Title: Efficacy of Do-It-Yourself Air Filtration Units in Reducing Exposure to Simulated Respiratory Aerosols

Data Dictionary

Field name on data page	Field definition
Airflow_Rate	Data Type = Numeric. A numeric value enumerating the calculated fan airflow rate of the fans and DIY units. The variable is expressed in units of CFM.
Atmospheric_Pressure_Mean (Kpa)	Data Type = Numeric. Mean Atmospheric Pressure in the room during the experiment. The variable is expressed in units of Kilopascals.
Condition	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 categories: Masked, Unmasked.
dBA(5sec)	Data Type = Numeric. A numeric value enumerating the noise level in decibel A scale for equivalent continuous sound pressure level for 5 seconds
DIY_Number	Data Type = Integer. An integer enumerating the number of HEPA purifiers active within the Conference Room during testing, irrespective of position. This variable is unitless.
DIY_Position	Data Type = Categorical. A category representing the combination of DIY unit and Number variable and DIY position within the Conference Room. This variable contains four categories: None, Front, Back, Front and Back (one front and one back of the room).
DIY_Unit_Configuration	Data Type = Categorical. A category representing DIY unit configuration. This variable contains four categories: None, Fan Shrouded Only, DIY Ford, or DIY Cube
Effective_ACH_Mean	Data Type = Numeric. A numeric value enumerating the observed ACH as measured by "Particle Decay" Method within the Conference Room and is the composite of the room HVAC system and any DIY unit(s). This variable is expressed in units of air changes per hour.
Electrical_Current	Data Type = Numeric. A numeric value enumerating the observed electrical current. The variable is expressed in units of Amps.
Electrical_Power	Data Type = Numeric. A numeric value enumerating the calculated value by the Watts Law Formula; $P=V*C$ (P is power in Watts, V is voltage in Volts and C is current in Amperes). The variable is expressed in units of Watts.
Experiment	Data Type = Categorical. Experiment number given to each experiment conducted

Fan_Blade_Speed	Data Type = Numeric. A numeric value enumerating the calculated value of the fan blade speed by revolutions per minute. The variable is expressed in units of RPM.
Fan_Model	Data Type = Categorical. Model/Brand of Fan used, this variable contains seven categories: None, Air King, Comfort Zone, Lasko Model B20200, Lasko Model Premium, Pelonis, Genesis, Hurricane.
Fan_Speed	Data Type – Categorial. A category representing the fan speed setting used. This variable contains three categories: None, Low, High
Filter_Width	Data Type – Categorical. The width of the filter in centimeters (cm) used in the construction of the DIY unit. This variable contains three categories: None, 2.5 cm or 5 cm
Fit_Factor	Data Type = Numeric. A numeric value reported for the Fit Factor for N99 mode (all size classes) from the PortaCount Pro+. This variable is unitless. NA indicate no masking conditions.
Mean_Mass_Concentration	Data Type = Numeric. A numeric value representing the mean aerosol mass concentration at the mouth of the Recipient over the 60-minute sampling period. This variable serves as the proxy of "exposure" for the purposes of this investigation and is expressed in $\mu g/m^3$.
Normalized_Concentration	Data Type = Numeric. A numeric value representing the precent related to the control condition of no mask and no DIY units. Recipient over the 60-minute sampling period. This variable serves as the proxy of "exposure" for the purposes of this investigation and is expressed in precent of the control condition.
OPC_Coordinate_X	Data Type = Numeric. A numeric value representing the X coordinate location of the optical particle counter area sampler in the conference room. This variable is expressed in units of inches.
OPC_Coordinate_Y	Data Type = Numeric. A numeric value representing the Y coordinate location of the optical particle counter area sampler in the conference room. This variable is expressed in units of inches.
OPC_Sampler	Data Type = Categorical. A category representing the designation of the eight optical particle counters used for area sampling and noise measurements. This variable contains eight categories: OPC_3330210303, OPC_3330210305, OPC_3330210306, OPC_3330210307, OPC_3330210401, OPC_3330210402, OPC_3330210403, OPC_3330210405.
RH_Mean (%)	Data Type = Numeric. Mean Precent Relative Humidify in the room during the experiment

Room_Configuration	Data Type = Categorical. A category representing the positional configuration of the Source and Recipient Simulators. Only one variable, B.
Room_HVAC_Setting	Data Type- Categorial. A category representing the air exchange rate of the room. One category: 2 ACH (2 air exchanges/hour).
Simulator	Data Type = Categorical. A category representing the simulator for which the Fit Factor measurement belongs. This variable contains four categories: Recipient A, Recipient B, Recipient C, Source.
Time_Point	Data Type = Categorical. A category representing the duration of aerosol sampling for which the mean mass concentration was averaged. This variable contains a single level: 60_Minute.
Temp_Mean (ºF)	Data Type = Numeric. Mean temperature in the room during the experiment in degrees Fahrenheit
Temp_Mean (ºC)	Data Type = Numeric. Mean temperature in the room during the experiment in degrees Celsius