

# OnlineGC-3000Series



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

**Analytical Technologies Limited**

An ISO 9001 Certified Company

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

The portable Gas Chromatograph is now more versatile than ever. ATL Instruments is pleased to present the newest Portable Companion 2 Gas Chromatograph with room for 2 Detectors. The Companion 2 GC was designed to "Go with you Anywhere!" Utilizing the same modular plug and play components found in our full size Series 600 Lab GC's. The performance of the Companion 2 GC has not been compromised because of it's smaller size.

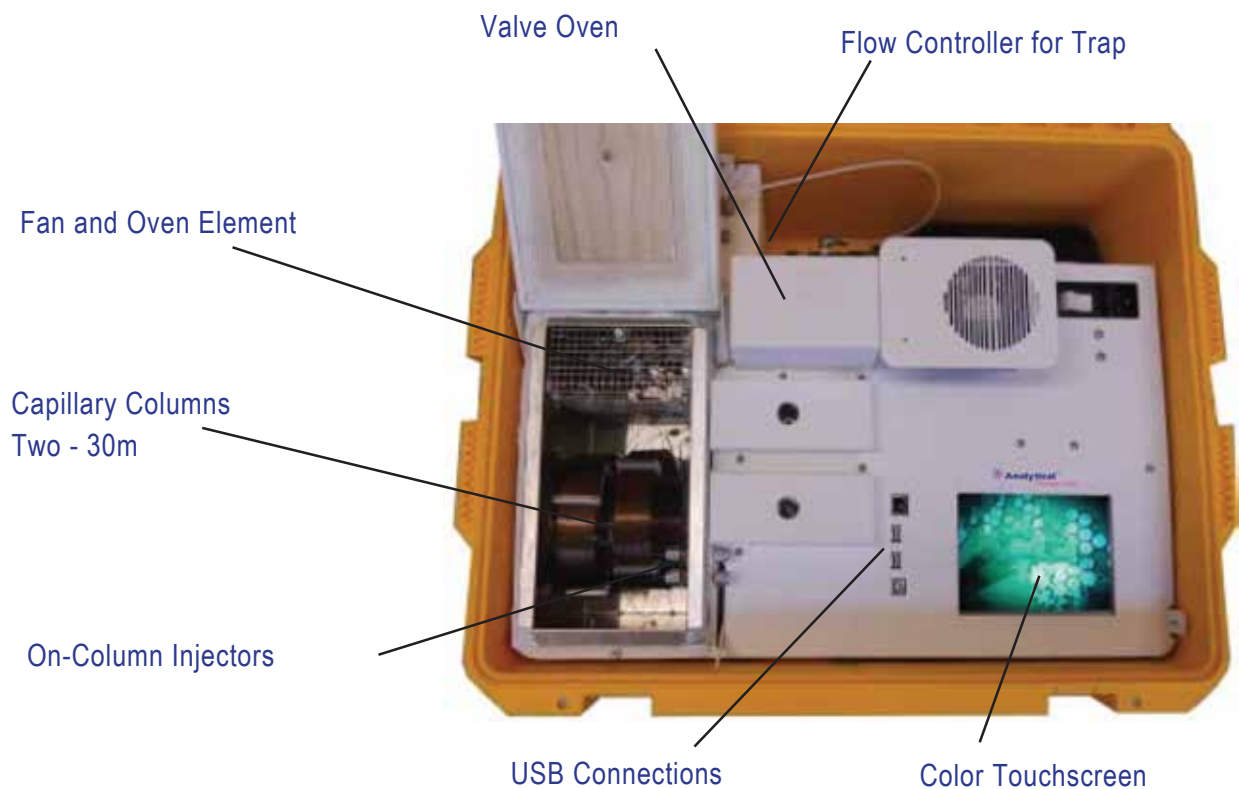
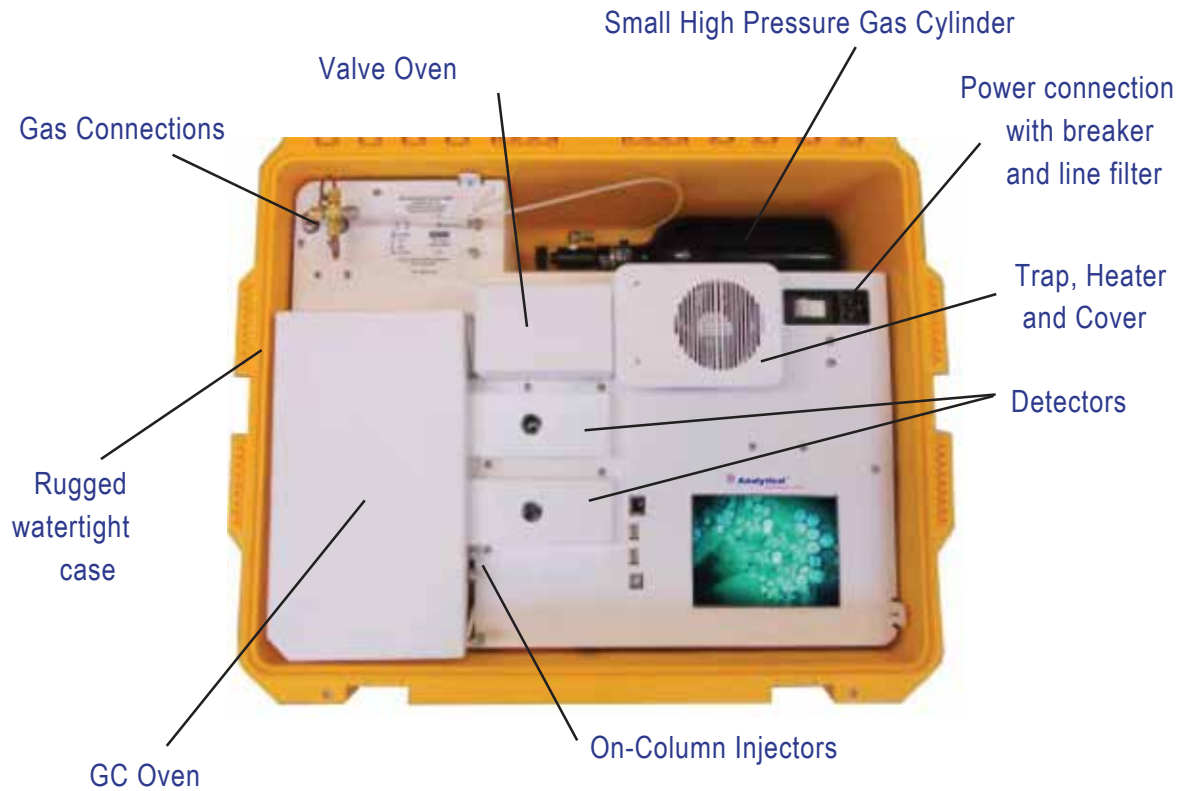
The ATL Companion 2 GC Systems are a new breed of GC. They are the first portable GC where you can select from 7 available detectors, allowing you to do more work in the field than ever before. From Environmental to Forensic, and Petrochemical to Quality Control Applications, the Companion 2 GC goes where you need it.

The intelligence of the GC Systems are locked safely in microprocessors, where our proprietary Digital Sample Processing routines control the temperatures and gas pressures to tighter tolerances than ever before. The ATL Companion 2 GC specifications are in a league of their own. The Companion 2 GC, and all ATL GC Systems are smaller, lighter, faster, more intelligent, and have delightful pricing.

## ►► General Specifications:

- Modular Design - Built-in Accessories
- Many Standard Application Specific Configurations
- Compact Oven and Soft Landing
- Color Touch Screen Instrument Control
- Free standing operation with on-board GC Methods
- Proprietary Digital Signal Processing
- Built-in Instrument Diagnostics
- Temperature Control to 0.001°C
- EPC Pressure Control to 0.001 kPa
- Ambient to 325°C Column Oven
- Up to 80°C per/min Column Oven Ramp
- Fast Cooldown 325°C to 50°C in < 4 min
- 1 or 2 Detectors
- Compact and Lightweight,  
Water Tight Carrying Case (56 x 43 x 25 cm)  
with wheels and handle Approximately 15 kg.
- 1 or 2 compact gas tanks, sold separately.

## ►► ATL Companion 2 Layout



## ►► Sample Concentrators

**Air Concentrator** - The air concentrators for Companion GC's are built right in to provide both a compact portable sample concentrator and a shortest possible sample path. The valve and sample lines are heated creating a inert sample path. The sample trap is plumbed in a true backflush fashion and the sample trap also can be equipped with a variety of packing materials to achieve the best concentration of the compounds being analyzed. The sample is loaded with the built-in vacuum pump and regulated with a variable flow controller for consistent sample trapping. The entire sequence of the Air Sample Concentrator is automated through the Timeline of the ATL Control Software for the analysis of one sample, or the system can be set up to run unattended 24/7, collecting and analyzing samples every hour, or so.

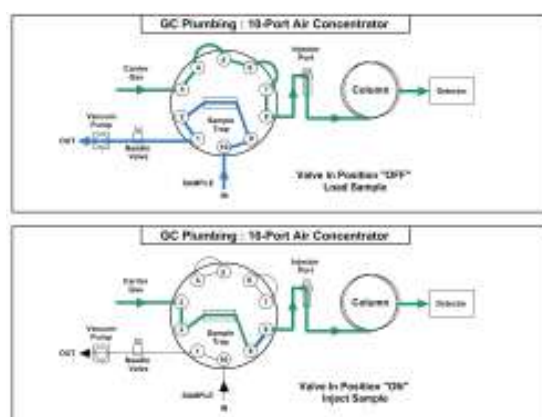
**Load** - The vacuum pump draws the sample from the inlet through the Trap and then to the flow controller and pump to limit any possible cross contamination between samples.

**Inject** - The carrier gas sweeps the components from the trap to the analytical column.

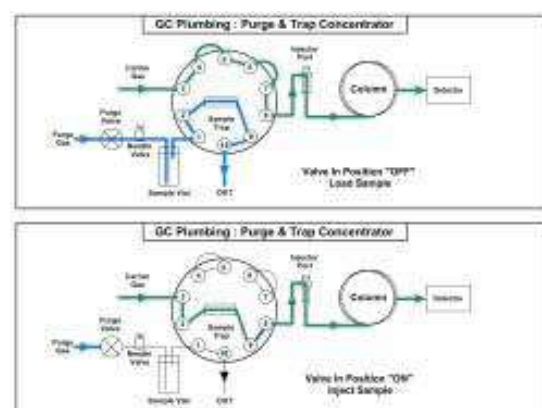
**Purge & Trap Concentrator** - The Purge & Trap Concentrator for Companion GC's are built right in with the same Trap features as the Air Concentrator. The water sample is purged with inert gas to extract the sample compounds and load them onto the Trap. The Purge Gas is regulated with a variable flow controller for consistent sample trapping. The entire sequence of the Purge & Trap Concentrator is automated through the Timeline of the ATL Control Software for the analysis of one sample at a time.

**Load** - The Purge Valve turns ON to start the stream of gas flowing to the Purge Vial. With this configuration the flow controller is up stream from the Trap to limit any possible cross contamination between samples.

**Inject** - The carrier gas sweeps the components from the trap to the analytical column. With the Purge Valve OFF there is no flow through the other side of the valve. The Purge Valve can be turned ON to blow out the sample lines using a blank Vial.



Air Concentrator  
Plumbing Diagram



Purge & Trap Concentrator  
Plumbing Diagram

**Headspace Concentrator** - The Headspace Concentrator for Companion GC's are built right in to provide the shortest possible sample path. The Sample Vial is heated and then consistently Pressurized before loading the Sample Loop. A fixed Sample Loop ensures reproducible sampling and the sample lines are Flushed between analyses to limit any cross over contamination. The entire sequence of the Headspace Concentrator is automated through the Timeline sequence of the ATL GC Control Software for the analysis of one sample at a time.

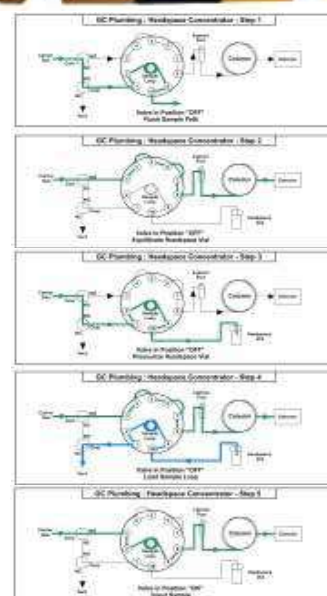
**Plumbing Diagram** - In the 1st sequence the carrier gas is diverted to Flush out the Sample Lines. The Sample Probe is then inserted into the Headspace Vial. During the 2nd step the carrier gas flows to the analytical column and the Headspace Vial is heated with the Vial Heater and allowed to equilibrate. During the 3rd step the Headspace Vial is pressurized for a few seconds. In the 4th step the sample is loaded onto the Sample Loop by releasing the pressure in the headspace vial. In the 5th step the Sample Valve is rotated to the ON position and the carrier gas sweeps the components from the Sample Loop onto the analytical column.

**MicroExtractor Concentrator** - The MicroExtractor concentrator is a exciting innovation exclusively from ATL that concentrates higher boiling compounds directly from water samples. The sample vial is pressurized and the water sample is pushed through the trap at ambient temperature where the compounds are concentrated. Later the trap is heated and the compounds are directed to the analytical column. The entire sequence of the MicroExtractor Concentrator is automated through the Timeline of the ATL Control Software.

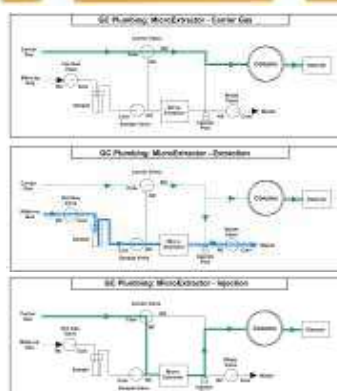
**Plumbing Diagram** - We use a series of solenoids, instead of a sample valve to control the flow of carrier gas and the water sample flow through the MicroExtractor.

**Extraction** - The sample vial is pressurized and the water sample flows through the MicroExtractor and then out to waste.

**Injection** - The carrier gas is directed through the MicroExtractor to sweep the compounds to the analytical column.



Headspace  
Plumbing  
Diagram

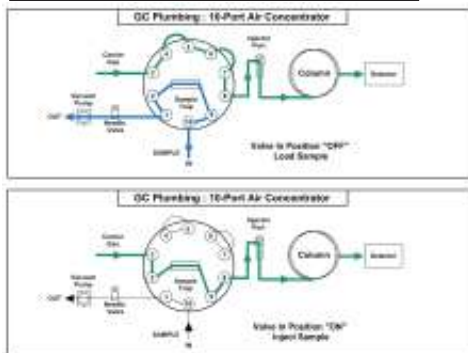


MicroExtractor Plumbing  
Diagram

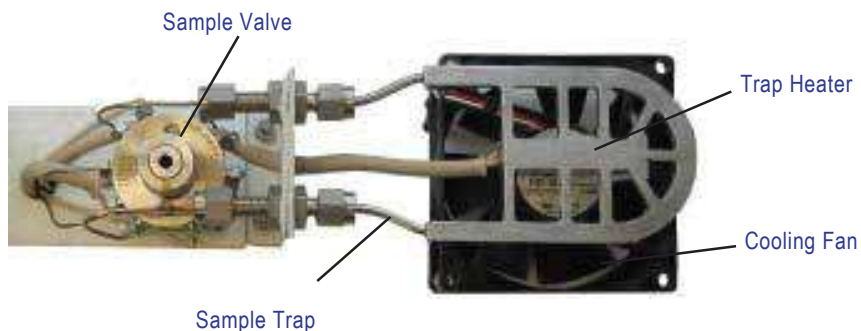


## ►► ATL Companion Accessories

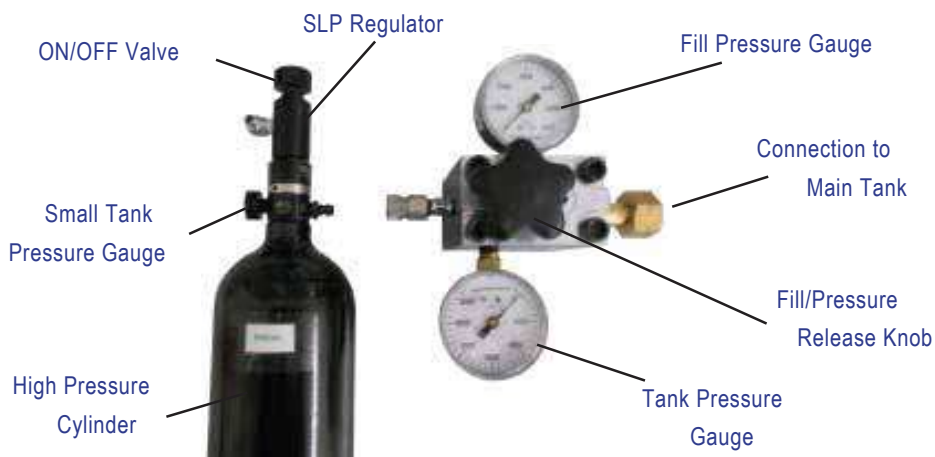
### Innovative Plumbing Schemes



### Gas Sample Valve & Trap



### Small High Pressure Refill Kit



### Accessory Kits

#### GC Maintenance Kit



Tools, Keyboard, Mouse,  
Voltmeter

#### Gas Line Kit



Regulator, Tubing,  
Cutters, Fittings

#### Shipping Kit

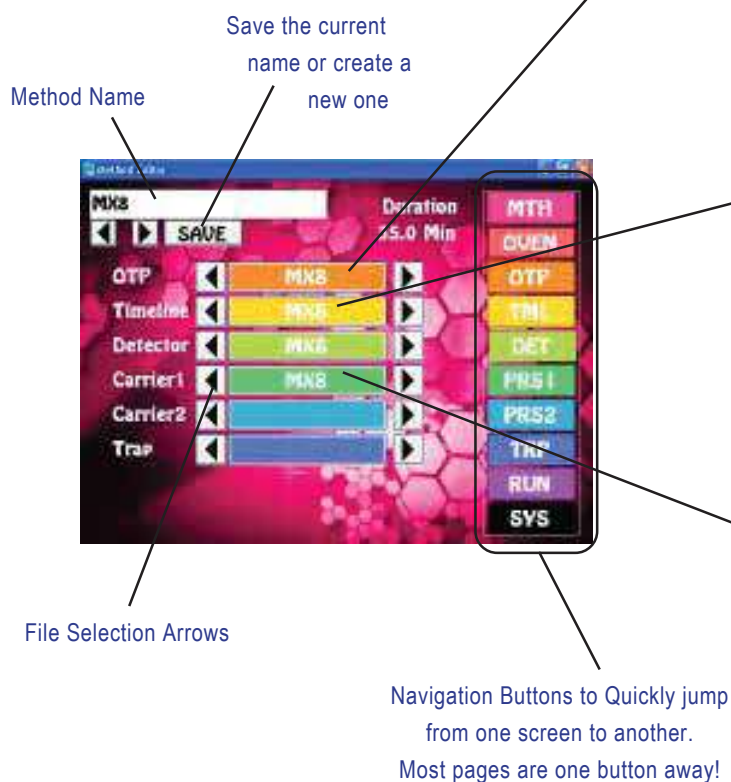


Syringes, Power Cord,  
Nuts, Ferrules, Screws  
(Included with each GC)

## ►► ATL GC Control Software

Easy to learn and master using a Graphical User Interface (GUI) and Color Touch Screen.

Editors let you customize the files associated with the GC Method.



Oven Temp Program Editor



Timeline Editor



Carrier Pressure 1 Editor



Keyboard to Enter Filenames



Number Pad for entering Values



Carrier Pressure 2 Editor

GC Status pages display the parameters in the method, both graphically and as text and values.



**Method Editor**



**Oven Status**



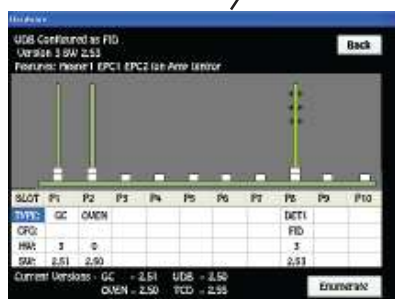
**Detector Status**



**System Status**



**Run Status**



**Hardware**

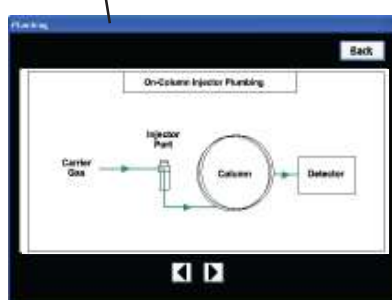
System status pages display the health and viability of the GC instrument.



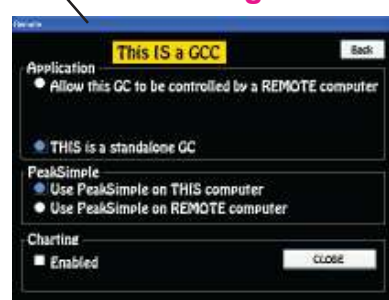
**Configure Names**



**Diagnostics**



**Plumbing**



**Remote Control**



## ►► Companion 2 Specifications:

### ►► Electronics Module:

- Enter and store GC Methods via Color Touch Screen
- Actual and set-point display of all GC parameters
- Safety Limits on all user entered parameters
- Oven Temperature Programs (OTP) with Multiple Ramps
- Pressure Programs for Carrier Gases with Multiple Ramps
- Timeline for sequencing Relays and Valve
- Detector Control of all Parameters on one page
- Electronic Pressure Controllers (EPC's):
  - Atmospheric Pressure & Temperature Compensation
  - EPC Pressure Control with 0.1 kPa set-point resolution
- Plug and Play GC Control, Oven, and Detector Board
- Microprocessor Controlled
- Proprietary Digital Signal Processing
- Digital Signal Outputs for each Detector
- Universal voltage input (85 – 240 Vac) with line filter and breaker.
- 7 amps at 48 Vdc total power consumption

### ►► Detectors:

- 1 or 2 Installed
- 400°C Temperature Limit with 0.1°C set-point resolution
- 24-bit Digital Outputs for the detector via USB
- EPC Pressure Control with 0.1 kPa set-point resolution

#### Available Detectors:

FID – Flame Ionization Detector (100 pg detection limit)  
PID – Photoionization Detector (10 pg detection limit)  
HID – Helium Ionization Detector (100 pg detection limit)  
BCD - Bromine Chlorine Detector (10 pg detection limit)  
FPD - Flame Photometric Detector (10ng Sulfur, 10 pg Phosphorus detection limit)  
NPD – Nitrogen Phosphorus Detector (20 pg detection limit)  
TID – Thermoionic Detector (20 pg detection limit)

### ►► Oven Module:

- Ambient to 325°C Column Oven
- Up to 80°C per/min Oven Ramp
- Fast Cooldown 325°C to 50°C < 4 min
- 200 watt Heater Element
- 12.5 x 10.5 x 12.5 cm area for Packed, or Capillary Columns
- Multiple Temperature Ramps with 0.1°C set-point resolution

►► **Accessories:**

- Sample Valve - Electronically Actuated
- Heated Valve Oven
- Built-in Air Compressor
- Air Concentrator
- Headspace Concentrator
- Purge & Trap Concentrator
- MicroExtractor Concentrator
- Methanizer
- Sample Solenoids
- Vacuum Pump for Sample Inlet
- High Pressure Tanks & Refill Station

►► **Injectors:**

- 1 or 2 Installed
- Cool On-column Injector
- Heated On-column Injector
- Heated On-column Split/Splitless Injector
- Cool Split/Splitless for Gas Samples
- Multiple Pressure Ramps with 0.1 kPa set-point resolution

►► **Data Communications:**

- Bi-directional communication with popular Data System
- Digital Signal Output via USB

**Network Connectivity:**

- Enterprise Compatible Network GC running Windows XPe
- Ethernet Connection using Windows Network Protocol
- On Board ETX Computer for GC Control and Data Acquisition
- Remote Control of GC and Data Acquisition over LAN

## 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



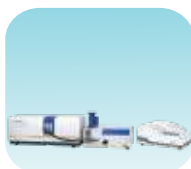
NOVA-2100  
Chemistry Analyzer



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 @



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