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May 2022
Nextteq VeriFit® Qualitative Fit Test Kit Bitrex® Solution Manual
P/N NX90445

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INSTRUCTION MANUAL Nextteq® VeriFit® Qualitative Fit Test Kit Bitrex® Solution



Respirator Fit Testing



BETTER TECHNOLOGY. BETTER QUALITY.
BETTER VALUE.

We Meet
OSHA
Requirements
for Respiratory
Fit Testing

VeriFit® Qualitative Fit Test Kit

The Nextteq VeriFit® Qualitative Fit Test System:

- Follows the OSHA Fit Testing Requirements
- Always ready to use
- One-time use pipettes
- Pre-measured 2.5cc solution
- Requires no mixing or additional equipment
- Simple pipette design gives you complete control
- Simply cut the end and re-cap if not ready
- Averages 3-5 tests per pipette
- No broken glass pieces
- Pipettes are 100% recyclable - use and recycle!



VeriFit® Qualitative Fit Test Kit P/N NX90450



Replacement Pipettes (6 pk ea.):

P/N NX90451 Bitrex Sensitivity Solution

P/N NX90452 Bitrex Fit Test Solution



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I. NEXTTEQ VERIFIT® QUALITATIVE FIT TEST KIT

Our VeriFit® Qualitative Fit Test Kit is designed to meet current OSHA requirements for fit testing N95 respirators as well as other tight-fitting face respirators.



II. KIT CONTENTS

- Bitrex Sensitivity Solution (6 pack)
- Bitrex Fit Test Solution (6 pack)
- Sensitivity Test Nebulizer
- Fit Test Nebulizer
- Test Hood
- Scissors
- Instruction Manual

VIII. NEXTTEQ VERIFIT® IRRITANT SMOKE GENERATORS FOR RESPIRATOR FIT TESTING

The VeriFit Irritant Smoke Generator is manufactured by Nextteq International, LLC in the U.S.A. The patented plastic design integrates all traditional fit testing kit components into one convenient device. The small bellows size provides the optimum amount of smoke for fit testing, yet minimizes the risk of overexposure.

Unlike other test methods, there is no need for chamber construction, nebulizers, electric pumps, mixing jars, batteries, special test masks, mask probes, or testing hoods. There are also no parts to calibrate, warm up, sterilize, or clean.

The VeriFit Irritant Smoke Generator comes ready to use. Everything you need for immediate qualitative fit testing is in one sleek, safe, and convenient smoke generator.



Reusable cap to store for use within 24 hours

Compact shape that is easily handled and stored

Both bulb and smoke tube of traditional irritant smoke tube kit are combined in one device

Safer to operate and discard than traditional broken glass smoke tubes

NEXTTEQ®
A brand name that indicates the highest quality available in the market - manufactured in the USA and exclusively sold by Nextteq International LLC

Controlled compression to precisely generate the intended amount of smoke

VII. NEXTTEQ VERIFIT® N95 RESPIRATORS NIOSH-CERTIFIED

Key Features:

- NIOSH approved N95 rating.
- CE approved FFP1 class certified.
- Embedded nose clip for snug soft fit.
- Unique adjuster beads on head straps for optimum fit and comfort.
- Dotted pattern edges for soft feel against face.
- Pocket-shaped flat design for easy storage.
- Superior micro-fine filter media technology.
- Multi-layers of pre-filter, fine filter and skin comfort layer.
- Designed with USA market specific requirements for occupational use only.



Stamp on Respirator:

1. Identifies the Manufacturer
2. Stamped "NIOSH N95"
3. Stamped with an identifier number that begins with "TC"



2 Head Straps, not Ear Loops:

- 1 strap goes behind the head above the ears, and
- 1 strap goes behind the head around the neck.



P/N NX-N95CSR-B20 Convex Style (Left)
P/N NX-N95FFAB-B50 Flat Fold Style (Right)

III. SPECIFICATIONS FOR BITREX® PIPETTES

Volume:	0.085 oz	(2.5 mL) or 0.085 oz / 2.5 mL
Dimensions:		
Total Capacity:		7 mL
Overall Length:		5.5 in (139.8 mm)
Bulb:		
Length:		1.625 in (41 mm)
Diameter:		0.5 in (13 mm)
Draw:		1.08 oz (32 mL)
Stem:		
Length:		3.875 in (98.6 mm)
Diameter:		0.31 in (7.9 mm)
Active Ingredient:		Bitrex (Denatonium Benzoate)
Number of tests per pipette:		3-5
Operating Temperature:		32°F to 104°F / 0°C to 40°C
Operating Relative Humidity:		10% to 95% RH
Storage Temperature:		41°F to 77°F / 5°C to 25° C
Storage Conditions:		Store in a secure, dry, cool place away from direct light
Warranty:		90 days

IV. TESTING PROCEDURES

The test administrator should read and understand the testing procedures before proceeding.

It is strongly recommended that the test administrator wear a particulate respirator to prevent prolonged exposure to the Bitrex solution.

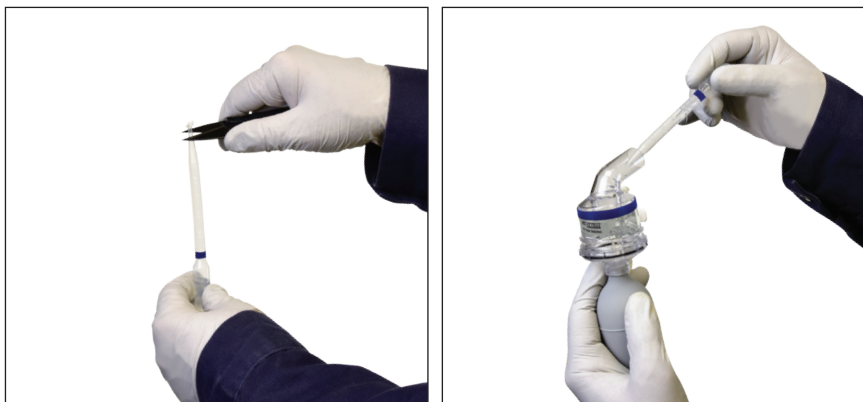
To begin, explain the steps and expected results to the test subject.

In addition to these instructions, training videos are available at nextteqnews.com.

A. PREPARING THE NEBULIZERS

There are two nebulizers in the VeriFit® Qualitative Fit Test Kit. They are labeled for the type of solution to be used at each step of the fit test. (See section V.A. (pg 12) for diagram of nebulizer.)

Remove one each of the sensitivity (red band) and fit test (blue band) solution pipettes from the kit.



1. Snip the sealed tip for the pipettes with scissors provided.
2. Remove the nebulizer stopper (C) from the vapor tube (A). Refer to diagram Section V.A. on Pg.12.
3. Holding the nebulizer in an upright position, add the entire contents of the solution through vapor tube (A).

Do not fill above the O-ring (E). Overfilling will cause the nebulizer to leak.

4. Remove the nebulizer stopper (C) to attain maximum aerosol delivery. Hold the nebulizer in an upright position until the test is completed.
5. After use, replace the nebulizer stoppers (B) and (C).

7. After parts are thoroughly dried, reassemble the bulb (I) to the nebulizer base (H). Carefully replace jet (G) to original position in base with closed part of jet toward throat. Reassemble top portion of the nebulizer to the nebulizer base.

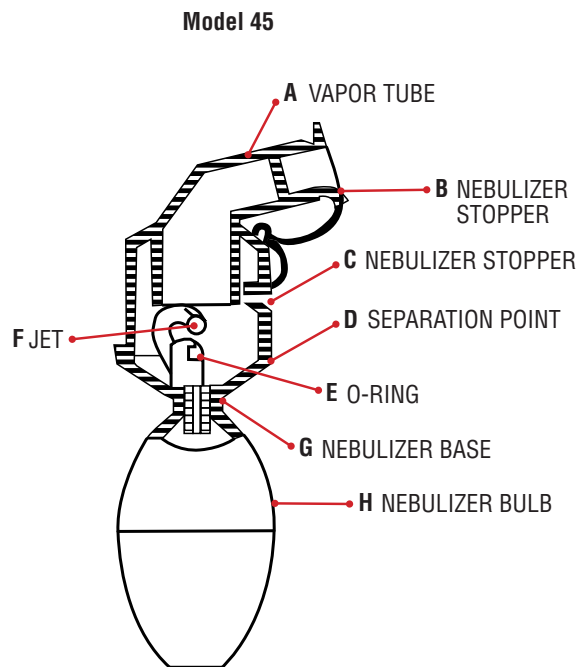
B. HOOD CLEANING

Wipe the inside of the hood with a damp cloth or paper towel to remove any residue from the solutions. The exterior can also be spot cleaned with a damp cloth or paper towel.

VI. REPLACEMENT PARTS AND REFILLS

Description	Part Number
Test hood	NX90442
Nebulizer (includes labels)	NX90449
Bitrex Sensitivity Solution	NX90451
Bitrex Test Fit Solution	NX90452

V. KIT MAINTENANCE
A. NEBULIZER CLEANING



1. Remove stoppers (B) and (C) from nebulizer ports.
Separate nebulizer base (G) and vapor tube (A) at point (D) by unscrewing. Remove any leftover solution.
2. With thumb and index fingers, using a lifting motion, carefully remove jet (F).
3. Nebulizer plastic parts should be rinsed with hot tap water after every use by removing the bulb (I) from the nebulizer base (G) and cleaned between test subjects.
4. Clean nebulizer using two clean plastic containers or bowls. Fill one with hot water and dishwashing detergent for washing, and fill the other with hot water and vinegar solution (one part vinegar to three parts water) for soaking.
5. Place nebulizer plastic parts and mouthpiece in bowl of detergent solution and clean thoroughly. Remove and rinse with clear hot tap water (131°F - 149°F/55°C - 65°C), then soak in vinegar solution (>=5% acetic acid concentration) for 30 minutes. Rinse with hot tap water and air dry.
6. Nebulizer plastic parts O-ring (E), and bulb (H) may also be sterilized by boiling. If using medical disinfectant cleaners, follow manufacturer's instructions carefully. Keep the outer surface of the bulb (H) dust-free by wiping with a clean, damp cloth.

! Never permit water or solution to enter the bulb as it will cause the bulb to become prematurely brittle.

B. PROPER FITTING OF THE TEST HOOD

Remove the hood from the kit, unfold and flatten.

Locate the snaps at each of the top corners and snap to form a cone if needed for a fit that allows free movement of the test subjects head.



Prepared hood ready for donning.
(Snaps are not required if there is ample room for movement)

Place the hood over the subject's head. Pull the strings to obtain a loose fit on top of the subject's shoulders. Do not tighten around the neck. Use the toggle to secure the hood.



Position the hood forward to allow free movement of the test subject's head while wearing a respirator and ensure even distribution of the misted solutions.

C. PERFORM THE SENSITIVITY TEST-STAGE ONE

The sensitivity test is performed to ensure that the test subject can taste the bitter solution at a diluted level of the fit test solutions.

The test subject should not eat or drink anything for 15 minutes before the test. Gum, oral rinses and smoking should also be avoided.


1. Have the subject don the test hood without a respirator.
2. Instruct the subject to breathe through their open mouth with their tongue extended.



3. Place the vapor tube (A) of the nebulizer with the sensitivity solution through the hole in the hood window and fully compress the nebulizer bulb (H) 10 times to introduce a mist into the hood.
Avoid pointing the nebulizer nozzle directly at the nose and mouth of the subject.
4. Ask the subject if they can taste the Bitrex mist. If tasted, document the number of squeezes and proceed to Stage Two (Fit Test).

NOTE: If the test subject reports tasting the Bitrex at any time during the first 10 compressions of the nebulizer the test threshold is documented as ten regardless of the number of squeezes completed.

5. If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the second ten squeezes, the screening test is completed. The taste threshold is noted as twenty regardless of the number of squeezes actually completed.
6. If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the second ten squeezes, the screening test is completed. The taste threshold is noted as thirty regardless of the number of squeezes.
7. The test conductor will take note of the number of squeezes required to solicit a taste response.
8. If the Bitrex is not tasted after 30 squeezes (Step 6), the test subject is unable to taste Bitrex and may not perform the Bitrex fit test.

 If the subject does not taste the solution after thirty squeezes, do not perform the fit test.

D. PERFORM THE FIT TEST-STAGE TWO

1. If the sensitivity test is successful, remove the hood and allow a few minutes to clear the taste from the mouth.
2. Have the test subject don and fit check the respirator per the donning instructions included with the respirator or view the training video on www.nextteqnews.com.
3. Instruct the subject to put the hood back on as outlined in Stage One and breathe through the mouth.
4. Place the vapor tube of the nebulizer with the fit test solution through the hole in the hood window and produce the mist using the same number of full bulb squeezes used in the sensitivity test.

NOTE: To maintain an adequate concentration of misted solution during the test, administer one-half of the number of squeezes used in Step 4 every thirty seconds.

5. Instruct the test subject to advise the administrator if they detect the bitter taste of the solution at any time during the test.
6. After the initial mist is produced, instruct the subject to complete the following exercises for sixty seconds each.
 - a. Breathe normally.
 - b. Deep breathing with deep, regular breaths.
 - c. Turn head from side to side, completing one turn every second.
 - d. Nod head up and down, one motion every second.
 - 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 at the bottom of this page, count backward from 100, or recite a memorized poem or song.
 - f. Bend over. The subject will bend at the waist as if to touch the toes every second.
 - g. Normal breathing.
7. Pass/Fail
 - Pass - If the test subject does not report tasting Bitrex the test is passed.
 - Fail - If the taste of Bitrex is detected, the fit is unsatisfactory and the test is failed. A different respirator should be tried and the test procedure, both sensitivity and fit test, is repeated.

“The Rainbow Passage”

When the sunlight strikes the 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 this reach, his friends say he is looking for the pot of gold at the end of the rainbow.