

Title: Efficacy of ventilation, HEPA air cleaners, universal masking, and physical distancing for reducing exposure to simulated exhaled aerosols in a meeting room

Data Dictionary

Field name on data page	Field definition
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.
Configuration	Data Type = Categorical. A category representing the positional configuration of the Source and Recipient Simulators. This variable contains five categories: A, B, C, D, E.
Decay_Position	Data Type = Categorical. A category representing the designation of the position for noise measurements and includes all positions demarcated in Configuration B. This variable contains twelve categories: OPC_3330210303, OPC_3330210305, OPC_3330210306, OPC_3330210307, OPC_3330210401, OPC_3330210402, OPC_3330210403, OPC_3330210405, Participant A, Participant B, Speaker, Source.
Distance	Data Type = Numeric. A numeric value representing the relative distance from a given Recipient Simulator to the Source Simulator. This variable is expressed in units of meters.
Effective_ACH	Data Type = Numeric. A numeric value enumerating the observed ACH as measured by the specified Method within the Conference Room and is the composite of the HVAC ACH and any the HEPA purifiers for a test measured by the denoted method within the data frame with “Particle Decay” as the default method. This variable is expressed in units of air changes per hour.
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.
HEPA_Number	Data Type = Integer. An integer enumerating the number of HEPA (high efficiency particulate air [filter]) purifiers active within the Conference Room during testing, irrespective of position. This variable is unitless.
HEPA_Position	Data Type = Categorical. A category representing the combination of HEPA_Number variable and HEPA position within the Conference Room. This variable contains seven categories: Off, 1 HEPA Front, 1 HEPA Back, 2 HEPAs Front and Back, 2 HEPAs Sides, 2 HEPAs Sides Raised, 2 HEPAs Center.

HVAC_Setting	Data Type = Categorical. A category representing the dialed HVAC (heating, ventilation, and air conditioning) setting for a given test. This value will be different from the Effective air exchange rate (ACH_{Eff}) denoted.
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 $\mu g/m^3$.
Method	Data Type = Categorical. A category representing the method used to derive effective air change rates. This variable contains two categories: Balometer, Tracer Gas.
Noise	Data Type = Integer. An integer value representing the measured noise level expressed in decibels (dB).
Orientation	Data Type = Categorical. A category representing the orientation a Recipient Simulator is positioned relative to the Source Simulator. This variable contains three categories: Front/Back, Front/Front, and Side/Side.
OPC_Coordinate_X	Data Type = Numeric. A numeric value representing the X coordinate location of the optical particle counter (OPC) 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 (OPC) 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 (OPC) used for area sampling. This variable contains eight categories: OPC_3330210303, OPC_3330210305, OPC_3330210306, OPC_3330210307, OPC_3330210401, OPC_3330210402, OPC_3330210403, OPC_3330210405.
Recipient	Data Type = Categorical. A category representing the breathing simulator for which the measured aerosol mean mass concentration belongs. This variable contains four categories: Speaker, Participant A, Participant B, Participant C.
Simulator	Data Type = Categorical. A category representing the simulator for which the Fit Factor measurement belongs. This variable contains four categories: Speaker, Source, Participant A, Participant B.
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.