

Sunset Laboratory Model 5L

OCEC Instrument

Organic Carbon



Elemental Carbon



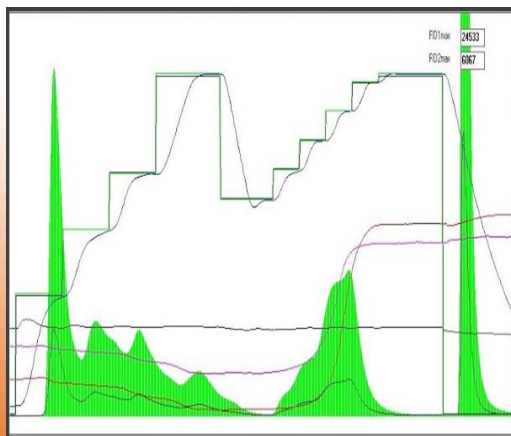
Carbonate Carbon



Total Carbon

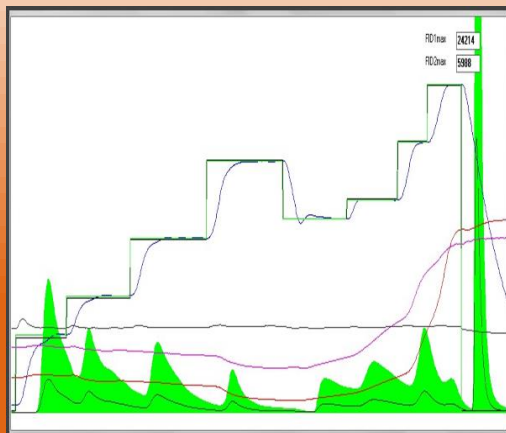


NIOSH5040

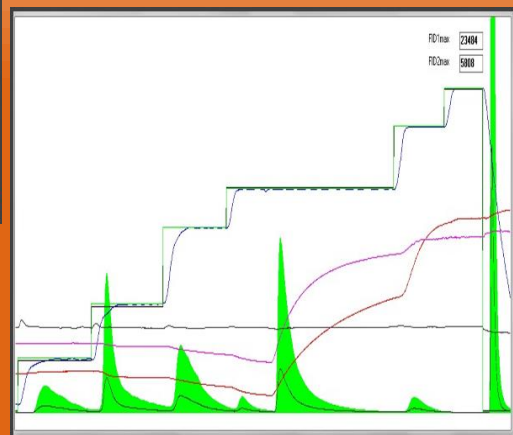


As described in: Elemental Carbon-Based Method for Monitoring Occupational Exposure to Particulate Diesel Exhaust; M. E. Birch and R. A. Cary, Aerosol Science and Technology, 25:221-241, October, 1996.

EUSAAR2



IMPROVE-A



Sunset
Laboratory Inc

For further details about the Model 5L please contact us or one of our local representatives.

Contact details can be found on the Partners page of our web-site or we may be contacted directly.

www.sunlab.com

Model 5L OCEC Instrument Specifications

•Physical dimensions

- 1)Dimensions: 40.6 cm x 40.6 cm x 52.1 cm (16 in x 16 in x 20.5 in)Wt; approximately 35 pounds
- 2)Power Requirements - 120 VAC/15 A or 220VAC/8A (Please specify at time of order)

•Instrument Package Includes

1. M5L OCEC instrument with TOT or TOT/TOR option
2. Latest Version of Operation & Calculation Software
3. Diode Laser optical system (660 ± 5 nm)
4. FID/Methanator Oven Unit
5. Electronic Flow control system
6. CPU Controller
7. Operator, service and maintenance manuals
8. Controlling Computer with Windows 10 Professional
9. Spare parts and supplies included:
 1. Heater-coils – Qty 3 (one for each oven)
 2. Spare Methanator tube – Qty 1
 3. Spare Quartz-Oven – Qty 1
 4. Spare Sample Boats – Qty 2
 5. 100 feet of pre-cleaned tubing for carrier gas lines.

•Performance Characteristics

1. Range: TC - 0.2 to 600 ug/cm2
2. Range: OC - 0.2 to 600 ug/cm2
3. Range: EC - 0.2 to 30 ug/cm2
4. Limit of Detection - 0.10 ug/cm2

•Measurement Method (User Configurable)

1. NIOSH 5040
2. EUSAAR2
3. IMPROVE-A
4. User defined custom applications

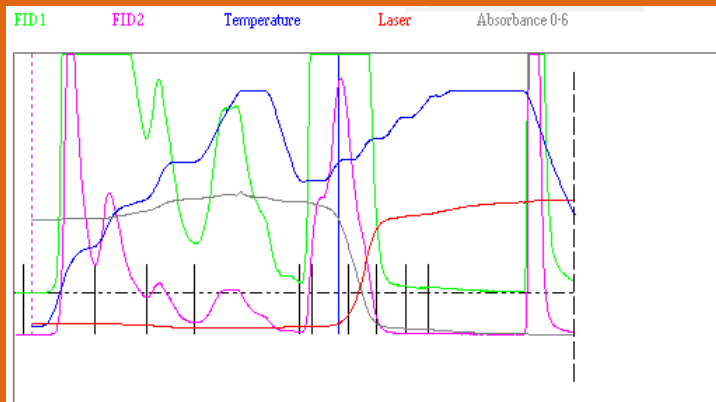
•Calibration

1. External Standard – Uses an external standard calibration gas. A fixed-loop volume of this gas is injected at the end of every analysis. All calculated results are referenced against this external standard.
2. Primary calibrations are referenced against sucrose solutions or NIST traceable gas standards. NIST traceable gas standards are USER provided and must be ordered separately if desired.

•Support Gases to be supplied by customer:

1. Helium (99.999% or better).
2. Helium (99.999% or better) with 10% Oxygen balance; Oxygen should be 99.995% purity or better.
3. Helium (99.999% or better) with 5% Methane balance; Methane should be 99.99% or better.
4. Air (“Ultra-zero” grade preferred; “zero” air is sufficient).
5. Hydrogen (99.999% or better).

Sample ID:
Instrument Name: BaseVolatile area =339283.0
FID1: OK FID2: OK Pyrolyzed area = 105569.0
Organic C = 45.92 ±2.40 ug/sq cm Base EC area = 128557.0
Carbonate C = 0.00 ±- ug/sq cm Calibration area = 197244.0
Elemental C = 13.27 ±0.76 ug/sq cm FID2 Calibration area = 47533.0
Total C = 59.19 ±3.16 ug/sq cm



Peak	ugC/sqcm	Fraction	
OC1	14.9	0.252	
OC2	10.7	0.181	
OC3	3.7	0.063	
OC4	5.7	0.096	
OC5.....			
OC6.....			
EC1	0.7	0.012	
EC2	15.6	0.263	
EC3	7.4	0.124	
EC4	0.3	0.005	
EC5	0.1	0.001	
EC6	0.2	0.003	
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