Title: Reduction of exposure to simulated respiratory aerosols using ventilation, physical distancing, and universal masking

Acronyms

ACH: Air changes per hour, a measure of the room ventilation rate

D_p: Aerosol particle optical diameter

OPC: optical particle counter, a device used to measure the concentration of airborne particles

Data Dictionary

Field name on data page	*Field definition*
ACH	Data Type = Categorical. A category representing the ventilation rate inside of the chamber. This variable contains four levels: No Ventilation, 4 Air Changes/Hour, 6 Air Changes/Hour, 12 Air Changes/Hour
ACH_Number	Data Type = Numeric. A numeric value representing the ventilation rate inside of the chamber for the purposes of multiple linear regression analysis. This variable is expressed in units of air changes per hour.
Distance	Data Type = Categorical. A category representing the relative distance from a given Recipient Simulator to the Source Simulator. This variable contains two levels: 0.9 m and 1.8 m.
Fit Factor	Data Type = Numeric. A numeric value representing the result N95 Mode fit testing. This variable is unitless.
Masking	Data Type = Categorical. A category representing the masking status of the Simulators denoting whether the simulators donned no masks or were all masked, a.k.a., universal masking. This variable contains two levels: No Masks and Universal Masking.
Mass_Concentration	Data Type = Numeric. A numeric value representing the aerosol mass concentration at the Time_Elapsed variable. This variable serves as the proxy of "exposure" for the purposes of this investigation and is expressed in $\mu g/m^3$.
Mass_Percent	Data Type = Numeric. A numeric value representing the percent of total particle mass attributable to the specific size channel bin. This variable is expressed in units of percent.
Mean_Mass_Concentration	Data Type = Numeric. A numeric value representing the mean aerosol mass concentration at the mouth of the Recipient over the Time_Period sampling period. This variable serves as the proxy of "exposure" for the purposes of this investigation and is expressed in $\mu g/m^3$.

OPC	Data Type = Categorical. A category representing the OPCs designated by their Serial Number for the purposes of comparing OPC decay homogeneity within the chamber. This variable contains five levels: 8F020006, 8F030003, 8F030004, 8F030045, 8F000711.
Particle_Percent	Data Type = Numeric. A numeric value representing the percent of total particle count attributable to the specific size channel bin. This variable is expressed in units of percent.
Percent_Aerosol_Remaining	Data Type = Numeric. A numeric value representing the percent of aerosol remaining from particle decay studies. This variable is expressed in units of percent.
Percent_Change	Data Type = Numeric. A numeric value representing the percent of total particle change attributable to the specific size channel bin relative to condition-matched experiments under No masks. This variable is expressed in units of percent.
Respiratory_Action	Data Type = Categorical. A category representing the respiratory action modality of the Source simulator. This variable contains three levels: Cough, Truncated Breathing (aerosol was only generated for first three minutes of breathing; breathing was continuous throughout experiment), and Repeated Breathing (aerosol generation was cycled on for 10 seconds and off for 50 seconds over the experiment; breathing was continuous throughout experiment).
Rolling_Average	Data Type = Numeric. A numeric value representing the 6- second rolling average of the Mass_Concentration variable at the Time_Elapsed variable. This variable serves as the proxy of "exposure" for the purposes of this investigation and is expressed in $\mu g/m^3$.
Sampler_Set	Data Type = Categorical. A category representing the location of OPC sampling for a given Mass_Concentration and Rolling_Average value. This variable contains two levels: At Mouth of Recipient and Area Sampling.
Simulator	Data Type = Categorical. A category representing the Simulator on which a fit test was performed. This variable contains two levels: Recipient and Source.
Size_Bin	Data Type = Categorical. A category representing the median optical aerosol particle optical diameter (D_p) of the OPC channel size bin. This variable contains eight levels: 0.35, 0.45, 0.575, 0.725, 0.9, 1.3, 1.8, 2.5.
Time_Elapsed	Data Type = Difftime. A difftime value representing the time elapsed from the initiation of the experiment. This variable is expressed in units of M(minutes) and S(econds).
Time_Point	Data Type = Categorical. A category representing the duration of aerosol sampling for which the mean mass concentration was averaged. This variable contains two levels: 15_Minute and 60_Minute.