

# SM-3111

---

## Smoke Meter



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

[www.analyticalgroup.net](http://www.analyticalgroup.net)

## ►► **Key Features :**

- Micro Controller Based.
- Alphanumeric LCD Display with back light for day & night operation
- User Friendly keyboard & display interaction
- Built-in 24 column printer for hard copy of the report
- Autozero facility
- Easy calibration check
- Computer Interface provided
- Can be up-graded to RPM Measurement by ripple technology & magnetic vibration sensing & Phono-Accelerometric device.
- Work on 12V battery and 230 VAC

## ►► **Operating Principle :**

ATL's Smoke Meter model SM-3111 is based on the principle of absorption of light, which is indicative of the quality of smoke. A Green LED driven by a pulsating constant current source, emits a light beam having peak spectral intensity between 550 to 570nm wave length. The beam passes through a smoke cell and on to a silicon photodetector which continuously senses the intensity of light incident on it, and converts it into an electrical signal, which is further processed by precise signal handling circuits. This all solid-state design ensures high stability. The output of this stage is given to a microprocessor for further processing to convert it into suitable units including percentage opacity and absorption coefficient (K)

Smoke sampling is done on free-acceleration principle. Smoke is measured in smoke cell which has an effective length of 0.4 meter.

### **Optional Ripple Sensor for RPM & Magnetic vibration sensing**

ATL's smoke meter model SM-3111 has the facility of an additional sensor for measuring RPM of diesel Vehicles. The smart measuring principle is based on the analysis of ripple balance of the system supply, a characteristic of all automotive alternators.

The measuring range is from 400 to 9990 rpm. The ripple Sensor.

## ►► **Accessories:**

- ATL's Smokemeter model SM-3111 is supplied with following accessories
- Calibration Filter
- Sampling Probe
- Rubber hose 4 meter long
- Operations manual

- Mainscord
- Printer Roll
- Instrument Cover
- USBCable
- Oil Temperature Probe
- RPM Cable with 6mm piezo sensor
- Remote Display
- Battery clamp with cable

## ►► Technical Specifications :

<b>Model Number :</b>	SM-3111
<b>Type of Smoke meter :</b>	Partial Flo
<b>Display Indication :</b>	Light Absorption Coefficient (K) and Percentage Opacity
<b>Display Range :</b>	0 to 9.99 m-1
<b>Opacity in HSU :</b>	0 to 99.99%
<b>Scale Resolution :</b>	0.01 m-1
<b>Linearity :</b>	0.1 m-1
<b>Drift :</b>	Zero 0.00 m-1
<b>Repeatability :</b>	Span 0.1 m-1
<b>Light Source Details :</b>	0.1 m-1
<b>Response time :</b>	5 mm clear green LED
<b>Warm up time :</b>	0.3 Seconds
<b>Operating :</b>	3 minutes
<b>Temp. range :</b>	5 to 50°C
<b>Power requirement :</b>	230 VAC+/-10% / 50 Hz. 175 W / 12 VDC + 5%, 40W
<b>Weight :</b>	23 Kg (Approx)
<b>Dimensions :</b>	47.5 (W) x 47.5 (D) x 26 (H) ems
<b>Serial Communication :</b>	Rs. 232
<b>Oil Temperature :</b>	0-150°C
<b>Scale Resolution :</b>	1°C
<b>RPM (Piezo) :</b>	300 to 9999 RPM
<b>Scale Resolution :</b>	1 RPM

## ►► Optional :

<b>RPM (Ripple)</b>	400 to 9990 RPM
<b>Scale Resolution</b>	10 RPM
<b>Auto Calibration Facility Magnetic RPM</b>	300 to 9990 RPM
<b>Phono-Accelerometric device</b>	

## HPLC Servicing, Validation, Trainings and Preventive Maintenance :

**HPLC Servicing** :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

**Trainings** :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

**AMC's/CMC** :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

**Validations** :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

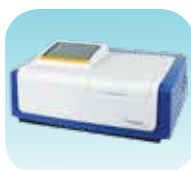
**Instruments** :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



## About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

## Our Products & Technologies



UV/VIS  
Spectro 2080+  
Double Beam



Infra FTIR



Optima Gas  
Chromatograph  
3007



Optima Gas  
Chromatograph  
2979 Plus



Flash  
Chromatograph



Atomic Absorption  
Spectrophotometer



Liquid Particle  
Counter



Optical Emission  
Spectrophotometer



DSC/TGA



Semi Auto Bio  
Chemistry Analyzer



HEMA 2062  
Hematology  
Analyzer



Micro Plate  
Reader/Washer



URINOVA 2800  
Urine Analyzer



Total Organic  
Carbon 3800



Fully Automated  
CLIA



NOVA-2100  
Chemistry Analyzer



PCR/Gradient PCR/  
RTPCR



TOC  
Analyzer



Laser Particle  
Size Analyzer



Ion Chromatograph



Water purification  
system



## Regulatory compliances



## Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



**Analytical**  
**Foundation**

1. Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at [Info@analyticalfoundation.org](mailto:Info@analyticalfoundation.org)

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

## Reach us @



 **Analytical**<sup>®</sup>  
Technologies Limited

**HPLC Solutions   MultipleLabs   Analytical Bio-Med   Analytical Distributors   Analytical Foundation (Trust)**

**Corporate & Regd. Office:**  
Analytical House, # E67 & E68,  
Ravi Park, Vasna Road, Baroda,  
Gujarat 390 015. INDIA

T: +91 265 2253620  
+91 265 2252839  
+91 265 2252370  
F: +91 265 2254395

E: [info@hplctechnologies.com](mailto:info@hplctechnologies.com)  
[info@multiplelabs.com](mailto:info@multiplelabs.com)  
[info@analyticalgroup.net](mailto:info@analyticalgroup.net)  
[info@analyticalbiomed.com](mailto:info@analyticalbiomed.com)

W. [www.analyticalgroup.net](http://www.analyticalgroup.net)  
[www.hplctechnologies.com](http://www.hplctechnologies.com)  
[www.multiplelabs.com](http://www.multiplelabs.com)  
[www.ais-india.com](http://www.ais-india.com)

Sales & Support Offices:  
across the country :  
Distributors & Channel  
partners World Wide

Note : Company reserves rights to add/delete/modify the contents / technical specifications of the catalogue without prior notice.