

Qualitative Fit Test – A Reference Guide

*Ensure the employee to be tested has completed the pre-fit test medical questionnaire in K-Health. If an employee screens positive, defer testing until EH can review and determine next steps.

*Employee must not eat, drink or chew gum for at least 15 minutes prior to the test.

Sensitivity Test:

- Have the employee put on the testing hood WITHOUT a respirator or mask.
- Instruct the employee to breathe through their mouth with tongue extended.
- Using Nebulizer #1 with Sensitivity Test Solution, inject the aerosol using 10 squeezes of the bulb.
- Ask the employee if they can taste the solution. If tasted, the number of squeezes to use in the test is 10.
- If not tasted, inject an additional 10 squeezes (total of 20) and ask if they can taste the solution. If so, the number of squeezes to use is 20.
- If not tasted, inject an additional 10 squeezes (total of 30) and ask if they can taste the solution. If so, the number of squeezes to use is 30.
- If the employee cannot taste the solution after 30 squeezes, they cannot proceed with qualitative fit testing.

Fit Test:

- Have employee don N95 in either previous model and size or begin with an N95 1860 if not previously fit tested.
- Have them perform a user seal check.
- Have the employee put on the testing hood and instruct them to breathe through their mouth with tongue extended.
- Using Nebulizer #2 with the Fit Test Solution, inject the number of squeezes required determined by the Sensitivity Test. A minimum number of 10 squeezes must be used.
- Note: As the employee performs the fit test exercises, maintain an adequate concentration of the Fit Test Solution by injecting one-half the number of squeezes (5, 10, or 15) every 30 seconds during the fit test.
- After the initial injection of Fit Test Solution, as the employee to perform the following exercises for 60 seconds each:
 1. Normal breathing
 2. Deep breathing
 3. Turning head side to side
 4. Moving head up and down
 5. Talking – Read the Rainbow Passage (see next page for Rainbow Passage)
 6. Bending over
 7. Normal breathing
- If the employee tastes the solution during these exercises, they must try a different N95 model/size. Have the employee swish their mouth with water in between tests.
- If the employee did not taste the solution, the fit test should be documented as passed in K-Health with the model and size of N95 worn.
- If the employee is not able to pass, the test should be documented as failed in K-Health and employee should be counseled by Manager and/or Employee Health.

***Note:** This is a quick reference guide for Qualitative Fit Tests provided at NKC. The individual performing this test must attend a training prior to administering this fit test. For details, please see Respiratory Protection Program policy (EH-R7013) and manufacturer instruction guide. Reach out to Infection Prevention and Employee Health for further information.

The Rainbow Passage

When the sunlight strikes raindrops in the air, they act as a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow. Throughout the centuries people have explained the rainbow in various ways. Some have accepted it as a miracle without physical explanation. To the Hebrews it was a token that there would be no more universal floods. The Greeks used to imagine that it was a sign from the gods to foretell war or heavy rain. The Norsemen considered the rainbow as a bridge over which the gods passed from earth to their home in the sky. Others have tried to explain the phenomenon physically. Aristotle thought that the rainbow was caused by reflection of the sun's rays by the rain. Since then physicists have found that it is not reflection, but refraction by the raindrops which causes the rainbows. Many complicated ideas about the rainbow have been formed. The difference in the rainbow depends considerably upon the size of the drops, and the width of the colored band increases as the size of the drops increases. The actual primary rainbow observed is said to be the effect of super-imposition of a number of bows. If the red of the second bow falls upon the green of the first, the result is to give a bow with an abnormally wide yellow band, since red and green light when mixed form yellow. This is a very common type of bow, one showing mainly red and yellow, with little or no green or blue.

Employee Training on Respirator Use

- Training will be conducted during new employee orientation (NEO) and annually with annual fit testing.

This training will cover the following topics:

- a. Why the respirator is necessary
- b. How improper fit, usage, or maintenance can compromise the protective effects of the respirator
- c. The capabilities and limitations of the respirator
- d. How to use the respirator effectively
- e. How to inspect, don and doff, use, and check the seals of the respirator (just in time fit/seal check)
- f. Procedures for maintenance and storage of the respirator
- g. How to recognize medical signs and symptoms which may limit or prevent the effective use of the respirator

Respirators shall not be worn when conditions prevent a good face seal. Conditions may include:

- a. Hair which passes between the face and the sealing surface of the respirator face piece
- c. Eyeglasses, if affecting the facial seal
- d. Skin, muscle and/or bone structure, missing teeth or dentures which do not accommodate a tight sealing surface
- e. Weight loss or gain of 10 % since last fit test