

## Decontamination of Qualitative fit testing (QLFT) and Fit Testing Equipment

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When we fit test, we are verifying a specific manufacture, make, model, style and size of a respirator on a specific face. You only get one chance. A respirator can't protect you if it doesn't fit your face. It's that simple. Agencies are finding it necessary to do in-house, just in time fit testing because of the demands of the changing workload associated with the Coronavirus. This additional task can bring challenges to our First Responders and Healthcare Professionals. These challenges can include but are not limited to:

- Training of fit testers based on OSHA and Z88.10 requirements;
- Multiple fit testings because of a change of manufacture, make, style, model and size of a different respirator;
- Changes of PPE that inter-react with the respirator;
- Large weight gain or loss;
- Major dental work (such as new dentures);
- Facial surgery that may have changed the shape of your face; or
- Significant scarring in the area of the seal

Any of these changes could affect the ability of your respirator to properly seal to your face, which could allow contaminated air to leak into your respirator facepiece.

### Qualitative Fit Testing

Qualitative fit testing is a pass/fail test method that uses your sense of taste or smell, or your reaction to an irritant in order to detect leakage into the respirator facepiece. Qualitative fit testing does not measure the actual amount of leakage. Whether the respirator passes or fails the test is based simply on you detecting leakage of the test substance into your facepiece; it's an honor system. There are four qualitative fit test methods accepted by OSHA:

- Isoamyl acetate, which smells like bananas;
- Saccharin, which leaves a sweet taste in your mouth;
- Bitrex, which leaves a bitter taste in your mouth; and
- Irritant smoke, which can cause coughing.

Qualitative fit testing is normally used for half-mask respirators - those that just cover your mouth and nose. Half-mask respirators can be filtering facepiece respirators - often called "N95s" - as well as elastomeric respirators. An N95 is a respirator, not a mask.

### Decontamination of The Qualitative fit testing Equipment - Hoods and Collars

#### Glossary of Terms:

- **Cleaning:** Removal of all soil (organic and inorganic) and foreign material from objects and surfaces. This is typically accomplished with water and mechanical action. Detergents may be used to assist the process. NOTE: Failure to remove foreign material (soil, face oils, etc.) from an object can make the disinfecting process ineffective.
- **Sanitizing:** A process to reduce the number of microorganisms on an inanimate object to "safe" levels (but may not destroy disease-producing organisms). E.g., dishes and eating utensils are normally sanitized.
- **Disinfecting:** A process of inhibiting or destroying disease-producing microorganisms

(but may not kill bacterial spores). It usually involves the use of chemicals, heat, and/or ultraviolet light and is divided into three categories: high, intermediate and low-level disinfection.

- **Sterilizing:** A validated process to render a product free of all forms of viable microorganisms, including bacteria, viruses, spores, and fungi.

### **Common Questions:**

**Question:** Who makes respiratory protection program decisions for your organization now?

**Answer:** – According to 29 CFR 1910.134(c), the employer shall designate a Program Administrator who is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness. The Program Administrator is required under 29 CFR 1910.134(c) to ensure (partial list):

- Fit testing is conducted correctly and in a safe manner;
- Respirators and Fit Testing Equipment are appropriately cleaned, disinfected, stored, inspected, repaired, discarded, and maintained;
- Respirator users are trained in respiratory hazards, and the proper use and maintenance of respirators;
- Annual evaluation or sooner (Based on a New Hazard or Equipment) of the Respiratory Protection Program.
  - Please review OSHA changes per OSHA's March 14<sup>th</sup>, 2020 [Temporary Enforcement Guidance - Healthcare Respiratory Protection Annual Fit-Testing for N95 Filtering Facepieces During the COVID-19 Outbreak](#)

**Question:** How should I clean the hoods and collars? (Before Coronavirus)

**Answer:** After each session, the hood and collar should be wiped with a damp cloth or paper towel to remove any deposited fit test solution. If desired, the hood and collar can be wiped with 3M™ Respirator Cleaning Wipes 504, towelettes are alcohol free, between individuals or between fit test sessions. Reference the 3M FAQ for their equipment.

**Question:** Should the hoods and collars be decontaminated between each fit test because of the Coronavirus?

**Answer:** Yes, because according to Appendix A (Fit Testing Procedures (Mandatory)) of OSHA's Respiratory Standard 1910.134:

#### ***B. Qualitative Fit Test (QLFT) Protocols***

##### 1. General

(b) The employer shall ensure that QLFT equipment is kept clean and well maintained so as to operate within the parameters for which it was designed.

3. Saccharin Solution Aerosol Protocol - The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Taste threshold screening. The saccharin taste threshold screening, **performed without wearing a respirator**, is intended to determine whether the individual being tested can detect the taste of saccharin.

(1) During threshold screening as well as during fit testing, subjects shall wear an enclosure about the head and shoulders that is approximately 12 inches in diameter by 14 inches tall with at least the front portion clear and that allows free movements of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

4. Bitrex™ (Denatonium Benzoate) Solution Aerosol Qualitative Fit Test Protocol -The Bitrex™ (Denatonium benzoate) solution aerosol QLFT protocol uses the published saccharin test protocol because that protocol is widely accepted. Bitrex is routinely used as a taste aversion agent in household liquids which children should not be drinking and is endorsed by the American Medical Association, the National Safety Council, and the

American Association of Poison Control Centers. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Taste Threshold Screening. The Bitrex taste threshold screening, **performed without wearing a respirator**, is intended to determine whether the individual being tested can detect the taste of Bitrex.

**Additional Questions that need to be answered now considering Coronavirus!**

**Question:** Are you currently doing this?

**Question:** Does the alcohol-free 3M™ Respirator Cleaning Wipes 504 work on the Coronavirus? If not, what should you use and what is the contact time?

If Program Administrators have not made these changes to their Respiratory Protection Program, the time is now, not tomorrow.

Additional Resources:

[3M Respirator Fit Testing FAQ](#)

“Let’s Be Careful Out There” - Hill Street Blues