Multiplelabs
Turnkey Laboratories Solutions

Analytical®
Technologies Limited

IC-3100 SERIES

ION CHROMATOGRAPHY

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

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

TECHNOLOGY ADVANTAGE

- Cation and anion dual-channel system, with both channels operating independently without disturbing each other and cations and anions being detected simultaneously;
- Eluent thermal buffer system in which eluent enters into the columns after preheated, to avoid bubles generated from rapid heating";
- Intelligent flow path mode, one-key operation to complete flow path switch, automatic cleaning to save time and labor;
- Built-in low-pressure degassing technology to eliminate bubble interference for more stability;
- The world'sleading full-rangeseries of chromatographiccolumns able to detectof ions withvaried compositions;
- Excellent performance to support all your applications.
- Ion excusion chromatography would be configured for the analysis of all carbon dioxide, present as CO2, carbonic acid, bicarbonate icon and anions like fluoride, chloride, nitrate, phosphate, sulphate, etc.,by conductivity delection.
- able to perform both suppressed and non-suppressed conductivity application.
- PC based system with data acquisition and system control through the same software shall be able to identify various components like pump, column, detectors automatically.

ISOCRATIC PUMP-3100

- userselectable high and low pressure limits to automatically stop the pump in the leakage,flow blockage, or empty eluent reservior
- Delivery method : High-pressure and low-pulse double plunger tandem advection pump
- Pump head :10 ml PEEK
- Maximum Working Pressure : 10ml pump head 42 Mpa for SST/35Mpa for PEEK
- Flow Range : 0.001 ml/min(increments at 0.001 mL/min)
- Flow Rate reproducibility ± 0.1%
- Flow rate accuracy: 0.1%measurement at 1ml/min
- Flow rate Precision: 0.075% RSD
- Flow Stability: (0.2-0.5)mL/min≤3%;
  (0.5-1.0)mL/min≤2%;
  ＞1.0mL/min≤2%;
- Pressure Pulse: ≤0.5%
- Pressure display Accuracy: ≤0.1MPa
- Display: 320X240X blue background color
- Protection : Pmax & Pmin
- Data automatically saved after Power down
- System connection 1/16 99 Capillaries
- Control : stand-along mode by front keypad
- HPG Mode: one pump work as Master, others work as slave Rs 232 by PC using Communication
- Protocol Power Supply: AC2220V,50Hz,400
- Dimensions and Weight: 410X180X270X10 KG

NUMERICAL-CONTROL AND ELECTROMAGNETIC INJECTION VALVE

- Maximum Pressure : 35MPa
- Contact Material of the Rotor : PEEK
- Control Mode : By stepper motor
- Power Supply : 24V (DC)

DIGITAL AND TEMPERTURE-CONTROL DETECTION SYSTEM

BIPOLAR CONDUCTIVITY DETECTOR

- Delivery method : Temperature-control and bipolar conductivity detector
- Detection Mode : Bipolar conductivity detection
- Cell Volume : ≤0.8μL
- Detection Range : 0~50000μS/cm
- Detection Resolution : ≤0.0020nS/cm
- Output Voltage : -6000~+6000mV (adjustable)
- Noice, wet ≤0.1 nSat1μs/cm background
- Operating Temperature Range : Room temperature +5~60°C(41 ~140°F)
- Cell temperature stability ≤0.001 °C
- Controlling Temperature Accuracy : ±0.01°C
- Maximum Pressure : 10MPa
- Linear Range : $\geq 10^3$
- Instrument Linearity : ≥0.999
- Quantitative Repeatability : ≤1.0%
- baseline drift noise <0.2 nS/cm

COLUMN HEATER

- Operating Temperature Range : Room temperature +20~60°C(68~140°F)
- Controlling Temperature Accuracy : ±0.01°C
- Allowable Deviation of Column Heater's temperature : ±2°C
- Temperature Stability : ≤1°C/h

FLOW SYSTEM

- Plastic Flow Path : Made of PEEK materials
- Six-way Valve : PEEK material, pressure 5000psi; Independent automatic collecting and flow funtion.

THERMAL BUFFER SYSTEM OF ELUENT

Before enter into the column,the eluent is preheated.By the way,can avoid the rapid heating up and the bubbles to generate,the baseline is more stable,effectively shorten the start-up balance time and improve the analysis efficiency and effect.

- Temperature Range : 25~40°C(77~104°F)

BUILT-IN AND LOW-PRESSURE DEGASSING DEVICE

- Vacuum Degree : -70kPa
- Maximum Flow Rate : 10mL/min
- Internal Volume : 30µL
- Degassing Efficiency : 10mL/min 90%

IC Columns

- Anion Column : 1No
- Anion Guard column : 1no.
- Cation Column : 1 No.
- Cation Guard column : 1 No.

COLUMN HOUSING

Housing would be able to identify the columns and set the optimal operating conditions for column operations.

IC COLUMNS ICC-3100 SERIES:

IC columns for analyses of anions including cyanide , silicate, borate etc cations, amines , transition metals would be quoted with respective guard columns. The columns would have electronic chip to store data and history of column use. It would also be possible to record the number of injections and the working hours.
The columns performance to be guaranteed for a 2500 injections which could be ascertained from the data stored in column identification chip.

SUPPRESSION SU-3100 SERIES :

In anion analysis; for reciprocal automatic selection of suppression columns after each analysis, with integrated PEEK plunger dosage pump and integrated column oven for controlled temperature of suppression columns, flow cell and separation column. Replace will be provided in case of non-working.

PDA DETECTOR DAD-3100 SERIES:

- Wetted Materials : Stainless steel/PEEK*,Teflon,Glass
- Diode Array : 1024 diodes
- Baseline Noise : $\pm 0.6 \times 10^{-5}$ AU (ASTM)
- Baseline Drift : 5×10^{-4} AU/Hr
- Wavelength Range : 190- 900 nm
- Wavelength Precision : ± 0.1 nm
- Wavelength Accuracy : ± 1 nm
- Linear Range: >2 DAU (ASTM)
- Max. Sampling Rate: 12 channels, 100 Hz Full spectrum, 100Hz
- Flowcell Pressure: 1200 PSI
- Flowcell Light Path:10mm
- Flowcell Volume: 12 µL, 2.5µL (semi micro)
- Detection Limit: 2x10 g/mL (naphthalene)
- Wavelength Calibration: Mercury peaks and bult-in homium oxide filter
- Temperature Operating Range: 5º C below ambient temp to 50º C (temperature control facility)
- Mean Pixel Pitch : 2.2 nm
- Spectral Resolution : 0.6 nm/pixel
- Light Source : Deuterium Lamp,Tungsten Lamp
- Wavelength Program : Programmable, 10 steps
- Analog Output : 1Hz-100 Hz
- Control Features : internal peak Detector with +24 V Solenoid switching output.
- Lamp Hour : D2 lamp > 2000hr Lifetime
- Consumption : 110W
- Rise Time : 0.0s - 9.9s
- Dimensions : 420mm x 280mm x 175mm
- Power : AC 10V / 220V, 50Hz / 60Hz
- Absorption range : -2.0 to +2.0 abs
- Bandwidth : Variable 1-10nm

POST COLUMN REACTOR PC-3100 SERIES:

Post column reagent addition system comprising of pump, mixing Coil. It has compact post column derivatization unit. The system would have reagent delivery pump, mixing, joining and reaction coils. The reagent has pumped using a peristaltic pump.

Post-Column Reactor for Derivatization with ninhydrin Pump :

- Flow rate : 0.01 – 2.5mL/min
- Pressure :0 to 2500PSI (172 BAR) (upper limit by firmware)
- Flow presicion : <0.5% RSD
- Flow Accuracy : ± 2% from set point
- Materials : All-PEEK fluid path, including pump headsInput :
- RS232 Interface for remote control and monitoringPower :
- 120/230 Vac : 50/60Hz

Features :

- Automatic piston wash (significantly improves seal life)
- Stepper motor drive, with electronic fast refill via flag and sensor
- Dual check valves (Inlet & outlet) – ruby ball, sapphire seat
- Prime-Purge Valve (PEEK)
- Pulse Dampener (PEEK)
- Outlet filter (0.5u glass frit)
- Back pressure coil for proper pulse dampener operation (approx. 1000PSI) @ 1.0mL/min
- Pressure Transducer (isolated in Pulse Dampener)
- Interactive front keypad with digital rea-out
- Flow rate set points
- Pressure readout
- Set upper/lower pressure limit

Reactor Specification :

- Volume accuracy : ± 2%
- Temperature Operating Range : 10°C above ambient to 150°C
- Temp. Accuracy : ± 2°C cover entire range (outlet fluid temperature vs. set point)
- Temp. Repeatability : ± 1°C
- Safety Cutoff Temperature : 160°C
- Stabilizing Time : 30 minutes to 150oC for “Ready”
- indication Input : RS 232 interface for remote control and status monitoring

Features :

- Contiuous loop, fully sealed
- Multi-directional path for effective mixing
- Interactive front keypad control with digital display
- Temperature set point
- Temperature display (°C or °F) Ready light

Digital Amperometric EC Detector :

- Working Potential: ±2.00V
- Measurement Range: ±(10pA-20µA)
- Auto Zero Range : max ± 50 µA
- Manual offset Range: max: ± 50 µA
- LCD- Display : display of settings and measurement data
- Filter: 5 Hz- 0.02 Hz 1,2,5 steps
- Detector noise level: 3 pA with a dummy cell (load of 300 M and 0- 0.5uF)
- Cleaning Potential : ± 2.00V
- Detay time cleaning potential : 10-1500sec
- Cleaning Cycle : every 1st to 10th cycle
- DC Current : 10nA-200µA in 1-2-5 Sequence
- Storage capacity for measurement program 0-99
- Storage capacity for cell- cleaning Program : 0-99
- Pulse mode range Filter (cut off)

  advanced digital filter : 10nA - 200 uA in 1,2,5 steps 0.4 - 0.001 Hz, 1,2,5 steps
- Scan mode range Scan rate : 10nA - 200uA (in 1,2,5 steps)
- Analogue Output: ± 1V per measurement
- Single range: 10pA to 500µA
- Auto-zero interface : active low
- Input : 115-230V,50-60Hz
- Output: 12 V DC,2.5 A
- Dimensions : 260 X 510 X 160mm
- Weight 7.6 kg

IN-LINE SAMPLE CALIBRATION SYSTEM IS-3100 SERIES:

Able to plot calibration curve automatically with single standard (of much higher concentration than the analyte)

AUTO SAMPLER AS-2320

- Sampling Mode: full loop, partial loopfill and µl pick -up
- Volume of sampler Loop: standard : 100µL (optional for 10,20,10 0µL)
- Max. sampling volume: Full loop = loop volume
- Partial loop fill =1/2 loop volume µl pick- up= (loop volume - 3X needle volume) 2
- Sample volume (size & positions) : 2 *48 0.5 to 10mL vials (Standard) (optional: 96-hole panel,384-hole panel, 10ml bottle)
- Cross contamination : <0.02%
- Linearity: 0.9999
- Pressure Limit: 6000psi(15,000psi sampling valve is optional)
- Number of samples : 2mL × 108 bottles at maximum or optional
- Injection mode : Three injection modes (full quantitative loop injection, partial injection, micro-injection)
- Injection volume : 0.1uL~500uL (standard: 25uL quantitative loop)
- Injection repeatability : Full quantitative loop injection RSD <0.25%; Partial quantitative loop injection RSD<0.5% (continuous injection, injection volume>10ul); Lossless injection RSD<0.8% (continuous injection, injection volume<5ul)
- Sample residual : <0.05%
- Maximum pressure : 40MPa (standard), 60MPa (Super efficient system)
- Automatic protection function : Bottle missing alarm, ejector pin alarm, pipeline blocking alarm, leak alarm
- Volume /weight : 300 (w)×450(D)×320(H),about25kg

INJECTOR-3100 SERIES:

Dual position 6-Port injector valve with 10and 25uL Loop fast response time and controlled through software.

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.

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, Manufaturing, 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

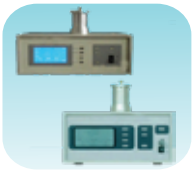
Optima Gas Chromatograph 2979 Plus

Flash Chromatograph

Atomic Absorption Spectrophotometer

Liquid 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

Corporate Social Responsibility

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.

Reach us @

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