



Qualitative Fit Testing N95 and P100 Respirators Connecticut Department of Correction

Attachment A
11/06/2020
AD 2.28

Qualitative Fit Testing for **N95** and **P100** respirators will be conducted in accordance with **OSHA Fit Testing Protocols - Standard 1910.134 Appendix A.**

- Under **no** circumstances can **any** of the Fit Testing requirements be omitted or modified.
- Fit Testing for **N95** and **P100** respirators **must** be conducted for all **New Employees** that are required to use respirators and **annually** thereafter.
- Fit Testing shall **not be conducted** if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface.
- Test subjects cannot eat, drink (except plain water), smoke, or chew gum for fifteen (15) minutes before the test.

Prior to Fit Testing:

1. The test subject shall be allowed to pick the most acceptable respirator from a **sufficient number of respirator models and sizes** so that the respirator is acceptable to, and correctly fits, the user.
2. The test subject shall be **shown how to put on a respirator**, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. **A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator.** This instruction may not constitute the subject's formal training on respirator use, because it is only a review.
3. The test subject shall be informed that they are being asked to **select the respirator that provides the most acceptable fit.** Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.
4. The test subject shall be instructed to **hold each chosen face piece up to the face and eliminate those that obviously do not give an acceptable fit.**
5. The more acceptable face pieces are noted in case the one selected proves unacceptable; **the most comfortable mask is donned and worn at least five (5) minutes to assess comfort.** Assistance in assessing comfort can be given by discussing the points in the next step (6). If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.
6. **Assessment of comfort** shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:
 - a. Position of the mask on the nose
 - b. Room for eye protection
 - c. Room to talk
 - d. Position of mask on face and cheeks
7. The following criteria shall be used to help determine the **adequacy of the respirator fit:**
 - a. Chin properly placed
 - b. Adequate strap tension, not overly tightened
 - c. Fit across nose bridge
 - d. Respirator of proper size to span distance from nose to chin
 - e. Tendency of respirator to slip
8. Self-observation in mirror to evaluate fit and respirator position **User Seal Check Test** – The test subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another face piece shall be selected and retested if the test subject fails the user seal check test.
9. **User Seal Check Test** – The test subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another face piece shall be selected and retested if the test subject fails the user seal check test.
10. **If the test subject finds the fit of the respirator unacceptable**, the test subject shall be given the opportunity to select a different respirator and to be retested.



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11. *The respirator to be tested shall be worn for at least five (5) minutes before the start of the fit test.*

Taste Threshold Screening:

- *Under no circumstances can any of the Fit Testing requirements be omitted or modified.*

Bitrex: Performed *without wearing a respirator* to determine whether the individuals tested can detect the taste of Bitrex.

1. Test subject **must don the testing hood/tent enclosure** for the screening to be conducted.
2. The test subject shall breathe through their slightly open mouth with tongue extended.
3. Instruct the test subject to report to you when they detect the bitter taste.
4. An initial **ten (10) squeezes** of the nebulizer bulb are repeated rapidly and then the test subject is asked whether the Bitrex can be tasted.
5. If the test subject reports tasting the bitter taste during the ten (10) squeezes, the screening test is completed.
6. The taste threshold is noted as ten (10) regardless of the number of squeezes actually completed.
7. If the first response is negative, repeat Steps 4-5. The taste threshold is noted as twenty (20) regardless of the number of squeezes actually completed.
8. If the second response is negative, repeat Steps 4-5. The taste threshold is noted as thirty (30) regardless of the number of squeezes actually completed.
9. **If the Bitrex is not tasted after thirty (30) squeezes, the test subject is unable to taste Bitrex and may not perform the Bitrex fit test.**
10. If Bitrex is not tasted, you may use the **Saccharin Solution** to attempt a Taste Threshold Screening – Repeat Steps 1-9 using the Saccharin Solution.
11. The number of squeezes and if a taste response was elicited must be noted on the form.

Test Exercises:

- *Under no circumstances can any of the Fit Testing requirements be omitted or modified.*
- *The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.*
- *Regardless of whichever agent is used (Bitrex or Saccharin Solution) for the Taste Threshold Screening, you must use the SAME agent for the Test Exercises.*

1. The test subject puts on respirator and dons the testing hood/tent enclosure.
2. As before, the test subject shall breathe through their slightly open mouth with tongue extended.
3. An **initial concentration** of fit test solution is sprayed into the enclosure using the **same number of squeezes** (either 10,20 or 30 squeezes) **based on the number of squeezes required to elicit a taste response** as noted during the screening test. **Refer to their form.**
4. **The test subject is instructed to perform the seven (7) test exercises (as listed below).**
5. Every **thirty (30) seconds** the aerosol concentration shall be replenished using **one half the number of squeezes used initially** (e.g. 5,10 or 15).
6. The test subject shall indicate to the test conductor if at any time during the fit test, the taste of the taste agent is detected. **If the test subject does not report tasting the taste agent, the test is passed. Notate on form.**
7. **If the taste of the taste agent is detected, the fit is deemed unsatisfactory and the test is failed.** A different respirator shall be tried and the entire test procedure is repeated (taste threshold screening and fit testing). **Notate on form.**

Test Exercise	Requirements	Time
Normal Breathing	In a normal standing position, without talking, the subject shall	One (1) minute



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	breathe normally.	
Deep Breathing	In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.	One (1) minute
Turning Head Side to Side	Standing in place, the subject shall slowly turn their head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can <i>inhale at each side.</i>	One (1) minute
Moving Head Up and Down	Standing in place, the subject shall slowly move their head up and down. The subject shall be instructed to <i>inhale when in the up position.</i>	One (1) minute
Talking	The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.	One (1) minute
Jogging in Place	Jogging in place is substituted for "Bending Over"	One (1) minute
Normal Breathing	In a normal standing position, without talking, the subject shall breathe normally.	One (1) minute