NIOSH Dataset #

Respirator Performance against Nanoparticles under Simulated Workplace Activities

DATA DICTIONARY

Field Name	Field Contents
Subject Number	Randomized subject number (1-25)
Visit	Trial #; 3 trials were done by each subject for each respirator model
Respirator Model	Respirator filter type (P100 or N95); manufacturer (A or B)
Respirator Style	Elastomeric half-mask respirator (EHR) or filtering facepiece respirator (FFR)
Respirator Size	Size stated by manufacturer
PortaCount Fit Factor	Harmonic mean of upstream: downstream concentration ratios for 7 of the 8 OSHA Fit Test exercises (29 CFR 1910.134 Appendix A)* $$Overall\ FF = \frac{7}{\frac{1}{FF_1} + \frac{1}{FF_2} + \cdots + \frac{1}{FF_7}}$$ * "grimace" exercise is excluded.
Exercise SWPF	Simulated workplace protection factor (SWPF) for an individual exercise; upstream (outside mask) concentration / downstream (inside mask) concentration
NB	normal breathing
DB	deep breathing
HSS	moving head side to side exercise
HUD	moving head up and down exercise
BO	bending-over exercise
VCM	Simulated vessel cleaning motion
Overall SWPF	Harmonic mean of SWPF values for the 6 simulated workplace exercises $$Overall\ SWPF = \frac{6}{\frac{1}{SWPF_{NB}} + \frac{1}{SWPF_{DB}} + \cdots + \frac{1}{SWPF_{CO}}}$$