

Whatman™ QM-C quartz filter paper



High-purity and high-temperature resistance quartz filter paper for air particulate testing

Whatman™ QM-C is a new grade of quartz filter paper developed specifically for heavy metal testing in air particulates.

Whatman™ QM-C is manufactured with 100% high quality silica raw material without any additives or binders. From raw material to finished products, QM-C is subjected to rigorous in-process quality control and final release testing. Each batch is pre-fired and tested to ensure heavy metal content conforms to European and US EPA environmental standards for inorganic elements analysis in ambient air and stationary source emission.

While Whatman™ QM-C is designed for heavy metal and inorganic chemical analysis, it is also excellent for organic chemical analysis in air monitoring. The suitable applications include gravimetric analysis of PM2.5/PM10/TSP, heavy metal and PAHs, PCB and black carbon analysis etc. Due to its high-quality raw material, QM-C has excellent performance for black carbon analysis at 1200°C.

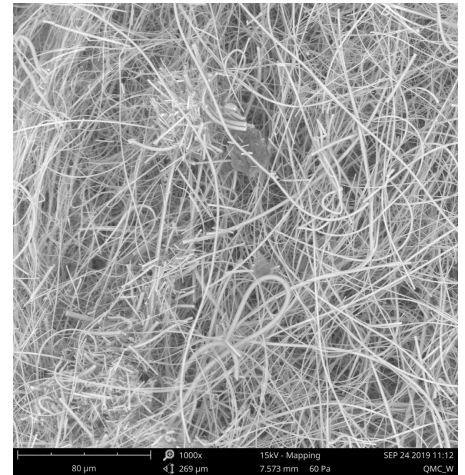


Features and benefits

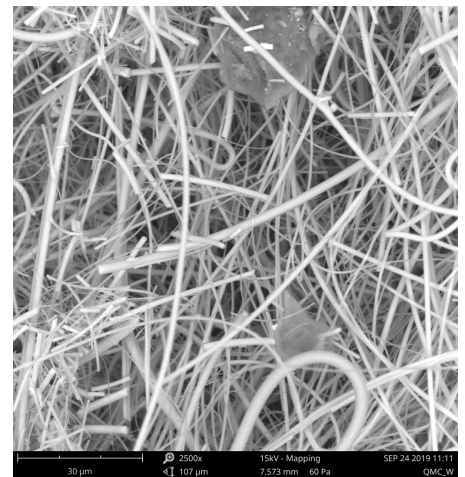
- Made of 100% high quality silica and from LEAN certified product lines.
- Air retention efficiency $\geq 99.95\%$ at $0.3 \mu\text{m}$ DOP.
- Each batch is certified to conform to EPA standards (method IO-3.5 and method 29) and EN standards (EN14902, EN12341, EN14385) for inorganic analysis in ambient air monitor and stationary emission monitor.
- Extremely low in trace metals.
- Pre-fired to remove any organic chemicals.
- Temperature resistance up to 1200°C .
- Each batch comes with certificate of analysis for the six most important metals (Pb, Ni, Cd, Cr, Ar and Zn), and trace metal report including 27 metals.

Product information

Description	Item code
QM-C pre-fired, 37 mm, 100/pk	76402-780
QM-C pre-fired, 47 mm, 100/pk	76402-782
QM-C pre-fired, 90 mm, 100/pk	76402-784
QM-C pre-fired, 150 mm, 100/pk	76402-786
QM-C pre-fired, 8 × 10 in, 25/pk	76402-788
QM-C pre-fired, 8 × 10 in, 100/pk	76402-790
QM-C pre-fired, 82 mm, 100/pk	76402-824
QM-C pre-fired, 110 mm, 100/pk	76402-826



SEM image of QM-C, 1000× magnification



SEM image of QM-C, 2500× magnification

Typical trace metal test results

Test	Result		
	Mean	Min	Max
Argentum, mg/kg	< 0.005	< 0.005	< 0.005
Arsenic, mg/kg	0.0085	0.007	0.01
Beryllium, mg/kg	< 0.01	< 0.01	< 0.01
Cobalt, mg/kg	0.15	0.14	0.16
Chromium, mg/kg	3.9	3.6	4.2
Copper, mg/kg	< 0.4	< 0.4	< 0.4
Mercury, mg/kg	< 0.005	< 0.005	< 0.005
Lithium, mg/kg	< 0.025	< 0.025	< 0.025
Manganese, mg/kg	1.15	1.1	1.2
Nickel, mg/kg	1.6	1.5	1.7
Antimony, mg/kg	0.0355	0.033	0.038
Lead, mg/kg	0.225	0.21	0.24
Boron, mg/kg	1.55	1.4	1.7
Aluminum, mg/kg	117	115	119
Sodium, mg/kg	18	17	19
Magnesium, mg/kg	33	32	34
Kalium, mg/kg	13.7	7.6	19.8
Calcium, mg/kg	86	84	88
Iron, mg/kg	28	28	28
Strontium, mg/kg	< 0.5	< 0.5	< 0.5
Titanium, mg/kg	< 1.2	< 1.0	1.4
Zirconium, mg/kg	5.55	5.4	5.7
Barium, mg/kg	2.4	2.3	2.5
Zinc, mg/kg	< 1.0	< 1.0	< 1.0
Phosphorus, mg/kg	133.5	127	140
Silicon, mg/kg	241760.5	238144	245377
Cadmium, mg/kg	< 0.5	< 0.5	< 0.5

Samples were digested with 6 mL HNO₃, 1 mL H₂O₂ and 3 mL HF and then tested by ICP-MS in accordance with BS EN 14902.



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