

EMISSION MONITOR COMPARISONS

In the following table, a number of particulate emission monitoring technologies are compared in terms of parameter sensitivities and other known issues which, taken together, form a reasonable basis for comparison of those technologies. The ratings are based on best estimates only, so readers are encouraged to create their own version of this table if more detailed, accurate or up-to-date information is available. The totals lose more credibility because all parameters are weighted equally (including maintenance and cost), but they are included for completeness only. In practice, all the listed technologies except for DC triboelectric and Opacity are considered viable in the proper circumstances and if properly applied. Each rating is 1(worst) to 9(best), eg.

- 1 = poor, or dependency must be calibrated out by site tests,
- 5 = average, or dependency can be compensated in real-time,
- 9 = best behaviour

Comparisons when reading MassFlowRate (MassDensity)

Technology Parameter	Triboelectric			Opacity	Optical	Scatter	Mass Beta
	ISE	AC	DC		Scintillation		
Material	1 (1)	1 (1)	1 (1)	7 (7)	7 (7)	5 (5)	8 (8)
Velocity	9 (9)	8 (5)	9 (5)	5 (9)	9 (5)	9 (5)	9 (7)
Path Length	7 (7)	1 (1)	1 (1)	9 (9)	9 (9)	9 (9)	9 (9)
NTP, O2	9 (5)	9 (5)	9 (5)	9 (5)	9 (5)	9 (5)	9 (5)
Sensitivity	9 (9)	9 (9)	5 (5)	1 (1)	5 (5)	9 (9)	9 (9)
Linearity	9 (9)	5 (5)	9 (9)	9 (9)	7 (7)	6 (6)	9 (9)
Particle Size	6 (6)	6 (6)	5 (5)	1 (1)	1 (1)	4 (4)	9 (9)
Moisture	6 (6)	6 (6)	6 (6)	9 (9)	9 (9)	9 (9)	3 (3)
Droplets	5 (5)	5 (5)	5 (5)	1 (1)	1 (1)	1 (1)	9 (9)
Humidity	7 (7)	7 (7)	5 (5)	9 (9)	9 (9)	9 (9)	9 (9)
Fallout	9 (9)	9 (9)	5 (5)	1 (1)	5 (5)	5 (5)	1 (1)
Maintenance	9 (9)	9 (9)	5 (5)	1 (1)	1 (1)	1 (1)	1 (1)
Cost	9 (9)	9 (8)	7 (6)	2 (3)	6 (6)	3 (3)	1 (1)
Totals	95 (91)	84 (76)	72 (68)	64 (62)	78 (70)	79 (71)	86 (80)