

“Respirator Design and Testing”
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Abstract:

It is important to study the performance of filtration media to determine the requirements of personal protective equipment (PPE) for workplace particle challenges, including engineered nanoparticles and small viable aerosols. The choice of PPE for a certain particulate challenge is dictated by OSHA with reference to an assessment of the challenge concentration and a respiratory protection program. This presentation will discuss definitions of particulate respirators, NIOSH certification test methodology, the results of filtration testing of different PPE filter materials and filter test comparisons of particle count vs. particle mass challenges. Future needs for healthcare include health provider design considerations and actual characterizations of the possible hazards.