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GC Optima-3007i

Gas Chromatography

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

Analytical Technologies Limited

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GAS CHROMATOGRAPH "GC Optima-3007"

Chromatographic complex "GC Optima-3007" is an effective solution for routine tasks and also for carrying out serious chromatographic research works. Our purpose was to create a device with high reliability, optimal working characterstic and flexibility with minimal complexity of integration and maintenance. Our GC differ by high profit and minimal investments and low cost ownership.

- EPC AFC GC Gas Chromatography

SOME APPLICATION OF GAS CHROMATOGRAPH

Chromatograph "GC Optima-3007" is a base for creation of the labrotary analytical systems, designed for researching and production routine tasks:

- Composition and quality analysis of natural gas, associated gas, liquefied gas and gas condensate with evaluation of heating ability, relative and total density, pressure of saturated steam;
- Detailed and group analysis of motor fuel, including gasoline with evaluation of octane number, density, fraction composition, saturated steam pressure, etc;
- Analysis of motor fuel on the content of aromatic and oxygen-containing compounds, MMA, etc;
- Motor fuel, oil and gas analysis on content of and hydrogen sulphide, mercaptans, sulphides, thiophenes and other sulphides;
- Analysis of chemical and petrochemical products;
- Analysis of transformer oil for content of dissolved gases, water, total gas content, antioxidant admixtures, furan derivatives, polychlorinated biphenyl, insulation gas analysis;
- Analysis of toxic admixtures in alcohol drinks, perfumery production, drugs;
- Analysis of the authenticity of alcoholic beverages, including cogancs;
- Analysis of wine and wine materials for content of ethanol, organic acids and admixtures;
- Analysis of water for the content of volatile halogen-containing and aroma compound and acetone, methanol, saturated hydrocarbons, minerals oil etc.;
- Analysis on content of pesticides, herbicides and other toxicants in water, soil, crop products and food;
- Analysis of atmosphere air content of halogenated and aromatic hydrocarbons, carbon oxide, etc.;
- Analysis of production exhausts and of working area air containing of saturated, unsaturated and aroma hydrocarbons, carbon oxide, etc.;
- Analysis of production exhausts and of working area air containing of saturated, unsaturated and aroma hydrocarbons, carbon oxide, etc.;
- Analysis of toxicity of food products packages, building materials and other domestic materials including toys;
- Analysis of mine air on content of constant gases, carbon oxides and hydrocarbons;
- Analysis of quality of vegetable and animal oils, dairy produces margarines, spreads, milk products, detection of falsification;

- Analysis of biological liquids and tissues of human body for contents of alcohol, drugs, medicaments and poisonous substances;
- Analysis of gas environment of nuclear power stations;
- Analysis of products of blast furnace production, Quality of gases, used in metallurgy;
- Analysis of impurities in helium, oxygen, nitrogen, argon by cryogenic concentration method;
- Analysis of oil and chemical reagents for its production on content of volatile organochlorine compounds;
- Analysis of quality of tobacco products;
- Analysis of products of color industry;
- Analysis of propellents, aerosols, coolagents;
- Analysis of absorbed gases in soil for geologist researches of oils and gas.

DESIGN

Chromatograph is fully automated, starting from injection of a sample and ending with processing of chromatographic information, included: functions of aromatic temperature control, electronic flow and pressure control of carrier and auxiliary gases, detector automatic lighting, flame burning control, measuring the signals from detectors with ADC One computer can work in real time with several analytical modules (up to 8). Information transfer between computer, analytical station and chromatographs is performed by standard interfaces of RS-232, Ethernet, USB types. Optionally: installation of remote control panel with sensor screen. Control of chromatograph is possible from the distance up to 3000m, and also remote control and diagnostics of the chromatograph via the internet.

REPLACEABLES MODULES

Replaceable analytical module, installed on the columns thermostat, determines the chromatograph model and includes detectors (multi-detector), injectors and additional devices. The module configuration can be chosen by the customer for the certain analysis conditions. The modules include two (three) injectors, which can be transformed from capillary into packed type by installing special adaptors. On the customer request we can supply module with any detector set and sample input devices.

TECHNICALS CHARACTERSTICS

PARAMETER	VALVE
FID Detection limit	$2*10^{-12}$gC/sec for n-hydrocarbons or propan $1,2*10^{-12}$gC/sec (special order)
TCD Detection limit	$1*10^{-9}$g/ml for n-hydrocarbons $4*10^{-10}$ g/ml for propane (special order)
ECD Detection limit	$2*10^{-14}$ g/sec for lindane $4*10^{-15}$ g/sec for lindane (special order)
FPD Detection limit	$1,0*10^{-13}$ gP/sec for methyl parathion $1*10^{-12}$ gS/sec for methyl parathion
TID Detection limit	$1,5*10^{-14}$ gP/sec for methyl parathion 3*10-^{13} rN/c gN/sec azobenzene
TChD Detection limit	$2*10^{-10}$ g/ml for hydrogen
PID Detection limit	$5*10^{-13}$ g/sec for benzene;
HID Detection limit	$3*10^{-13}$ g/sec for carbon in methane;
NPD Detection limit	N: ≤1×10-12 g/s (Azobenzene) P: ≤5×10-13g/s (Malathion)
MSD-relation to signal/noise	500;1 (1500:1) for injecting $1*10^{-12}$ g/mcl octaftornaftaline in isooctane
Linear dynamic range FID	$1*10^{7}$
Linear dynamic range TCD	$1*10^{6}$
Oven volume	14 (19) L
Column temperature	From ambient temp. +3 till +400oc (by special order up to 450°C) (by special order from -15oc with the usage of refrigeration unit) (by special order from -100oc with the usage of liquid N2)
Temperature setting scale	0,1°C
Temperature stability	0,01°C
Temperature programming speed	Temperature programming speed
Column over cooling speed from 400 till 50oc	3 min

Maximum temp. of detector and insulator	450°C
Carrier gas flow	From 0 till 100 ml/min (by special order from 0 till 500 ml/min)
Carrier gas pressure (from capillary column)	From 0 till 0,40 MPa (by special order from 0 till 1MPa)
Maximum gas inlet pressure by special order	0,5 MPa; 1,25 MPa
Hydrogen flow	0-500
Air flow	0-1000
Dimensions (w*D*H)	550*500*500 mm
Weight	39 kg
Electric power supply	From AC voltage (230)V, Frequency (50±1) Hz
Maximum Power consumption (in the steady)	900 VA

LABORATORY REACTOR PLANTS

Intensification of oil refining process is a prospective task of modern manufacturing. Waist reduction and maximum usage of natural resources is very important from ecological and economical points of view. These task can be successfully solved with the help of catalysis. Development, production and implementation of laboratory reactor plant and pilot plants for testing of catalysts of various purposes.

Examples:
- Cracking in fluidized bed;
- Hydrofining;
- Hydrogenation;
- Dehydrogenation;
- Dehydratation;
- Alkylation, etc.

At the moment development of universal automated transformed plant for the study of hydrofining, hydrogenation, dehydrogenation, dehydratation, alkylation process is held. It works in temperature ranges from 30oc to 650oc, pressure from 0÷100 Bar and consumption of hydrogen and other gases is up to 1L per minute.

You can order development and production of reactor plant in RPC by reasonable price.Our products are made according to all current standards and it is proven by certificate of conformity. Over the years we also have been developing and implementing equipment for conduction of complex analysis of multicomponent substances.

Plant for simulation of
delayed coking processes

Plant for cracking
of heavy oil fractions

Plant for epoxidation
of propylene

Hydrogenation plant

Two-channel hydrogenation
and hydrofining plant

Autoclave with magnetic coupling
volume 10 L,
stainless steel with fluoroplastic coating,
presure 2MPa, temperature 200°C

HYDRON GENERATOR HG (7, 16, 25 L)

CHARACTERISTIC OF HG 7, 16, 25 L

Produced hydrogen corresponds to requirements. Besides this HG-HP can be used as the source of gas carrier due to extra gas purification, especially when helium is not available to user, for example during work with thermal conductivity detector (TCD). High thermal conductivity of hydrogen allows TCD to work with better sensitivity in comparison with helium.

Microprocessor controlling of operational modes make hydrogen generator a standalone device, and also allows it to control general and technical parameters of generator including pressure, consumption, level of water poured into the tank, electrolyzer current, leakproofness of gas mains. All the main of generator are made of inert materials.

BOTH TYPES OF GENERATOR PROVIDE:

- Multiprocessor controlling
- Multistage system of gas purification
- Reduction of heart release and increasing of reliability by means of using power supply of electolyzer with high efficiency.
- Automatic transfusion that ensures avoiding pressure failures
- Protection from hydrogen excess pressure and excess of electolyzer current
- Increase of electrolyzer services period by means of regulating hydrogen productivity
- Temperature control of oxygen afterburner
- Prevention of ingress of moisture into user's pipes by means of using hydrogen indication.

There are main parameters on LCD display of HG and HG-HP: outlet pressure, present pressure, electrolyzer current and afterburner temperature, hydrogen consumption.

CONTROL AND MAINTENANCE

Control and input of parameters is fulfilled through 4-button keyboard. Generators are filled by bidistilled or especially pure water with refilling during its work, without switching off the device, at that hydrogen generators ensure long continuous work. Hydrogen generators allow to reduce greatly or completely eliminate in the majority of cases the use of bottled gas for chromatograph provision.

Electric power from single phase network AC power with voltage from 187 to 240v, frequency (50±1) Hz, work mode – continuous.

ERGENCY SITUATIONS DURING WORK OF GENERATOR

Integrated control system measures the pressure and flow rate of hydrogen. In an emergency (like a line break), a lock is triggered adn delivery of hydrogen to user line. In case water level is insufficient, the system will inform about it.

There is no hydrogen reverse in generators that can be possibly momentary fill the laboratory or chromatograph, and its productivity will allow to create an explosive concentration of gas in the room, and that increases its safety.

TECHNICAL CHARACTERISTICS

Parameter	HG-7	HG-16	HG-HP-7	HG-HP-16	HG-25
Productivity, l/hour	0-7,5	0-16	0-7,5	0-16	0-25
Maximal outlet pressure, atm	4*	4*	4*	4*	4*
Pressure stability of hydrogen, no less, atm	0,0025	0,0025	0,0025	0,0025	0,0025
Watering of hydrogen, no more than, ppm	5	5	5	5	5
Hydrogen purity, %	99,995	99,995	99,995	99,995	99,995
Pre-mode time, min	30	30	30	30	30
Water consumption, g/l H22	1,0	1,0	1,0	1,0	1,0
Tank volume O2, L	1,0	1,0	1,0	1,0	1,0
Water volume added to the tank O2 if alarm went off no more than, l	0,65	0,65	0,65	0,65	0,65
Afterburner O2	-	-	+	+	-
Power consumption, no more than, VA	130	170	140	175	300
Overall dimensions (w*D*H), no more than,mm	200*450*500	200*450*500	200*450*500	200*450*500	200*450*500
Mass, no more than, kg	14	15	14	15	17

HYDROGEN GENERATOR HG-75

Hydrogen generators are used for supply of flame chromatographic detectors. Produced hydrogen corresponds the requirements.

Microprocessor control of generator work modes makes it a standalone device, and it also allows to control basic and technical generator parameters, including pressure, consumption, level of water poured in the tanks, electrolyzer current, leakproofness of gas mains. All mains of generator are made of inert maerials.

BOTH TYPES OF GENERATOR PROVIDE:

- Gas purification system
- Microprocessor control
- Decrease of heat release and reliability by means of using electrolyzer power supply with high efficiency coefficient
- Protection from hydrogen pressure excess and electrolyzer current excess
- Increase of service life by means of hydrogen productivity regulating
- Prevention of moisture ingress to the user's pipes by using control and level water indication.

Indication of generator main parameters of LCD display provided:

- Outlet pressure
- Electolyzer current
- Hydrogen consumption

Control and insertion of parameters is done by 4 button keypad. Hydrogen generator allow to reduce greatly or completely eliminate, in the majority of cases, the use of bottled gas for chromatograph provision.
There is no hydrogen reserve in generators that can be possibly momentary fill the laboratory or chromatograph, and its productivity will not allow to create an explosive concentration of gas in the room, that increase its safety.
Hydrogen generator HG-75-O2 optionally provides oxygen generation for welding. Generator can be equipped with a catalyc filter.
Electric power from single-phase network AC power with voltage from 187 to 242V, frequency (50±1) Hz, Work mode – continuous.

TECHNICAL CHARACTERISTICS:

Parameter	HG-75	HG-75-O2
Productivity H2, l/hour	0-75	0-75
Productivity O2, l/hour	-	37
Maximal outlet pressure, atm	2	2
Pressure stability of hydrogen, no less, atm	0,0025	0,0025
Watering of hydrogen, no more than, ppm	5	5
Hydrogen purity, %	99,995	99,995
Pre-mode time, min	30	30
Water consumption, g/l H2	1,0	1,0
Working time without adding water, hour	4	4
Ank volume O2, L	2,5	2,5
Water volume added to the tank O22 if alarm went off no more than O, L	1,4	1,4
Power consumption, no more than, VA	800	800
Overall dimension (W*D*H), no more than, mm	225*390*550	225*390*550
Mass, no more than, kg	25	26

NITROGEN GENERATOR

PURPOSE

Usage of Generator allows to obtain nitrogen with high purity in the laboratory, It is used for supply chromatograph during the analysis. Nitrogen produced by generator is characterized by high outlet pressure and low moisture content, which allows to use it as carrier-gas even together with ECD.

THE PRINCIPLE OF THE DEVICE

Compressed air form the internal source (Air compressor, built-in-air compressor, technological line with compressed air) is delivered to generator through coalescence filters, where pre-cleaning from dust and oil drops condensation is done. Extraction of nitrogen in the generator is done by air separation by means of short-cycle no-heat absorption on carbon molecular sieve by two-arm scheme with two alternately working absorbers. Simultaneously gas is purified from water vapor, carbon dioxide, oils, hydrogen and carbohydrates.

WORKING PROCESS

Primary blowing of absorbers, receiver and internal lines from oxygen, moisture and other impurities is done during first 8 minutes after switching the generator on. Warming up of the reactor and oxygen sensor is done at the same time together with control of oxygen concentration in nitrogen. Supply of nitrogen to user line starts only after concentration of oxygen in nitrogen reduces to the value less than 20 ppm. Further purification of nitrogen is done at working user line. Pressure at the generator outlet is stabilized by built-in mechanic pressure controller. Nitrogen flow values in user line and oxygen concentrations are detected by in-built sensors and are indicated on digital display.

EMERGENCY SITUATIONS DURING WORK OF GENERATOR

In emergencies like line break (significant depressurization of user line), reduction of inlet pressure lower than 4,5atm, increase of oxygen up to 100 ppm – are controlled accordingly by flow sensor, pressure sensor and oxygen sensor. Delivery of nitrogen to user line is stopped in such cases and indicator “ALARM” lights up together with sound signal. After eliminating the cause of generator shutdown primary 8-minutes device blowing is repeated. Supply of nitrogen to the user resume after oxygen concentration reduces to the values less than 20 ppm.

SPECIFICATION

CLASSIFICATION OF GENERATED NITROGEN	PNG-18
Vol. fraction of nitrogen, no less than, % vol. (including impurities of inert gases – argon, neon, helium)	99,999
Vol. fraction of oxygen, no more, ppm	5
Vol. fraction of water vapor, no more, ppm	7
Vol. fraction of hydrogen, no more, ppm	2
Vol. fraction of total carbon-containing compound in conversion to methane, no more, ppm	3
Maximal productivity by nitrogen, no less, l/hour	18 (300 МЛ/МИН)
Nominal outlet pressure of nitrogen, atm	4
Setting time of work mode, no more, min	45
Maximal inlet air pressure, atm	5
Compressed air consumption at nominal inlet pressure, no more, l/hour	300
Power consumption, no more, VA	100
Overall dimensions (W*D*H), no more, mm	210*500*460
Mass of generator, no more, kg	20

THERE ARE GENERATORS OF 18, 21, 60, 120, 200, 400 LITRES PER MINUTE.

PURE AIR GENERATOR

Pneumatic Part of generator consist of seriously connected air compressor, drying filter, receiver, reactors, pressure regulator. Electronic part consists of power unit, control board, indication card, pressure sensors connected with each other by microcontroller. Pressure sensor, connected with receiver, detects moment of compressor switching on/off to develop required excess pressure in the receiver. At the increase of air flow over nominal generator productivity (partial depressurization) indicator “alarm“ lights up and short beeps begin at the same time.

Drying is done by the filter which is automatically regenerated during work of unit. Catalyst purification is done in reactor. Pressure regulator ensures stabilization of outlet pressure, its value is measured by electronic sensor and is displayed on digital board “PRESSURE”. Indicator “ALARM” turns on in case of outlet pressure stability failure (downturn of pressure lower than in technical passport), long beeps begin at the same time and compressor stop working. Such situation arises if depressurization of the system takes place: air generator-connection line-gas chromatograph.

Electric power of air generators is from single-phase network AC power with voltage from 187 to 242V, frequency (50±1) Hz, work mode – continuous.

TECHNICAL CHARACTERISTIC

NAME OF CHARACTERISTICS	VALUE
Productivity by air, brought to normal conditions, L/min, no less	1,2
Outlet air pressure, atm	3,5
Outlet pressure stability, no more, atm	0,05
Outlet concentration of hydrocarbon, ppm, no more	0,1
Water vapor concentration at 200C and 100kPa, ppm, no more 10	10
Power consumption, no more, VA	200
Overall dimensions	210*440*360
Mass of generator, no more, kg	11

MANUAL HEADSPACE SAMPLER

Manual headspace sampler is designed for insertion of volatile components from matrices into chromatograph, such components that are impossible or unwelcome to be inserted. Examples
such matrices are natural, drinking and waste water, soil, biological fluids, food substances and drinks, various polymer, building materials, pharmaceuticals, etc. The usage of device allows avoiding contamination of evaporator, column and detector of chromatograph by non-volatile or semi-volatile compounds, helps to avoid consumption of solvent which is necessary for extraction and helps to increase reproducibility of analysis.

Sampler realizes static method of insertion of equilibrium vapor from above the analyzed liquid (solid sample) in thermostatic vial. This device independent item and can be applied to any chromatograph.

Realization of the electromagnetic interfusion mode allow to reduce the time of setting balance in the sample and fulfilled the analysis of more viscous samples, for example oil or molten polymers.

Using syringe as dispenser allowed to promptly change the volume of injected sample, eliminate “memory” effects by means of syringe purge mode, eliminate “dead zone” in the evaporator input device.

CHARACTERISTICS

- Thermostat temperature of containers with samples - from ambient temperature to 150°C
- Inaccuracy of temperature maintenance - no more than 0,1°C
- Volume of container with sample - 20 ml, it is possible to use vials from 6 to 40 ml.
- The number of container simultaneously thermo-stated -4.
- Dosed volume of equilibrium vapor - up to 2 ml
- Syringe temperature - from ambient temperature to 150°C
- Gas consumption for purge - from 5 to 300 ml/min.
- Electric power from AC power with voltage (220)V, frequency
- Overall size (W*D*H) - 350 *270*170 mm.
- Power consumption - no more than 360 VA
- Weight - no more than 6,5 kg.

AIR COMPRESSORs

Air compressor perform supply function to FID in chromatographic equipment and gas analyzers. Air compressor is designed for supply of pure air to flame detectors of gas chromatographs. There are air compressor different productivity. Some type of compressor can supply a little amount chromatographs, other type can supply whole lab.

FEATURES OF AIR COMPRESSORS

Equipment produced by company is distinguished by high performance. In-built system of catalyst purification from carbon particles in the compressor can considerably improve sensitivity of devices and, as a result, increases accuracy of the performed analyses. Among the rest consumer qualities of the equipment. we should point out low noise level during work of compressor, stable working pressure and low power consumption.

Compressor AC consists of series connected, drying air filter, indicator tube, reverse valve (pneumatic air distributor), receiver, pressure relay, pressure regulator and output filter. Compressor is equipped with the system of regeneration of built-in air drying filter, which starts automatically and relieves the operator from maintenance works. Compressor is easy to operate.

Liquid Auto Sampler

Features

(1) Simple and easy operation and 5" visual man-machine interactive touch interface.
(2) Intelligentized, user can input orders step by step by following the hint .
(3) High stability, Real-time comparison fed back by the encoder to makes the operation of the instrument more stable.
(4) Providing multiple modes of I/O ports to connect with different kinds of GC.
(5) High degree of automation , 24 hours of uninterrupted work without person.
(6) Nice appearance, small size, light in weight, easy installation, high universality.
(7) Syringe handspike use the buffer mechanism to reduce the gas in syringe needle.
(8) Sample tray use the absolute position to reduce cumulative error.
(9) The instrument designed by modular design and double lines CAN communication mechanism inside, functional module with strong expansion.
(10) Drive with precision motor to provide different kinds of powered speed to make the injection speed more stable and the injection volume more accurate.
(11) The instrument provide universal MODBUS protocol and USB interface to make convenient for the user to programme with computer.
(12) The system will check the date after user input to make the instrument running safer.
(13) User can use the computer to control the auto-sampler to improve work efficiency.

Performance Introduction

Parameters	Range
Injector size	1, 5,10,25,50,100,250,500 (μl)
Digit of sample tray	22-digit sample tray. Extend160-digit sample tray
Digit of sample vial	19(extend to 160)
Digit of solvent vtial	2 (extend to 11)
Digit of waste vial	1 (extend to 5)
Sample injection times of each line	1 to 99 times
Maximum interval	999 min
Minimum sample size	0.1μl
Maximum sample size	250μl
Methods	1 to20
Maximum injection inlet	1
Maximum times of needle cleaning	99 times
Maximum times of sample pumping	99 times
Maximum interval of sample pumping	5000ms
Viscosity delay	0 ~ 60s
Dwell time before and after injection	0 ~120s
Needle speed	fast, slow, user-defined
sample extract and injection speed	fast, slow, user-defined
Injection mode	normal mode, continuity mode, sample + L1, sample + L1 + L2, PTV
Control mode	interval automatic control ,signal negative control, PC control
Two tower injection	time reproducibility of synchronous sampling is less than 1/1000s.

TECHNICAL CHARACTERISTICS

Name of Characteristics	Valve
Productivity, no less, /min	3
Outlet air pressure, MPa	0,25±5%
Pressure stability with constant flow, no more, MPa	0,0007
Engine power consumption, no more, VA	100
Receiver volume, l	9
Noise level, no more, dB	60
Mass, no more, kg	19
Overall dimensions (W*D*H), no more, mm	235*755*440
Single phase network voltage	230V, 50Hz

DIGITAL VACUUM GAUGE

Purpose and Application Of Vacuum Gauge

Unit is designed of measuring of diluted gases pressure. Vacuum gauge gives opportunity to control the work of vacuum pumps, determine degree of rarefaction in technical cavities and oil pipes, perform several tasks in laboratories. Now a days digital services are very popular due to simplicity of operation, accuracy of readings and wide range of applications. Vacuum gauge is used in following spheres:

- Chemical industry
- Lyophilization
- Service of pumps of vacuum type
- Systems of molecular distillation
- Spectrometry and analyzers
- Refilling and vacuumizing of cooling systems
- Vacuum thermal insulation, pipelines and double - walled vessels
- Vacuum packaging
- Quality control
- Electronic and semiconductor elements production.

I – Vacuum gauges are especially relevant in the spheres where one of the main working orientations is examination and analysis of gaseous substances.

DESCRIPTION OF VOLUME GAUGE

Device represents vacuum gauge of ionization-thermocouple type with continuous range of pressure measurements. System “automate” of sensor switching and system of emission current control of hardware-software type are used in the device. Digital device is supplied with built-in display, which displays the set and measured parameters. Unit control can be performed either from keyboard located on the corpus of the unit or remotely from PC through RS-485 (for control of electronic leak valve of gases).

DESIGN OF DIGITAL VACUUM GAUGE

Devices is equipped with two channels measuring pressure in vacuum system. Low vacuum is measured by channel of thermocouple lamp, which is switched on together with vacuum gauge. When vacuum level reaches the value of 3 Pa, power of ionization lamp is switched on and it measures the vacuum. At that measurement channel of thermocouple lamp is not switched off and is performing the function of fuse. Ionization channel is switched off and data from both sensors is shown on display. Application of device is possible in units with manual and automatic methods of control.

TECHNICAL CHARACTERISTICS

Range of measured pressure by thermocouple lamp ТТМТ-2, torr (mm. of mercury)	From 10-3 to 10-1
Range of measured pressure by ionization lamp ПМИ - 51, torr (mm. of mercury)	From 7,5*10-8 to 7,5*10-2
Range of gas pressure measured by vacuum gauge	From 7,5 to 10-5 Pa
Work with thermocouple converters	ПМТ-2, ПМТ-4М
Work with ionization converters	ПМИ-2, ПМИ-51, ПМИ-10-2
Indication in different measuring units is provided	Pa, mm of mercury (torr)
Response time of sensors (ionization type)	0,1 sec
Electric power from single phase network AC power with voltage from 187 to 242V, frequency (50±1)Hz, work mode	Continuous
Value of power consumption (without including PC)	No more than 30 VA
Overall dimensions	165*350*215 mm
Mass	No more than 3 kg

Analytical®
Technologies Limited

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 Maintenace 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.

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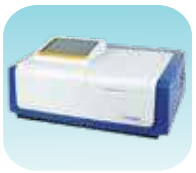
Our Products & Technologies



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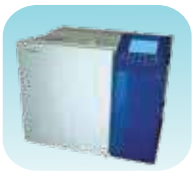
Optima Gas Chromatograph 3007



Optima Gas Chromatograph 2979 Plus

Flash Chromatograph

Atomic Absorption Spectrophotometer

Liquid Partical 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

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

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 personallities 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

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

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

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