

Co-location details

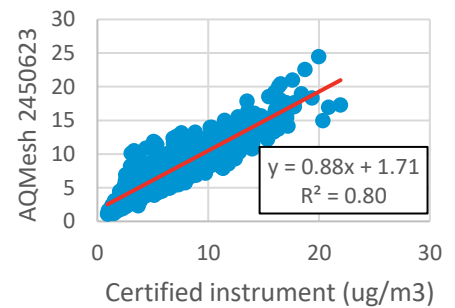
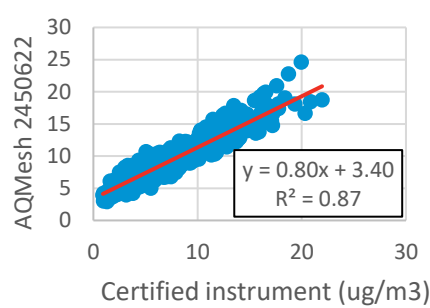
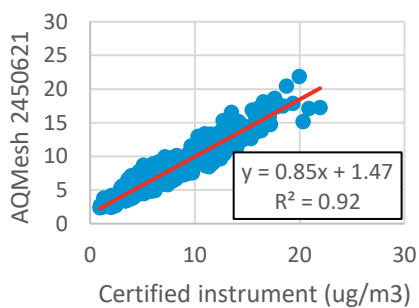
Sensor information

Sensor	PM2.5
Sensor type	Optical particle counter
AQMesh processing algorithm	V3.0h
Sampling time interval	1hr
Pod serial numbers	2450621, 2450622, 2450623
Number of paired sensor / certified instrument values	700

Testing site information

Location	Manchester, UK
Duration (Hrs.)	720
Date range	17 Jun 2021 – 17 Jul 2021
Certified instrument uptime	97.58%
Range of certified instrument concentrations over duration of test	21.02 $\mu\text{g}/\text{m}^3$

Scatter plot: AQMesh comparison to certified instrument



Performance metrics

Co-location result	Linearity	Bias		Accuracy	Data completeness
	R2	Slope	Intercept	RMSE	Sensor uptime
Pod 2450621	0.92	0.85	1.47	1.22	97.58
Pod 2450622	0.87	0.80	3.40	2.47	
Pod 2450623	0.88	0.88	1.71	1.95	
US EPA target*	>0.70	0.65-1.35	<+/- 5 $\mu\text{g}/\text{m}^3$	<+/- 7 $\mu\text{g}/\text{m}^3$	>90%

* <https://www.epa.gov/air-sensor-toolbox/air-sensor-performance-targets-and-testing-protocols>

Time series plot: 1-hour average PM2.5

