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**MOLDEX®**

**BITREX® QUALITATIVE FIT TEST INSTRUCTIONS**

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## **A. Equipment Required**

1. Hood
2. Nebulizer #1 (Bitrex Sensitivity Solution)
3. Nebulizer #2 (Bitrex Fit Test Solution)
4. Two sets Replacement Nebulizer Inserts
5. Bitrex Fit Test Solution Applicator Tube (#0504)
6. Bitrex Sensitivity Solution Applicator Tube (#0503)
7. Appropriate Moldex Respirators\*



\*Use any Moldex disposable respirator. This fit test may also be used with 8000 by using any N, R, or P filter.

Items 1 – 6 can be purchased as a kit (#0102) or as individual items.

## B. Preparation

1. With Sensitivity Solution Applicator Tube, hold tube upright and squeeze along tube thoroughly until glass ampoule is completely crushed. Insert applicator tip into opening of Nebulizer #1 (Bitrex Sensitivity Solution). Squeeze the applicator until drained.





## **B. Preparation**

2. Repeat the same procedure using the Fit Test Solution Applicator Tube to fill Nebulizer #2 (Bitrex Fit Test Solution).



## **C. Taste Sensitivity Screening**

**Purpose:** This test is done to ensure that the person being fit tested can detect the taste of Bitrex at sufficiently low levels to make the fit test valid.

## **C. Taste Sensitivity Screening**

- 1.** Ensure that the test subject does not eat, drink, smoke or chew gum for fifteen (15) minutes before the test.
- 2.** Explain the screening and fit testing procedures to the subject.



## **C. Taste Sensitivity Screening**

- 3.** Instruct subject to put on the hood without a respirator.





## **C. Taste Sensitivity Screening**

- 4.** Position the hood forward so there is about six (6) inches between the subject's face and the window. This is especially important for the fit test. It allows free movement of the head when the subject is wearing a respirator and helps ensure even dispersion of the aerosol around the face seal area.





## **C. Taste Sensitivity Screening**

- 5.** Instruct the test subject to breathe with their mouth slightly open and tongue extended.





## **C. Taste Sensitivity Screening**

- 6.** Using the nebulizer labeled Bitrex Sensitivity Solution, inject the aerosol into the hood through the hole in front of the enclosure. Inject ten (10) squeezes of the bulb, fully collapsing and fully expanding the bulb on each squeeze.

## **C. Taste Sensitivity Screening**

- 7.** Ask the subject if he can detect the bitter taste of Bitrex.
- 8.** If the subject does not detect bitter taste, inject an additional ten (10) squeezes into the hood.



## **C. Taste Sensitivity Screening**

- 9.** If the subject still does not detect bitter taste, inject an additional ten (10) squeezes, for a total of thirty (30) squeezes.

## **C. Taste Sensitivity Screening**

- 10.** If thirty (30) squeezes were inadequate to elicit a response from the subject, this subject cannot be fit tested with the Bitrex test. Another fit test method must be used.



## **C. Taste Sensitivity Screening**

- 11.** If the subject could detect bitter taste, the number of squeezes required to produce a taste response should be noted, i.e., ten (10), twenty (20) or thirty (30) squeezes, even if subject tasted the Bitrex on a number of squeezes other than multiples of ten (10).

## **C. Taste Sensitivity Screening**

- 12.** Remove the hood. Wait a few minutes, to give the subject time to clear the taste from his mouth, before proceeding to the fit test. A drink of water during this time will aid in removing the bitter taste. Use a paper towel to wipe the subject's mouth of any residue (also wipe mustaches).



## **D. Fit Test**

- 1.** Use any Moldex disposable respirator or 8000 Series with new regulation filter. Have the test subject put on and adjust the respirator per the instructions provided with the respirator. Have the subject select the size respirator that provides the best fit. The subject may find a mirror useful in the adjustment process. The subject should wear the respirator at least five (5) minutes before starting the test.

## **D. Fit Test**

- 2.** Instruct the subject to put on and position the hood as before and breathe with their mouth slightly open and tongue extended.



## **D. Fit Test**

- 3.** Using the nebulizer labeled Bitrex Fit Test Solution, inject the fit test aerosol into the hood. The same number of squeezes is required as was necessary to elicit a response in the threshold sensitivity screening test, i.e., ten (10), twenty (20) or thirty (30) squeezes.



## **D. Fit Test**

- 4.** To maintain an adequate concentration of aerosol during the test, one half of the initial number of squeezes should be injected again every thirty (30) seconds [ i.e., five (5), ten (10), or fifteen (15) ] throughout the test.

## D. Fit Test

- 5.** After injecting the aerosol initially, ask the test subject to perform the following exercises for sixty (60) seconds each:



- (a)** Normal breathing.
- (b)** Deep breathing.
- (c)** Turning head from side to side, stopping at each end of travel for one (1) or two (2) breaths.
- (d)** Moving head up and down, stopping at each end of travel for one (1) or two (2) breaths.
- (e)** Talking, reciting the alphabet, or reading a prepared text (the Rainbow Passage is recommended, see below).
- (f)** Jogging in place.
- (g)** Normal breathing.



## **D. Fit Test**

- 6.** Instruct the subject to indicate if they detect the bitter taste at any time during the test.
- 7.** If the entire test is completed without the subject detecting the bitter taste of the aerosol, the test is passed and the respirator's fit on that individual is judged adequate.



## **D. Fit Test**

- 8.** At any time during the test, if the subject detects the bitter taste of the aerosol the test is stopped at this point. When this occurs, the fit of the respirator on the subject is judged inadequate.
- 9.** If the test is failed, before retesting the subject, a fifteen (15) minute waiting period must be observed and the taste sensitivity screening test must be performed again. Test again with same Moldex model.

## **D. Fit Test**

- 10.** If the second test fails, repeat tests with another size and/or model Moldex respirator.
- 11.** Document results of fit tests for each employee.

## **E. OSHA Information**

This fit test meets the performance criteria for fit testing half mask respirators under current OSHA Standards.

OSHA regulation 29 CFR 1910.134(f) requires that the user be fit tested before being assigned a respirator.



## **F. Cleaning Instructions**

Immediately after completing the test, discard any unused solutions. Rinse the nebulizers with warm water to prevent clogging. Wipe inside of the hood with a damp cloth or paper towel to remove any deposited test solution.

## **G. 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 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.



## **Technical Assistance**

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