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OCEC Lab Instrument

Model 5

Sunset Laboratory Inc.

www.sunlab.com

Setting the Industry Standard

Sunset Laboratory was established in 1984 to analyze particulate organic and elemental carbon (OC/EC) aerosols. The OC/EC Lab instrument has become the industry standard for environmental and workplace monitoring. This model serves as the basis for NIOSH Method 5040 and is fully compliant with the IMPROVE and EUSAAR2 protocols. With a base of more than 100 instruments installed worldwide, Sunset Laboratory is unmatched in experience with OC/EC instrumentation and measurement techniques. There is no comparable instrument on the market today.

Our instrument has been used to analyze a wide variety of sample types, including: ambient urban and rural areas, national parklands, forest fire plumes and oil fires from the Gulf War. Samples are typically collected as time-integrated composite filters, with loadings and times determined by the sample source and study goals.

Innovative Instrumentation for Carbon Aerosol Analysis

The Sunset Laboratory Carbon Aerosol Analyzer uses a proven thermal-optical method to analyze for organic and elemental carbon aerosols collected on quartz filters. The samples are thermally desorbed from the filter medium under an inert helium atmosphere followed by an oxidizing atmosphere using carefully controlled heating ramps. A flame ionization detector (FID) is used to monitor the analysis. Our proven low dead volume carrier gas control system and proprietary quartz oven design provide high sensitivity with ultra low carbon background and no oxygen contamination.

New Features of the OC/EC Lab Instrument:

The Sunset Laboratory OC/EC Lab Instrument has been continually improved to incorporate new technology for enhanced accuracy, precision and ease of use.

New Automated Valve Control is one of our latest updates. The software controls and adjusts all gas flows and there is no need for manual needle valve adjustment.

- OC/EC measurements for integrated filters and bulk samples
- Performs both NIOSH 5040 and IMPROVE protocols
- Excellent sensitivity with low instrument background
- FID detection with linearity over 4 orders of magnitude
- Built-in FID igniter
- New and improved CPU board/data system for enhanced accuracy and precision
- Standard transmittance-based pyrolysis correction, resulting in better signal-to-noise and throughput
- Concurrent transmittance/reflectance option with superior temperature controlled laser system
- New extended-life heating coils
- Quality service and technical support by highly qualified personnel