

# Required Procedures for Respiratory Protection Program

Chapter 296-842 WAC

## Rule

Table 13  
Saccharin Aerosol Test Procedure

### Screening Preparations

**Important:**

- This is a qualitative fit-test (QLFT) procedure.
  - Taste threshold screening determines whether the employee being tested can detect the taste of saccharin.
    - The employee must **not** eat, smoke, chew gum or drink anything but plain water for at least 15 minutes **before** the fit test. Sweet foods or drink consumed before the test may make the employee unable to detect saccharin during screening.
    - Nebulizers must be thoroughly rinsed in water and shaken dry:
      - Each morning and afternoon
      - or**
      - At least every 4 hours
    - You may use commercially prepared solutions if they meet the requirements in this procedure.
1. Obtain a test enclosure (hood) that meets the following specifications:
    - 12 inches in diameter by 14 inches tall
    - A clear front portion
    - Enough space inside to allow free movement of the head when a respirator is worn
    - A  $\frac{3}{8}$  inch ( or 1.9 centimeter) hole to accommodate the nebulizer nozzle. The hole must line up in front of the wearer's nose and mouth.

**Note:**

    - An enclosure similar to the 3M hood assembly, parts #FT 14 and #FT 15 combined, meets these specifications.
    - This enclosure can also be used for testing.
  2. Obtain and assemble 2 clean DeVilbiss Model 40 Inhalation Medication Nebulizers **or** equivalent.
  3. Prepare the screening solution as follows:
    - Dissolve 830.0 milligrams of sodium saccharin USP in 100 ml of warm distilled water
    - or**
    - If you have already prepared the fit test solution, you can make the screening solution by adding one ml of this solution to 100 ml of distilled water.
  4. Add about 1 ml of the screening solution to one of the nebulizers.
    - Mark this nebulizer to distinguish it from the one to be used for fit testing.



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Table 13 (Continued) Saccharin Aerosol Test Procedure	
Test Preparations	
5.	Prepare the fit test solution as follows: <ul style="list-style-type: none"><li>• Add 83.0 grams of sodium saccharin to 100 ml of warm water.</li></ul>
6.	Add about 1 ml of the test solution to the second nebulizer. <ul style="list-style-type: none"><li>• Mark this nebulizer to distinguish it from the one used for screening.</li></ul>
7.	Have particulate filters ready for the employee's chosen respirator or have filtering-facepiece respirators ready.
Screening	
8.	Have the employee, while <b>not</b> wearing a respirator, put on the test enclosure
9.	Instruct the employee to: <ul style="list-style-type: none"><li>• Breathe through a slightly open mouth with tongue extended during screening <b>and</b> testing</li><li>• Immediately report when a sweet taste is detected</li></ul>
10.	Insert the nebulizer into the front hole of the test enclosure <b>and</b> administer saccharin as follows: <ul style="list-style-type: none"><li>• Direct the nozzle away from the employee's nose and mouth</li><li>• Complete 10 squeezes in rapid succession.</li><li>• Each time firmly squeeze the bulb so it collapses completely, then release and allow it to fully expand.</li></ul>
11.	Ask the employee if a sweet taste is detected. <ul style="list-style-type: none"><li>• If <b>yes</b>, screening is completed. Proceed to conduct testing, Step 14, <b>after</b> you:<ul style="list-style-type: none"><li>- Ask the employee to remember the taste for reference during the fit test.</li><li>- Note the employee's taste threshold as "10" regardless of the number of squeezes actually completed.</li></ul></li><li>• If <b>no</b>, screening must continue. Proceed to Step 12.</li></ul>
12.	Repeat with 10 more squeezes. Then follow Step 11 again; <b>except</b> this time note the employee's taste threshold as "20" <b>if</b> a sweet taste is reported. <ul style="list-style-type: none"><li>• If a sweet taste is still <b>not</b> detected, repeat with 10 more squeezes and follow Step 11 one last time; <b>except</b> this time note "30" for the taste threshold <b>if</b> a sweet taste is reported.</li></ul>
13.	If <b>no</b> sweet taste is reported after 30 squeezes, you must <b>stop</b> and choose a different fit test protocol for the employee.

Required  
Procedures



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## Rule

Table 13 (Continued)  
Saccharin Aerosol Test Procedure

Test

**Important:**

- Periodically check nebulizers to make sure they do not clog during use. A test is **not** valid if the nebulizer is clogged at the end of the test.
14. Have the employee attach particulate filters, put on, properly adjust, and seal check the respirator. Have the employee put on the test enclosure (hood).
15. Instruct the employee to immediately report if a sweet taste is detected.
16. Insert the nebulizer into the front hole of the test enclosure **and** administer the same number of squeezes, either 10, 20, or 30, as noted during screening.
17. Have the employee perform the appropriate fit test exercises as described in Table 19. During this step:
- Replenish the aerosol in the hood **every** 30 seconds using 1/2 the number of squeezes used in Step 16, either 5, 10, or 15.
  - The employee must report if a sweet taste is detected:
    - If **no** saccharin is tasted, the test has been **passed**.
    - If saccharin is tasted the test has **failed**, have the employee select another respirator **and**
    - Repeat screening and testing

