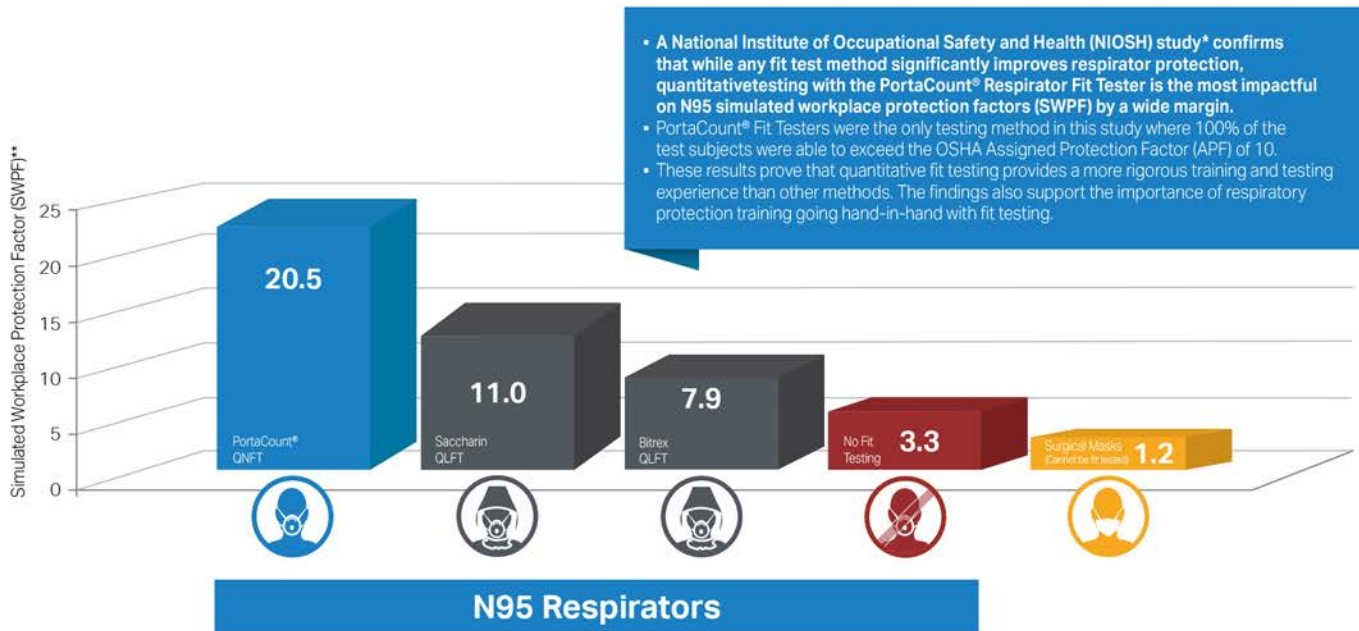


Quantitative vs. Qualitative Fit Testing:

Simulated N95 Protection Factors by Testing Method

95th percentile protection levels provided by N95 filtering-facepiece respirators, by fit test method*



- A National Institute of Occupational Safety and Health (NIOSH) study* confirms that while any fit test method significantly improves respirator protection, quantitative testing with the PortaCount® Respirator Fit Tester is the most impactful on N95 simulated workplace protection factors (SWPF) by a wide margin.
- PortaCount® Fit Testers were the only testing method in this study where 100% of the test subjects were able to exceed the OSHA Assigned Protection Factor (APF) of 10.
- These results prove that quantitative fit testing provides a more rigorous training and testing experience than other methods. The findings also support the importance of respiratory protection training going hand-in-hand with fit testing.

* Dulling, M.G., Lawrence, L.B., Slaven, J.E., Coffey, C.C., (HHS/PHS/CDC/NIOSH). "Simulated Workplace Protection Factors for Half-Facepiece Respiratory Protective Devices." Journal of Occupational and Environmental Hygiene, Vol. 4, No. 6, pp. 420-431, June 2007.
 ** SWPF is the protection provided by a respirator, measured during a laboratory simulation of a workplace environment. A SWPF of 10 means that the air inside the respirator was 10 times cleaner than the air outside.

PortaCount Fit Testers ensure respirator users are getting the protection they deserve because they know how to wear it and when it fits.

Quantitative vs. Qualitative Fit Testing:

Comparing the Testing Experience

Testing Time

How long does a quantitative fit test take versus a qualitative test with Saccharin or Bitrex? It's important to remember that the test itself is only a portion of the total time required.

Exercise / Activity	PortaCount® Fit Tester (QNFT) Minimum Time (Min:Sec)	Saccharin or Bitrex (QLFT) Minimum Time (Min:Sec)
Threshold Screening Test	N/A	~1:00 – 3:00*
Threshold Test Wear-off Time	N/A	~10:00**
User Respirator Assessment ***	5:00	5:00
One OSHA Compliant Fit Test***	2:29	7:00
Total Testing Time	7:29	23:00 – 25:00



Note: The listed times do not take into account some necessary preparation activities for each method such as: daily calibration (QNFT), solution preparation (QLFT), test subject data entry or documentation (Both).

* Approximated

** "A Guide to 3M Qualitative Fit Testing," 3M, n.d. Web. 11 Nov. 2016.

*** OSHA Respiratory Protection Standard 29CFR 1910.134 Appendix A.

PortaCount® Fit Testers offer many advantages that save time over qualitative testing

Exercise / Activity	PortaCount® Fit Tester (QNFT)	Saccharin or Bitrex (QLFT)
Less Prep and Set-up Time	✓	—
Automated Testing Steps	✓	—
Automatically Recorded Test Data	✓	—
Training w/ Real-time FitCheck Mode™ = Fewer Test Failures	✓	—



Testing Experience

It's easy to see the advantages quantitative testing can offer.

PortaCount Fit Tester (QNFT)

Integrated, automated, step-by-step software test protocol that enables up to four people to be fit tested simultaneously using one computer



1 button push, 99% reduction in work, 100% reliable

Know You Are Protected!

- Eliminates error
- Enables real-time fit optimization and training
- Eases reporting and record keeping
- Minimizes operational resources
- Eliminates repetitive stresses injuries caused by bulb squeezing
- OSHA-compliant for all respirators including N95s

Saccharin or Bitrex (QLFT)

Squeeze Bulb



75-225 nebulizer squeezes per test subject

What a Waste!

- Tedious process
- Prone to errors
- Increases need for operational resources
- Constant bulb squeezing can cause repetitive stress injuries
- Necessitates exposure to unpleasant sensitivity and test solutions
- Prone to deceitful test responses



Knowledge Beyond Measure.

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