

Clearing the Air

Black Carbon Monitoring Solutions



Met One
Instruments

POWERED BY ACOEM

Advanced Solutions for Tracking Black Carbon

Black Carbon (BC), also known as soot, is a highly impactful pollutant emitted from incomplete combustion processes like burning fossil fuels, biomass, and waste. It ranks as the second largest man-made contributor to global warming, following closely behind carbon dioxide. Not only does black carbon pose significant risks to respiratory health, but it also contributes to climate change and negatively affects air quality on both local and global scales.

The Black Carbon Monitoring solutions offered by Met One Instruments Powered by Acoem help you take control of black carbon emissions. Our advanced technology and expertise accurately measure and track Black Carbon emissions. This empowers you to make informed decisions and implement effective strategies for reducing this potent pollutant. Join us in fostering a cleaner and healthier future by monitoring Black Carbon sources, concentrations, and trends. Take the first step towards a more sustainable tomorrow.

BC 1054 Black Carbon Analyzer

The BC 1054 Multi-spectrum Black Carbon Analyzer provides continuous measurement of light transmittance across filter media, allowing real-time calculation of Black Carbon concentrations at 10 different wavelengths. This includes a range from near-UV to near-IR. Built upon the widely accepted calibration constants and operational principles, the BC 1054 delivers superior results while significantly reducing costs.

The BC 1054 seamlessly connects to various products, such as the BAM 1020, discrete particle size and counting modules, and a diverse selection of meteorological sensor inputs.

- Tape-saving mode for economical collection of data in high BC regions
- Optional CCS COMET cloud-based data service permits collected data to be uploaded and stored on the Web
- Data access in near real time remotely without the need for an external data logger
- The simple sensor design requires no flow splitting, employs a single mass flow controller and is well matched for use with the filter media
- Flow checks, audits and trouble-shooting are simple to perform
- Actual flows are measured
- Concentrations are calculated under actual flow conditions but may be displayed in either actual or standard conditions.





BC 1060 and BC 1065

Portable Black Carbon Monitors

Our BC 1060 and BC 1065 portable Black Carbon monitors measure and report Black Carbon concentrations, with user-selectable time resolution down to one minute, at both UV (370 nm) and IR (880 nm) illumination wavelengths. The combination of portability and dual-wavelength illumination permits rapid, easy deployment on a broad scale for source apportionment (fossil fuel vs biomass combustion) determination, roadside monitoring, and emergency responder applications. The BC 1060 can continuously sample for up to 6 months with a single roll of filter tape.

- Two channels – UV 370 nm & IR 880 nm
- CCS COMET cloud plus+ compatible
- Optional flow dilution system for high concentration environments
- Self-contained weatherproof enclosure (BC 1060)
- Rack-mounted (BC 1065)
- Up to 6 months of operation per tape roll
- Highly portable – 35 lbs./16 kg (BC 1060).

The BC 1060 (shown) is a stand alone instrument and may be set up in a matter of a few minutes on the optional stand (shown) or on a user-provided platform. The BC 1065 is a rack-mounted version of the BC 1060 and is useful for applications where an existing shelter containing other instrumentation is available.





C-12 Portable Carbon Monitor

A revolutionary device that accurately measures Black Carbon concentration with 1-minute time resolution. Operating on the principle of optical transmittance across filter media, the C-12 provides real-time output and has many of the advantages of tape-based carbon monitors without needing an environmental shelter for operation. With over 1,000 filter advances, it can operate unattended for over two months. Equipped with an integrated CCS COMET Cloud Plus+ modem, it provides real-time data on a customized webpage dashboard. The C-12 Portable Carbon Monitor offers affordable, granular-scale carbon monitoring, opening up new possibilities for various applications.

- The most cost-effective BC / BrC instrument on the market
- Industrial-grade instrumentation in a robust package
- Self-contained, eliminating the need for an environmental shelter
- Compact, with pole or tripod mounting options
- Can measure both BC & BrC (with optional 370 nm illumination)
- Standard configuration includes cellular data network and GPS for real-time cloud communications
- Optional configuration removes cellular modem and GPS and replaces with WiFi and a digital serial port for data logger connectivity
- Can run for approximately 2 - 4 months between servicing
- Powered by batteries, solar power, or AC power.



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