

# Whatman™ Quartz Filters QM-A

## Filters for use in US EPA PM<sub>10</sub> Ambient Air Monitoring

High-purity quartz (SiO<sub>2</sub>) microfiber filters are used for air sampling in acidic gases, stacks, flues and aerosols, particularly at high temperatures up to 500° C and in PM-10 testing. Because of the low level of alkaline earth metals, 'artifact' products of sulfates and nitrates (from SO<sub>2</sub> and NO<sub>2</sub>) are virtually eliminated. QM-A, sequentially numbered according to EPA standards, is suitable for most applications.

Property	Test Method	Unit of Measure	Value	Range
Filter Media	n/a	n/a	Quartz Fiber	n/a
Filter Thickness	ASTM D 645-92	mm	0.45	± 15
Filter Dimension	micrometer	inches	8 × 10	± 1/16
Particle Retention (0.3 µm)	ASTM D 2986-91	%	99.95	minimum
Flow Rate	EPA RFM	M <sup>3</sup> / min	1.1325	± 0.0285
Tensile Strength	ASTM D 828-93	g / 15 mm	200	minimum
Brittleness	Test for Fiber Filters	n/a	No crack larger than 1 inch	maximum
Integrity	Test for Fiber Filters	mg	2.5	maximum
Weight Loss	EMSL/RTP-SOP-QAD-522	%filter	0.75	maximum
Lead Content	EPA RFM (40 CRF 50)	µg / filter	0.25	maximum
Alkalinity	EPA/600/R-94/038b Section 2.12	µeq / g of filter	25	maximum

### Extractable metals

Al	Ba	Be	Ca	Cd	Co	Cr	Cu	Fe
9.2	<0.001	<0.001	110	0.2	0.3	<0.001	0.2	5.3
K	Mo	Mg	Mn	NA	Ni	Pb	Zn	
<0.001	<0.001	7.3	0.4	320	1.4	4.8	1.2	

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