Testing Report – PM_{10} Enhanced Testing
Manufacturer & Air Sensor Name

Testing Organization
Contact Email / Phone Number
Date

Image of device during chamber evaluation

Testing Details

Testing Organization and Contact Information	
Testing organization (Name, Organization Type)	
Contact Information (Website, Phone Number, Email)	

PM_{10} FEM Monitor Information	
Manufacturer, model	
Sampling time interval	
Date of calibration	
Date of flowrate verification check	

Sensor Information			
Manufacturer, model			
Device firmware version			
Sampling time interval			
Sensor serial numbers	#1	#2	#3
Manufacturer listed detection limit			
Manufacturer listed longevity, lifespan			
Manufacturer listed drift			

Attached Documentation	
FEM monitor documentation	
Description, date(s) of maintenance activities	☐
Sensor documentation	
Product specification sheet	☐
Product manual	☐
Description of parameters measured and units, and data flow	☐
Data storage and transmission method	☐
Data analysis/correction script and version	☐
Testing chamber documentation	
Description of chamber, particle dispenser system, and particle sizer instrument	☐

Effect of Relative Humidity (RH)

RH Monitor	Manufacturer	
	Model	

			Average RH (%)	Average T (°C)	Average FEM monitor PM_{10} concentration of test aerosol (µg/m³)	Average FEM monitor $PM_{2.5}$ concentration (µg/m³)	$PM_{2.5}/PM_{10}$ Ratio FEM monitor concentrations	Average sensor PM_{10} concentration (µg/m³)	Averaged influence of RH on sensor measurements (µg/m³)
Effect of RH	Initial Testing Conditions	Setpoint	40 ± 5	20 ± 1	60 ± 5%		≤ 0.4 ± 0.1		
		Measured Value							
	High RH Conditions	Setpoint	85 ± 5	20 ± 1	60 ± 5%		≤ 0.4 ± 0.1		
		Measured Value							

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Effect of Temperature (T)

T Monitor	Manufacturer	
	Model	

			Average RH (%)	Average T (°C)	Average FEM monitor PM_{10} concentration of test aerosol (µg/m³)	Average FEM monitor $PM_{2.5}$ concentration (µg/m³)	$PM_{2.5}/PM_{10}$ Ratio FEM monitor concentrations	Average sensor PM_{10} concentration (µg/m³)	Averaged influence of T on sensor measurements (µg/m³)
Effect of T	Initial Testing Conditions	Setpoint	40 ± 5	20 ± 1	60 ± 5%		≤ 0.4 ± 0.1		
		Measured Value							
	High T Conditions	Setpoint	40 ± 5	40 ± 1	60 ± 5%		≤ 0.4 ± 0.1		
		Measured Value							

60-Day Low Concentration Drift

			Average RH (%)	Average T (°C)	Average FEM monitor PM_{10} concentration of test aerosol (µg/m³)	Average FEM monitor $PM_{2.5}$ concentration (µg/m³)	$PM_{2.5}/PM_{10}$ Ratio FEM monitor concentrations	Average sensor PM_{10} concentration (µg/m³)	Sensor drift after 60 days (µg/m³)
60-Day Low Concentration Drift	Day 1 Date	Setpoint	40 ± 5	20 ± 1	15 ± 10%		≤ 0.4 ± 0.1		
		Measured Value							
	Day 60 Date	Setpoint	40 ± 5	20 ± 1	15 ± 10%		≤ 0.4 ± 0.1		
		Measured Value							

60-Day Mid Concentration Drift

			Average RH (%)	Average T (°C)	Average FEM monitor PM_{10} concentration of test aerosol (µg/m³)	Average FEM monitor $PM_{2.5}$ concentration (µg/m³)	$PM_{2.5}/PM_{10}$ Ratio FEM monitor concentrations	Average sensor PM_{10} concentration (µg/m³)	Sensor drift after 60 days (µg/m³)
60-Day Mid Concentration Drift	Day 1 Date	Setpoint	40 ± 5	20 ± 1	60 ± 5%		≤ 0.4 ± 0.1		
		Measured Value							
	Day 60 Date	Setpoint	40 ± 5	20 ± 1	60 ± 5%		≤ 0.4 ± 0.1		
		Measured Value							

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Accuracy at High Concentrations

		Average RH (%)	Average T (°C)	Average FEM monitor PM_{10} concentration of test aerosol (µg/m³)	Average FEM monitor $PM_{2.5}$ concentration (µg/m³)	$PM_{2.5}/PM_{10}$ ratio from FEM monitor concentrations	Average sensor PM_{10} concentration (µg/m³)	Test averaged difference between sensor and FEM PM_{10} concentrations (µg/m³)
Accuracy at High Concentrations	Setpoint	40 ± 5	20 ± 1	200 ± 5%		≤ 0.4 ± 0.1		
	Measured Value							
	Setpoint	40 ± 5	20 ± 1	300 ± 5%		≤ 0.4 ± 0.1		
	Measured Value							