Qualitative Fit Test Apparatus FT-10 (Sweet) and FT-30 (Bitter)

Instructions for Use

Issue Date 4/29/05

Contents:
- One Hood
- One Collar Assembly
- Nebulizer #1 (Sensitivity)
- Nebulizer #2 (Fit Test)
- Two Sets Replacement Nebulizer Inserts
- Sensitivity Solution (#1)
- Fit Test Solution (#2)

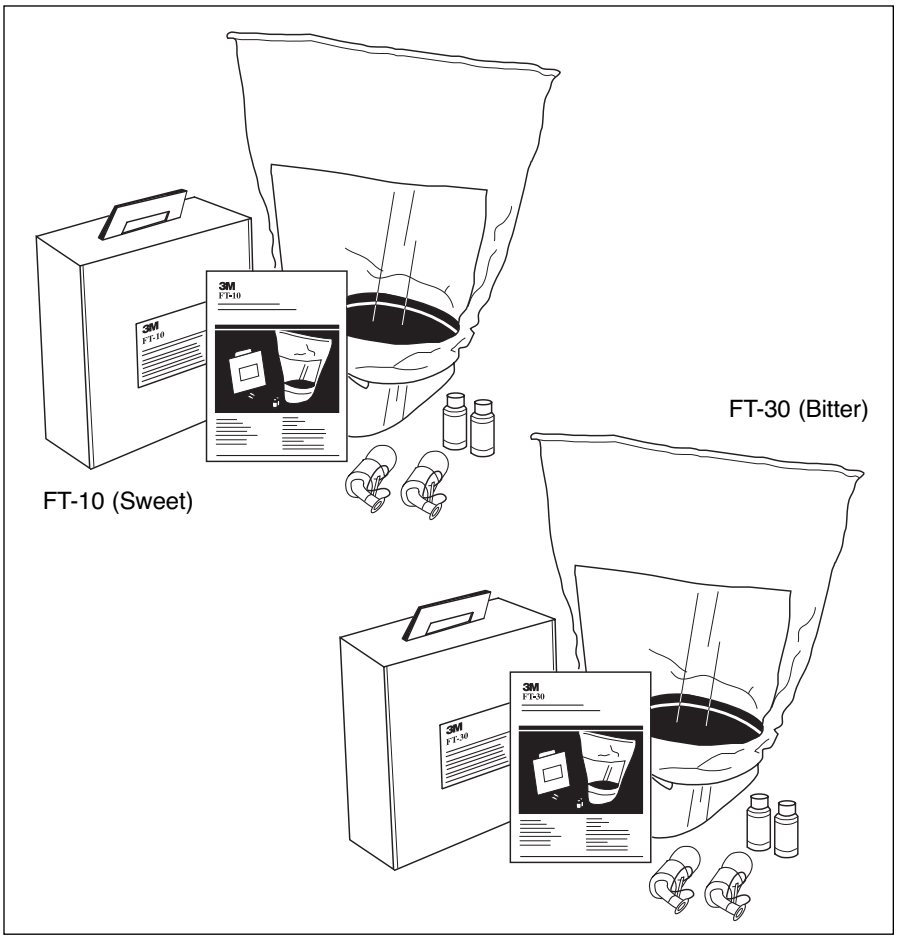
Intended Use:
The intended use of these products is to fit test any particulate respirator or gas/vapor respirator with a particulate prefilter.

FT-10 Ingredients:
- Water, sodium saccharin

FT-30 Ingredients:
- Water, sodium chloride, denatonium benzoate

Caution: Denatonium benzoate is a very bitter chemical used to keep children from ingesting certain consumer products. Keep out of reach of children.

Caution: If there is evidence of solution contamination, immediately discard the bottle.



3M™ Qualitative Fit Test Apparatus FT-10 (Sweet) and FT-30 (Bitter)

Note: OSHA requires that a respirator medical evaluation be conducted prior to fit testing. Subjects should be informed of the ingredients of the fit test solution and that they will be exposed to a fine mist.

Note: If crystals are present hold closed bottle under a warm stream of water or shake vigorously to dissolve the material.

OSHA:
The 3M™ Qualitative Fit Test Apparatus FT-10 (Sweet) and FT-30 (Bitter) meet the performance criteria for fit testing respirators under the current OSHA Standard for Respiratory Protection: 29 CFR 1910.134.

Preparation:

1. Attach hood to collar by placing drawstring between flanges on collar. Tighten drawstring and tie with square knot or bow.
2. Pour a small amount (approximately one teaspoonful) of the Sensitivity Test Solution (#1) into the nebulizer labeled "#1 Sensitivity Test Solution."
3. Pour the same amount of Fit Test Solution (#2) into the second nebulizer labeled "#2 Fit Test Solution."
4. Immediately recap the bottles.

Sensitivity Test:

This test is done to assure that the person being fit tested can detect either the sweet or the bitter taste of the test solution at very low levels. The Sensitivity Test Solution is a very dilute version of the Fit Test Solution. The test subject should not eat, drink (except water), or chew gum for 15 minutes before the test.

1. Have the test subject put on the hood and collar assembly without a respirator.
2. Position the hood assembly forward so that there is about six inches between the subject's face and the hood window.
3. Instruct the test subject to breathe through his/her mouth with tongue extended.
4. Using Nebulizer #1 with the Sensitivity Test Solution (#1), inject the aerosol into the hood through the hole in the hood window. Inject ten squeezes of the bulb, fully collapsing and allowing the bulb to expand fully on each squeeze. Both plugs on the nebulizer must be removed from the openings during use. The nebulizer must be held in an upright position to ensure aerosol generation.
5. Ask the test subject if he/she can detect the sweet or bitter taste of the solution. If tasted, note the number of squeezes as 10 and proceed to the Fit Test.
6. If not tasted, inject an additional ten squeezes of the aerosol into the hood. Repeat with ten more squeezes if necessary. Note whether 20 or 30 squeezes produced a taste response.
7. If 30 squeezes are inadequate, in that the subject does not detect the sweet or bitter taste, the test is ended. Another type of fit test must be used.
8. Remove the test hood, and give the subject a few minutes to clear the taste from his/her mouth. It may be helpful to have the subject rinse his/her mouth with water.

Fit Test:

1. Have the test subject don the respirator and perform a user seal check per the instructions provided on the respirator package.
2. Have subject wear any applicable safety equipment that may be worn during actual respiratoruse that could interfere with respirator fit. Respirator must be worn at least 5 minutes before testing.
3. Have the subject put on and position the test hood as before, and breathe through his/her mouth with tongue extended.
4. Using Nebulizer #2 with Fit Test Solution (#2), inject the fit test aerosol using the same number of squeezes as required in the Sensitivity Test (10, 20, or 30). A minimum of ten squeezes is required, fully collapsing and allowing the bulb to expand fully on each squeeze. The nebulizer must be held in an upright position to ensure aerosol generation.
5. To maintain an adequate concentration of aerosol during this test, inject one-half the number of squeezes (5, 10, or 15) every 30 seconds for the duration of the fit test procedure.
6. After the initial injection of aerosol, ask the test subject to perform the following test exercises for 60 seconds each:
   a. Normal breathing — In a normal standing position, without talking, the subject shall breathe normally.
   b. Deep breathing — In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.
   c. Turning head side to side — Standing in place, the subject shall slowly turn his/her 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 inhale at each side.
   d. Moving head up and down — Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).
   e. 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.

f. Bending over — The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place may be substituted for this exercise.

g. Normal breathing — Same as exercise a.

7. The test is terminated at any time the sweet or bitter taste of aerosol is detected by the subject because this indicates an inadequate fit. Wait 15 minutes and perform the fit test again.
8. Repeat the fit test after redonning and readjusting the respirator. A second failure may indicate that a different size or model respirator is needed.
9. If the entire test is completed without the subject detecting the aerosol, the test is successful and respirator fit has been demonstrated.
10. Periodically check the nebulizer to make sure that it is not clogged. If clogging is found, clean the nebulizer and retest.

Cleaning:
At the end of each session or at least every four hours, discard the unused solutions from the nebulizers.

DO NOT pour unused solutions back into bottles. Rinse the nebulizers with warm water to prevent clogging and shake dry. Wipe out the inside of the hood with a damp cloth or paper towel to remove any deposited Test Solution. 3M™ Respirator Cleaning Wipes 504 may be used to clean non-disposable type respirator facepieces between fit tests.

Replacement Parts

Part Number	Description	Packaging
F-11	Sensitivity Solution — Sweet (55 ml Bottle)	1 Each/Box; 6 Boxes/Case
F-12	Fit Test Solution — Sweet (55 ml Bottle)	1 Each/Box; 6 Boxes/Case
FT-31	Sensitivity Solution — Bitter (55 ml Bottle)	1 Each/Box; 6 Boxes/Case
FT-32	Fit Test Solution — Bitter (55 ml Bottle)	1 Each/Box; 6 Boxes/Case
FT-13	Nebulizer	1 Each/Box: 3 Boxes/Case
FT-14	Test Hood (2/Pack)	2 Each/Box; 5 Boxes/Case
FT-15	Collar	1 Each/Box; 1 Box/Case

Rainbow Passage

When the sunlight strikes raindrops in the air, they act like 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 reach, his friends say he is looking for the pot of gold at the end of the rainbow.

⚠WARNING

Respirators help reduce exposure to certain airborne contaminants. **Misuse may result in sickness or death.** Before use, the wearer must read and understand *User Instructions* provided as a part of product packaging. Time use limitations may apply. Call 3M OH&ESD Technical Service at 1-800-243-4630. In Canada, call 1-800-267-4414.

Important

Before using respirators, you must determine the following:

1. The type of contaminant(s) for which the respirator is being selected.
2. The concentration level of contaminant(s).
3. Whether the respirator can be properly fitted on the wearer's face. All respirator instructions, warnings and use and time limitations must also be read and understood by the wearer before use.

Before use of these respirators, a written respiratory protection program must be implemented, meeting all the requirements of OSHA 29 CFR 1910.134, including training, medical evaluation and fit testing.

3M Occupational Health and Environmental Safety Division
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For more information, please contact:

3M Occupational Health and Environmental Safety Division (OH&ESD)

In the U.S., contact:

Sales Assistance
1-800-328-1667

Technical Assistance
1-800-243-4630

Fax On Demand
1-800-646-1655

Internet
www.3M.com/occsafety

For other 3M products
1-800-3M HELPS

In Canada, contact:

3M Canada Company, OH&ESD
P.O. Box 5757
London, Ontario N6A 4T1

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Technical Assistance In Brazil
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