing tube may be submerged and soaked in a mild cleaning solution as necessary, then rinsed with water.
5. Allow PAPR blower/filtration unit, breathing tube, battery pack, and hood/helmet to air dry.
6. Store on a shelf in a cool, dry, dark space, out of sunlight.

**PAPR User Checklist**

1. Inspection PRIOR to use
  - Helmet/hood, breathing tube, and/or fittings are correct for the pump being used (must be same manufacturer)
  - Filter/cartridge is in place (wear gloves if installing previously used filter)
  - Filter/cartridge is adequate for contaminant
  - Air flow is adequate (typically 6 CFM)
2. Donning (putting on) the PAPR and in-use procedure
  - Fittings and connections are tight and hose is not leaking
  - Air flow is adequate (6 CFM)
  - PAPR is turned on **BEFORE** entering exposure
  - Exit area then check battery if a variance in airflow or motor sound is noticed
3. Doffing (taking off) the PAPR
  - For potentially infectious exposures (BSL-3 agents, Q fever in the PRF, etc.), cleaning of the PAPR should take place **BEFORE** the PAPR is removed from the immediate area
  - Infectious exposures:** the wearer, or a SECOND PERSON/HELPER (if possible) must wipe the exterior surface while the PAPR is still being worn with a disinfectant capable of inactivating the contaminant
  - PAPR may then be removed, and must be cleaned/disinfected outside of the hazard area within a dedicated decontamination area or ante-room
  - Do NOT take PAPRs to a clean area, such as an office, for disinfection – this will spread contaminants**
4. Cleaning and disinfection
  - Disconnect all component parts of PAPR
  - Blower unit AND all its component parts (blower/filtration unit, battery, breathing tube, and hood/helmet) must be cleaned and disinfected
    - **Non-infectious exposures:** use a mild cleaning solution or disinfectant cleaning wipes (70% isopropyl alcohol) to wipe down all parts
    - **Infectious exposures (BSL-3, PRF):** typical cleaning agents WILL NOT WORK for some contaminants; use bleach or Virkon instead
  - Do NOT submerge the battery, blower/filtration, or hood/helmet in liquid
  - Do NOT clean filters/cartridges
  - Dispose of filters/cartridges after service life has expired. Special steps may be required (e.g., for infectious exposures, perform change-out in a BSC)
5. Storage
  - AFTER disinfection and drying, store on shelf in cool, dry, dark area, out of sunlight