Continual flow test report

Guidance from:
ISO 29463-5:2011

Five Create.
Company number: 12034140

Product ID: BRIIVPRO-01 5V 1A

Continual flow test reports

Test conditions

Filter configuration:
75g Moss
20mm Coconut natural latex fibre
Matrix and carbon layer Pleated Box 40mm deep 100mm x 100mm

Measured ariflow:
(68CFM / 1.9CMM)

Measured particulate:
Smoke paraffin wax derived

Summary

Direct flow testing method measures the reduction of particulate in one pass, under a simulated environmentt with a constant supply of test particulate entering the device over a set period of time.

Environment 1: Replicates normal room environment

Sensors placed in the inflow and exhaust of the filters with recordings taken 1 minute intervals, run for 11 mins and repeated 5 times on each environment. Mean results are calculated form all the data points and presented in the graphs shown

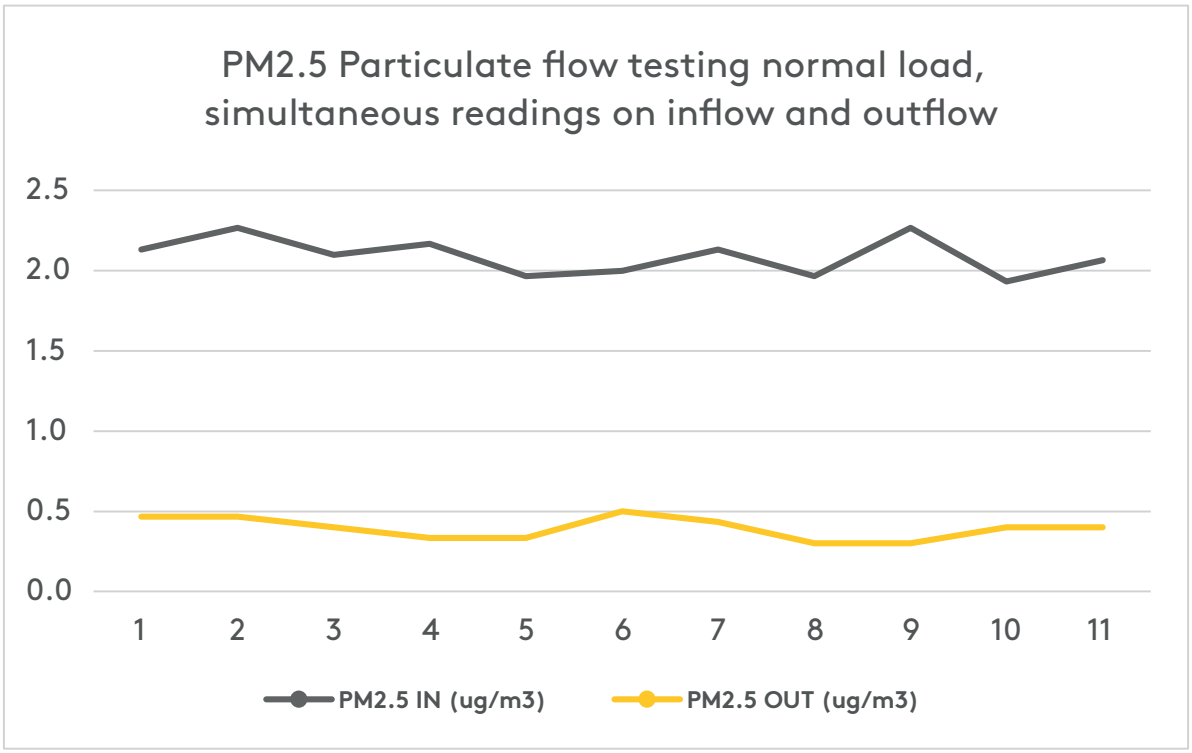
Referenced standards:

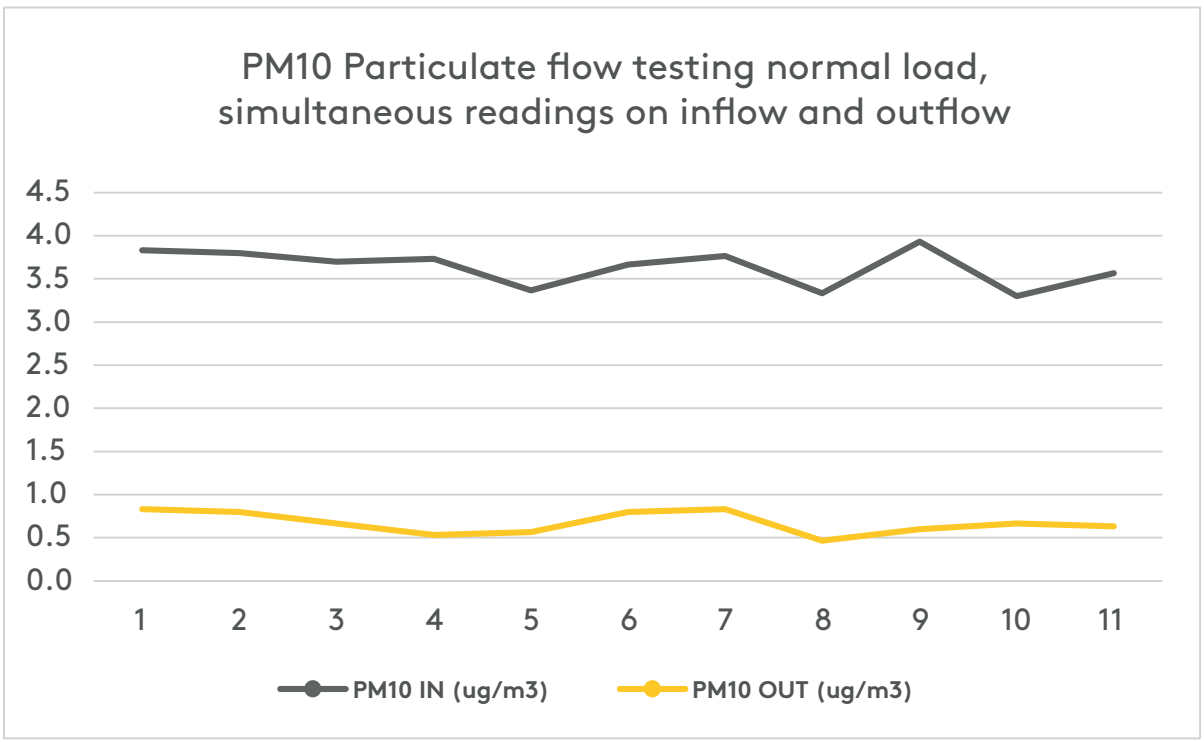
ISO 9000 Quality management systems — Fundamentals
ISO 14644-3 Cleanrooms and associated controlled environments
EN 1822-4 -High efficiency particulate air filters (EPA, HEPA and ULPA)
IEST RP CC 021, Testing HEPA and ULPA Media, Inst. of Env. Science and Technology, Arlington Hts, IL, USA
US Military Standard 282, Filter Units, Protective Clothing

United Kingdom contact for regulatory topics only:
FIVE Create Ltd, Unit 5, Armley Nano Park, Leeds, West Yorkshire, LS12 2BJ, UK

Test Data

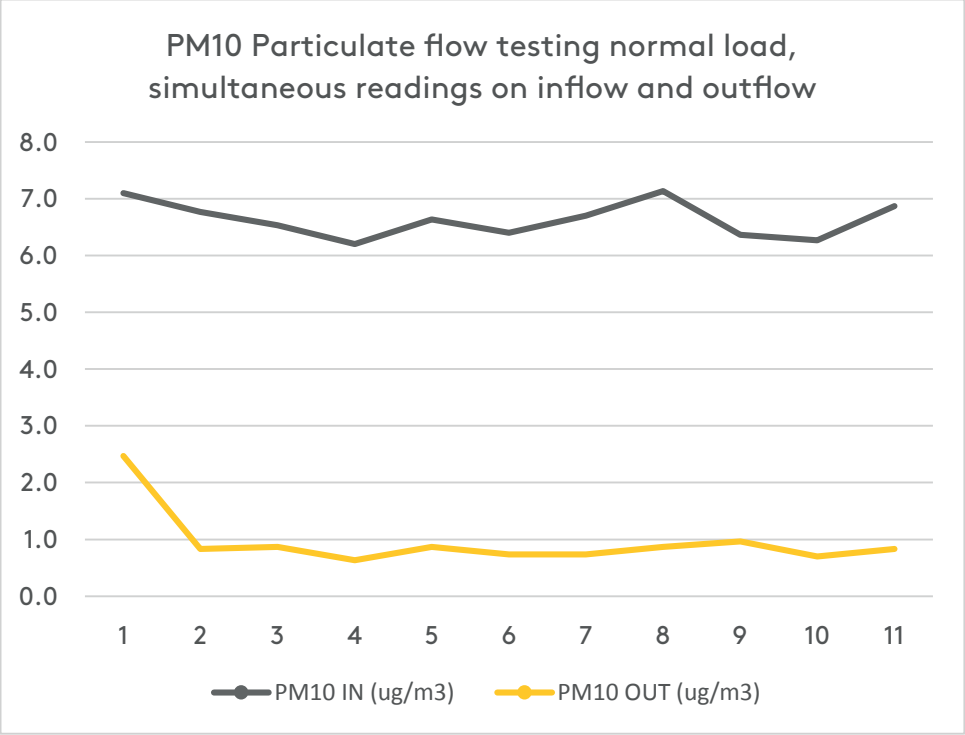
Sphagnam Moss, CoConut (standard layer), Matrix filter Cartridge.
(Ambient office environment, no added pollutants)

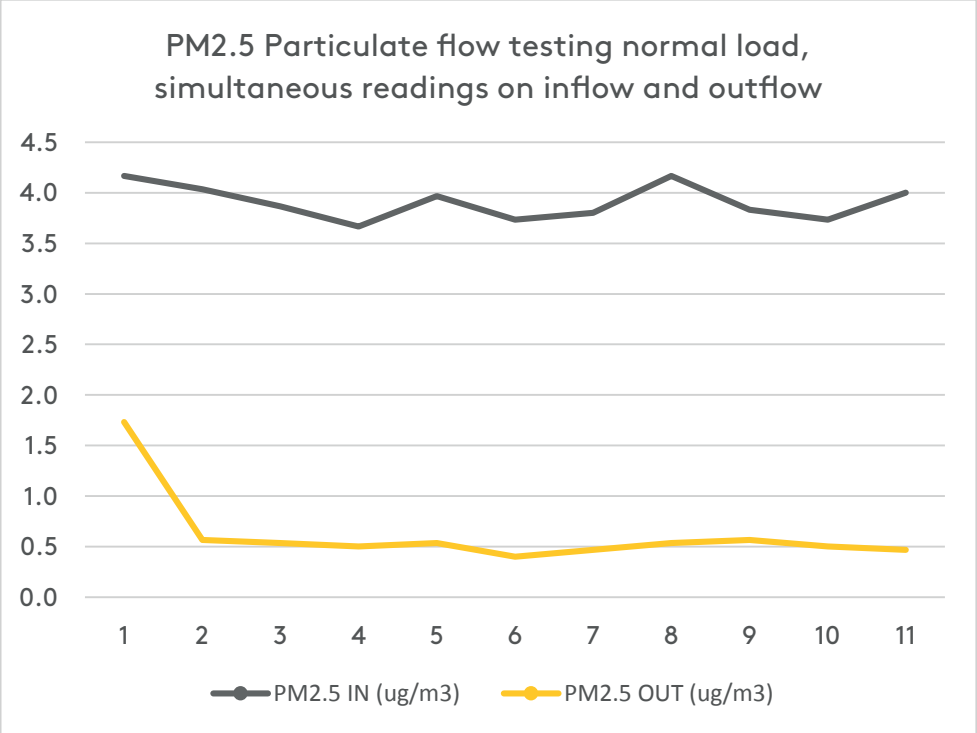




Test Data

CoConut (standard layer), Carbon Chips 5mm max size 250grams, Matrix filter (Briiv Black Edition) (Ambient office environment, no added pollutants)





Data points

Data pulled form 10 000+ data points across 10 hours of continual testing across 5 separate instances, conducted for each test environment averaged below.

Sphagnam Moss

Reduction in one pass averages from all tests				
60 second Intervals	**PM2.5 IN (ug/m3)**	**PM2.5 OUT (ug/m3)**	**PM10 IN (ug/m3)**	**PM10 OUT (ug/m3)**
1	2.1	0.5	3.8	0.8
2	2.3	0.5	3.8	0.8
3	2.1	0.4	3.7	0.7
4	2.2	0.3	3.7	0.5
5	2.0	0.3	3.4	0.6
6	2.0	0.5	3.7	0.8
7	2.1	0.4	3.8	0.8
8	2.0	0.3	3.3	0.5
9	2.3	0.3	3.9	0.6
10	1.9	0.4	3.3	0.7
11	2.1	0.4	3.6	0.6
		Average Improvement		**Average Improvement**
		81%		**82%**

Carbon Chips

Reduction in one pass averages from all tests				
60 second Intervals	**PM2.5 IN (ug/m3)**	**PM2.5 OUT (ug/m3)**	**PM10 IN (ug/m3)**	**PM10 OUT (ug/m3)**
1	4.2	1.7	7.1	2.5
2	4.0	0.6	6.8	0.8
3	3.9	0.5	6.5	0.9
4	3.7	0.5	6.2	0.6
5	4.0	0.5	6.6	0.9
6	3.7	0.4	6.4	0.7
7	3.8	0.5	6.7	0.7
8	4.2	0.5	7.1	0.9
9	3.8	0.6	6.4	1.0
10	3.7	0.5	6.3	0.7
11	4.0	0.5	6.9	0.8
		Average Improvement		**Average Improvement**
		84%		**86%**

Observations

There were no visual or mechanical change to the filter materials of housings for the duration of the tests.

Approval:

Study carried out and approved according to internal testing guidelines and refrencing ISO 29463-5

Date: 15/08/2023

Study Director

Sean Sykes