



KANOMAX

The Ultimate Measurements

ISO9001 ISO14001



JQA2790



JQA-EM1628

Nanosampler Model 3180

The world's first and only cascade impactor which classifies 0.1 μm particles under ambient pressure!

■ Benefits

Nanosampler classifies under ambient pressure

A low pressure impactor (LPI) is usually used for sampling PM_{0.1}, however, an LPI requires a low pressure vacuum or it will cause a change in particle composition. The Nanosampler can be used to sample a greater amount of PM_{0.1} particles at ambient pressure without causing a distortion in particle composition.

Enables the use of a higher sampling flow - 40L/min

This higher flow shortens the sampling time needed for the weighing or analysis of particle matter.



■ Features

- Particle classification as small as 0.1 μm
- Five stages of PM: 10, 2.5, 1.0, 0.5, 0.1
- Large Sample Flow Rate of 40L/min

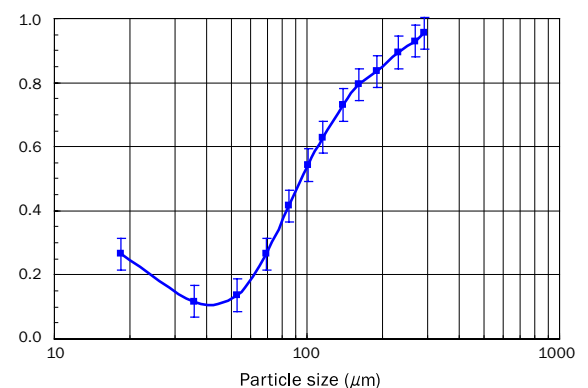
■ Applications

- Aerial Environmental Studies
- Health Impact Assessments
- Indoor Aerosol Classifications
- Vehicle Emission Studies

■ PM_{0.1} Principle

Fiber filters utilize several mechanisms for aerosol collection such as inertial, gravitational settling, interception, and diffusion. Each collection efficiency depends on particle size and filtration velocity. Large particles are collected in a filter by inertial impaction at a high filtration velocity while small particles are removed from the air by Brownian diffusion. The Model 3180 controls its diffusion collection increasing filtration velocity, and collecting particles only by inertia.

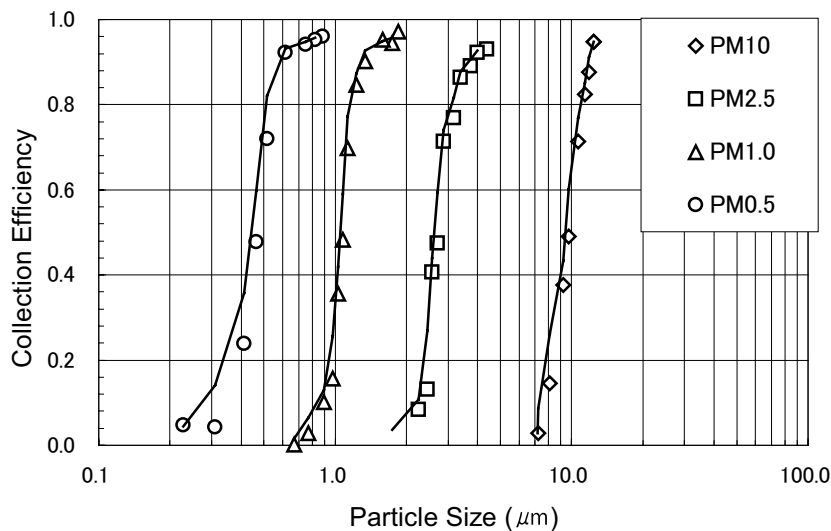
Classification characteristics of PM_{0.1}



Specifications

Classification Method	Inertial Collection
Classification Range	PM 10, PM 2.5, PM 1.0, PM 0.5, PM 0.1 and Backup Filter
Absorption Material	Quartz Fiber Filter: PM 10, PM 2.5, PM 1.0, PM 0.5, and backup filter SUS fiber: PM0.1
Sampling Flow Rate	40 L/min
Dimensions	Diameter of 90 mm x 210 (H) mm or less (excluding projection)
Weight	< 6.6 lbs (3 kg)
Accessories	Quartz Fiber Filter: 1 box (55mm x 100 pcs) PM0.1 Cartridge: 5 sets
Optional Extras	Pump Unit (Vacuum Pump + Rotameter with Valve) PM0.1 Cartridge Case: A case for 5 cartridges Quartz Fiber Filter Case: A set of 20 cases PM0.1 Absorption Materials: 10 sets

■ PM 0.5-10 Classification Performances



* Nanosampler Model 3180 is created from a collaboration of Kanazawa University, National Metrology Institute of Japan, Advanced Industrial Science and Technology and KANOMAX JAPAN INC.



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