



QUALITATIVE FIT TEST APPARATUS



Fit Test Kit Contents:

1 Instruction Manual
1 Test hood
1 Collar

2 Bottles of Solution (1 Sensitivity, 1 Fit Test)
2 Nebulizer (1 Sensitivity, 1 Fit Test)
10 Test Report Forms

INSTRUCTIONS FOR USE:

The intended use of this fit test apparatus is to fit test any tight fitting particulate respirator or gas/vapour respirator fitted with a particulate prefilter.

TEST SOLUTION CONTENTS:

Water, sodium chloride, denatonium benzoate.

SAFETY MEASURES:

- 1. Denatonium benzoate is a very bitter chemical used to keep children from ingesting consumer products. Keep out of reach of children.**
- 2. If there is evidence of solution contamination, immediately safely and correctly dispose of the bottle and its contents.**

NOTE:

It is recommended that a medical check 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 warm water or shake vigorously to dissolve material

HSE:

The JSP Qualitative Fit Test Apparatus meets the performance criteria for fit testing respirators as advised in HSE information document 282/28, the guidance document for fit testing of respiratory protective equipment.

STORAGE:

The JSP Qualitative Fit Test Apparatus should, when not in use or during transportation, be stored in the packaging in which it was supplied. The JSP Qualitative Fit Test Apparatus should be stored away from direct sunlight, not in contact with solvents and in such a manner that it cannot be damaged by physical contact with hard, hot, cold or wet surfaces. Storage temperature should be between 5°C and 40°C and relative humidity not greater than 75%.

PREPARATION:

1. The test subject should not eat, drink (except water), smoke or chew gum for 15 minutes before the test. The test subject needs to be clean-shaven around the face seal to achieve an effective fit when using tight-fitting facepieces and to achieve a representative result from this test.
2. Pour a small amount (approximately one teaspoon) of the Sensitivity Test Solution into the nebulizer labelled "Sensitivity Test Solution"
3. Pour the same amount of Fit Test Solution into the second nebulizer labelled "Fit Test Solution"
4. Immediately recap bottles.
5. Fill out the Test Report Form with the subjects details.
6. Align the base of the hood with the Velcro lining of the collar, ensuring the clear plastic window is the same side as the empty slots in the collar. With these two aligned, press the Velcro together to create a seal.
7. Have the subject don the hood and collar assembly, use the Velcro straps and feed them under the armpit and tighten them using the slots in the collar.

SENSITIVITY TEST:

This test is done to assure that the person being fit tested can detect 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.



1. Have the test subject put on the hood and collar assembly without a respirator.
- Position the hood and collar assembly so that there is about 150mm between the subjects face and the hood window.
- Instruct the test subject to breath through his/her mouth with tongue extended.
- Using the nebulizer with sensitivity test solution, 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 before use. The nebulizer must be held upright to ensure aerosol generation.

5. Ask the test subject if he or she can detect the bitter taste of the solution. If tasted, note the number of squeezes as ten and proceed to 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 bitter taste then 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. Advise the test subject that the object of the test is to ensure that the test solution does not get around the seal between the mask and the subjects face. Advise that there is a likely hood of a slight taste of the test solution due to possible penetration of the mask, but that this should be no worse than that tasted during the sensitivity test. Leakage around the mask will result in a much stronger taste.
2. Have the test subject don the respirator and perform a user seal check per the instructions provided on the respirator package
3. Have the subject wear any applicable safety equipment that may be worn during the actual respirator use that could interfere with respirator fit.
4. Have the subject put on and position the test hood and collar as before and breath through his/her mouth with tongue extended.



5. Using the nebulizer with fit test solution, inject the fit test aerosol using the same number of squeezes as required in the sensitivity test (10, 20, 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 up right position to ensure aerosol generation.
6. *To maintain an adequate concentration of aerosol during this test inject one-half the number of squeezes (5, 10, 15) every 30 seconds for the duration of the fit test procedure.*

7. After the initial injection of aerosol, ask the subject to perform the following test exercises for 60 seconds each:-
 - a. Normal breathing – in a normal standing position, without talking the subject shall breath normally.
 - b. Deep breathing – in a normal standing position the subject shall breath slowly and deeply, taking care 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 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 slowly and loud enough so as to be heard clearly by the fit test assessor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100 or recite a memorised poem or song.

Rainbow Passage

When the sun 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 colours.

These take a 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.

- f. Bending over – the subject should stand and bend at the waist as if to touch their toes.
- g. Normal breathing - Same as a.

7. The test is terminated at any time the bitter taste of the aerosol is detected by the subject because this indicates an inadequate fit. Wait 15 minutes and perform the sensitivity test again.
8. Repeat the fit test after readressing and readjusting the respirator. A second failure may indicate that a different size or model is needed.
9. If the entire test is complete without the subject detecting the bitter taste of the aerosol, the test is successful and respirator fit has been demonstrated.
10. If the test is successful, ask the subject if they are happy that the fit of the mask is correct. If there is any doubt on the part of the user about the fit of the mask, the subject can be invited to remove the mask with the hood still in place, the test subject will then be subject to the test solution and will immediately understand the need for good fit.
11. Remove the test hood from the test subject and the mask, if not already done so. The test subject should be advised to wash their face at the earliest opportunity.
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 4 hours, discard the solutions from the nebulizers. **DO NOT pour unused solution back into bottles.** Rinse the nebulizers with warm water to prevent clogging and shake dry. Wipe out the inside with a damp cloth or paper towel to remove any deposited test solution.

REPLACEMENT PARTS:

Replacement parts can be obtained from the retailer from which the test kit was purchased. If any difficulties are found, JSP's Technical Helpdesk should be contacted.

IMPORTANT NOTICE

WARRANTY:

In the event any JSP product is found to be defective in material, workmanship or not in conformance with any express warranty for a specific purpose, JSP's only obligation and your exclusive remedy shall be to repair, replace or refund the purchase price of such parts or products upon timely notification thereof and substantiation that the product has been stored, maintained and used in accordance with JSP's written instructions.

EXCLUSION TO WARRANTY:

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY, EXCEPT OF TITLE AND AGAINST PATENT INFRINGEMENTS.

LIMITATIONS OF LIABILITY

Except as provided above JSP shall not be liable or responsible for any loss or damage, whether direct, indirect, incidental, special or consequential, arising out of the sale, use or misuse of JSP products, or the user's inability to use such product.

FOR MORE INFORMATION and assistance on this test apparatus and other JSP products contact the JSP Technical Service Department;

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