Multiplelabs
Turnkey Laboratories Solutions

Analytical®
Technologies Limited

iUHPLC : 3000N

Ultra High Performance Liquid Chromatograph

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

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

Introduction :

• Ultra-high pressure linear motor pump with 125MPa pressure resistance
• Needle-in-loop sampler for lossless injection and minimal cross-contamination
• Liquid-core waveguide flow cell technology for lossless optical energy transmission and ultra-high detection rate
• Fast detection speed, high sensitivity and high separation.
• Flexible configuration of DAD, FLD,ELSD,RID and other detectors to meet the needs of different customers
• PCT international patent

Binary Pump:

• Ultra-high-pressure linear motor pump with a maximum pressure of 150 MPa and a flow rate range of 0-2 mL/min, covering the use of sub-micrometer columns.
• Dynamic Compression Compensation Technology: Highly accurate real-time pres sure following technology for "zero fluctuation" and extremely high flow stability.
• Equipped with four-way solvent switching device, electric venting valve, six-way in-line degassing, and liquid leak detection, it is free from manual operation.

Technical Parameters :

Pump	Linear Motor Pump	Flow Rate Stability	50.09% RSD
Gradient Mode	Quasi-quadruplex pumps (2 pumps)	Gradient Stability	<0 2% RSD
Flow Rate Range	0.0001-2.0000mL/min	Check Valve	Active Check Valve
Maximum Pressure	150MPa	Degassing	6-way Inline Degasser
Flow Rate Error	±1.1%	Flow Rate Increment	0.001mL/min

Autosampler :

The ultra-efficient autosampler adopts ultra-high pressure needle in the flow path nondestructive sampling technology, with a very low sampling cycle period. Since the injection needle is always flushed in the high-pressure flow path, it has extremely low cross-contamination. The refrige-rated sample chamber can store biological samples and other easily deteriorating test materials

Technical Parameters :

Max Pressure Resistance	125MPa	Linearity	R20.999
Sampling Volume Range	0.1- 10.0uL	Cross-contamination	<0.001%
Sampling Speed	15S	Number of Samples	96 Vials (248,2ml)
Sampling Error	± 0.2uL	Temperature Setting Range	4.0-40.0C
Repeatability	<0.3% RSD	Temperature Stability	±1C

The ultra-efficient column thermostat has an active preheating function, the heating rate is extremely fast, and the mobile phase can be fully preheated the in the ultra-efficient and extremely short detection time, bringing excellent detection results

Technical Parameters :

Temperature Setting Range	20.0-90.0C	Temperature Setting Error	±0.05C
Temperature Stability	±0.3C/h	Function	Preheating

Detector

The ultra-high efficiency diode array detector adopts the patented liquid core waveguide flow cell technology to realize the lossless transmission of light energy, and with the unique minimization of stray light technology, it brings extremely high sensitivity and signal-to-noise ratio. With ultra-high detection rate, it can give full play to the performance of ultra-high performance liquid phase.

Technical Parameters :

Baseline Noise	<7x 10° AU	Wavelength Repeatability	s±01 nm
Baseline Drift	s0.9 10 AU/h	Linearity	2.0AU
Min Detection Concentration	2 10g/ml (naphthalene/ methanol)	Sampling Rate	Up to 100Hz
Wavelength Range	190-800 nm	Number of Arrays	1024
Wavelength Error	s±1nm	Light Source	Deuterium (D2) Lamp

AnalCHROM™ Workstation:

AnalCHROM™ Chromatography Workstation

Self-developed AnalCHROM™ CDS stand-alone chromatography workstation and AnalCHROM™ Solution network version chromatography workstation software.Humanized design, easy to use The workstation provides a complete audit trail,permission management and other features to meet compliance requirements.And it also provides database based storage and disaster recovery design to ensure data security. In addition selfdeveloped FLD,ELSD and other detectors can be seamlessly connected to the AnalCHROM™ chromatography workstation to realize a complete UPLC solution.

High Performance Liquid Chromatograph (Quadruple Autosampler) :

1. Working conditions

1. Working power supply: 220V, 50Hz
2. Ambient temperature: 10-40°C
3. Relative humidity: 20-85%.

2. Instrument Functional Requirements

1. Mainstream split design
2. The pump head is a split pump head with a customised one-piece check valve.
3. Dynamic compensation technology with reduced flow fluctuations to ensure flow accuracy and stability;
4. With plunger rod active flushing function;
5. With wavelength scanning and dual-wavelength detection function;
6. The high-pressure pump adopts two-stage suspension drive technology,drive suspension technology,combined with the suspension plunger rod design of the pump head, to extend the service life of seals and reduce the user's cost of use.
7. Realise precise control of the proportional valve through precise logic control to ensure proportional accuracy.

3. Technical indicators

3.1. System indicators

1. Qualitative measurement repeatability: ≤0.065%
2. Repeatability of quantitative measurements: ≤0.066%

3.2. High-pressure constant-flow pumps

1. Maximum operating pressure: 45MPa
2. Maximum delivery pressure：45MPa（0.0001～2.0000ml/min；30MPa (2.0001～Max ml/min）；
3. Flow rate setting range：0.0000～10.0000ml/min
4. Flow rate setting increment：0.0001ml/min
5. Gradient error：≤0.204%
6. Gradient stability：0.15%RSD（5%～95%，0.2～2.0ml/min）
7. Flow rate setting value error ： ±0.09% (1ml/min, water, 10MPa,room temperature stable)
8. Flow Stability: ≤0.07% RSD (1ml/min,water,10MPa,room temperature stable)

3.3. Autosampler

1. Repeatability: <0.066%RSD (10.0μL injection), <0.170%RSD (1.0μl injection) ；
2. Linear correlation coefficient: >0.99998; [Certification; test report >0.99999].
3. Cross-contamination: ≤0.0011% (naphthalene);
4. Inlet volume accuracy error: -0.13%
5. Number of sample bits: standard 120 bits (2*60, 2mL), optional 64 bits (2*32, 4ml);
6. Syringe specification: standard: 500μL; [no documentation support].
7. Inlet volume range: 0.1-20.0μl (with 20μL quantitative ring),0.1-100.0μl (with 100μL quantitative ring);
8. Temperature setting range: 4.0～40.0℃ (with optional refrigeration);
9. Temperature control range: room temperature -20.0℃～room temperature -5℃ (with optional refrigeration);
10. Temperature setting value error: ± 0.07 ℃ (optional refrigeration);
11. Temperature stability: ± 0.27 ℃ (optional refrigeration);
12. Inlet valve switching time: <60ms; [no documented support].
13. Position control accuracy: <0.2mm;
14. Inlet needle cleaning: unlimited number of times inside and outside the needle cleaning and blow-drying, can be selected between samples or between each needle to clean or not.
15. Other: quantitative ring technology, an optional different volume quantitative ring, to achieve large volume injection; can be adapted to the normal phase system;

3.4 Heating and Cooling Column Oven (CT)

1. Temperature setting range：0℃-90℃；
2. Temperature control range: temperature control range: room temperature -10 ℃ ~ room temperature +70.0 ℃ (not exceeding the maximum temperature);
3. Temperature stability: ±0.03℃/h;
4. Temperature setting value error: ±0.01℃;
5. Temperature setting resolution: 0.1 ℃;
6. Preheating: built-in 1-way preheating module;
7. Other: standard semiconductor cooling module, resistance heating module, two temperature control modes. Built-in switching valve position, can also support multiple external switching valve positions.

3.5 Ultraviolet detector (UV)

1. Baseline noise: ≤2.1×10^{-6} Au
2. Baseline drift: ≤9.0×10-6 Au/30min [calibration certificate; test report-1.8×10-5Au/h].
3. Minimum test concentration: ≤4.90×10-10g/mL (naphthalene/methanol)
4. Spectral range:188～740nm
5. Wavelength error: ≤±0.1 nm (Erbium perchlorate)
6. Wavelength repeatability: ≤±0.1 nm
7. Sampling rate: the highest 100Hz (100SPS) [no file support
8. Linear range: ≥2.17×105 or 2.5Au [no document support
9. Qualitative repeatability: 0.065% RSD
10. Quantitative repeatability: 0.066% RSD
11. Dual wavelength switching frequency: > 2.5Hz
12. Standard deuterium lamp [No document support

3.6 Diode array detector (DAD)

1. Baseline noise：≤2.64×10^{-5} Au；
2. Baseline drift: ≤4.80×10-5 Au/30min; [certificate of calibration; test report 9.6×10-5 Au/h].
3. Minimum test concentration: ≤1.10×10-8 g/mL;
4. Spectral range: 190～800 nm;
5. Wavelength error: ≤±0.1 nm; [certificate of verification + test report].
6. Wavelength repeatability: ≤±0.1 nm; [Certification + test report].
7. Linear range: ≥4.05×104;
8. Qualitative repeatability: 0.092% RSD
9. Quantitative repeatability: 0.038% RSD
10. Grating: original imported aberration-corrected holographic concave grating;
11. Advanced function: wavelength combining;
12. Leakage detection: standard with a leakage detection module

3.7 Evaporative Light Scattering Detector (ELSD)

1. Baseline noise: ≤0.0020mV（1mV=1SU）
2.★Baseline drift: ≤0.003mV/30min
3.★Minimum test concentration: ≤ 2.0×10-7 g/mL (national standard method, cholesterol/methanol)
4. Qualitative repeatability: 0.035% RSD

5. Quantitative repeatability: 0.121% RSD
6. Evaporated gas flow range: (0~3) SLM
7. Atomization temperature range: room temperature ~ 90 ° C
8. Evaporation temperature range: room temperature ~ 110 ° C
9. Temperature range of detection chamber: room temperature～60℃
10. Input air pressure: (4～7) bar
11. Mobile phase flow rate range: (0.2～5) mL/min (methanol)
12.★Equipped with atomization, evaporation, detection of three independent airflow control and three independent temperature control
13.★Full touch 7 "LCD screen, the machine can be completely independently controlled.L

3.8 Fluorescence detector (FLD)

1. Baseline noise: ≤2.4×10^{-6} FU 4
2. Baseline drift: ≤9.0×10-6FU/30min [Certificate of calibration; test report ≤-1.8×10-5FU/h].
3. Minimum test concentration: ≤3.25×10-10 g/mL (naphthalene/methanol)
4. Spectral range: EX: 200～650nm; Em: 200～650nm
5. Wavelength error: ±0.1nm
6. Wavelength repeatability: ±0.1 nm
7. Linear range: ≥1.85×104
8. Qualitative repeatability: 0.023% RSD
9. Quantitative repeatability: 0.069% RSD

3.9 Oscillometric refractive detector (RID)

1. Flow-through pool type: 2-chamber type；
2. Measuring method: refractive method;
3. Refractive index range: 1.00 ~ 1.75;
4. Detection range: 0.25 ~ 512 μRIU;
5. Drift: 3.0×10-9 RIU /30min; (pure water flow rate of 1mL/min) [certificate of calibration; test report 6.0×10-9 RIU /h].
6. Linear range: ≥2.71×104;
7. Noise: ≤4.0×10-10 RIU;
8. Qualitative repeatability: 0.030% RSD
9. Quantitative repeatability: 0.210% RSD
10. Minimum test concentration: 1.29×10-7 g/mL (cholesterol/methanol)

11. Pool volume: 8μL;
12. Flow rate: (common value) 0.2 ~ 3.0mL/min; (maximum value) 10mL/min (solvent: pure water);
13. Maximum back pressure: 50kPa;
14. Dead volume: IN → Cell:ca. 60μL;Cell → OUT:ca.600μL;All (Cell → OUT):ca. 670μL;
15. Temperature control: OFF, 30 ~ 65℃ (1℃ each time);
16. Communication port: RS232, Ethernet;
17. Material of liquid contact part: stainless steel 316, Teflon, quartz glass;
18. Power supply,power consumption: AC 100~240V±10%,50/60Hz,maximum 150W;
19. Dimensions, weight: 510*370*230, ca.18kg;
20. Accessories: power cord, signal cable, connecting tube, back pressure tube,fuse, operating instructions

3.10AnalCHROM™ Software

1. 1. Independent research and development : with software copyrights
2. 2. Passed the CMMI maturity level 5 assessment, the software product development level has reached the highest international standards.
3. Centralised configuration management and device control capabilities

1) Utilising the creation wizard function with clear guidelines, you can quickly and accurately create and edit the contents of the configuration items to improve operational efficiency.
2) Modular display, easy for users to clearly, intuitively and quickly view the contents of the configuration items。
3) Unified configuration of the contents of the settings in the same module to simplify the operation process
4) 4) At-a-glance equipment operation status interface display, easy for users to intuitively understand the operation of the equipment
5) Plug-in equipment components for integration of third-party manufacturers equipment.Full control of multi-brand,multi-model instruments gives future labs full scalability.

4. Convenient data organisation and storage features

1) Methods of storing data in the form of folders and data correspondence
2) 2) All folders are visually displayed in the Data Browser, making it easy to view or analyse data
3) 3) Rename function to change the name of the folder, data, method, etc.

4) 4) Data movement function to re-adjust the data storage path as needed
5) 5) Data movement function, you can re-adjust the data storage path as needed
6) 6) Find function, you can search for matches by fuzzy searching
7) 7) Cross-project duplicate copies of methods
8) Import and export functions in folder or data form
9) 9) Database backup and restore, and project backup and restore functions
10) The use of efficient database system, effective protection of user data security, automatic backup, cycle update, always ensure that the latest 7 days of complete database backup, to prevent data loss；
11) Maintains instrument operation and accessibility of data for processing in the event of a network outage,and automatically uploads local data to the server when the network is restored (supported by network version)

5. 5. Simple and efficient data processing functions

1) Multiple acquisition interfaces can be opened at the same time, and sequential injections in different projects can be run continuously and alternately using different projects associated with the same chromatographic system.
2) Multiple run sequences can be set up in the same project and added to the sequence queue to run consecutively.
3) Support for online addition of new feed lines and modification of the parameters of outstanding feed lines during the running of a feed.
4) Quick print report function when viewing spectra
5) Data processing plug-in, can add spectra, mass spectrometry processing and other modules
6) 6) Confirm peak purity, correctly identify compounds and optimize methods using powerful 3D data analysis functions
7) 7) Develop SmartPeak, a second-order algorithm with Gaussian, exponential, and tangential cuts, to realize effective identification and intelligent selection of chromatographic peaks (provide screenshots of the software for identifying shoulder peaks and advanced cuts) to simplify the integration process, and provide consistent and reliable peak detection between multiple chromatograms.
8) Reporting component plug-ins to customize reporting methods in various formats
9) Ability to add customized formulas and output customized results

6. Strict regulatory compliance

1) 1) Comprehensive support for GLP and other regulations, support for a variety of application scenarios, user and permission management, perfect audit trail, data traceability of the whole process.
2) Flexible combinations of roles and permissions ensure that users can only drive the content of their own permissions, so as to meet the enterprise's data confidentiality needs.
3) 3) Full audit trail function in compliance with GMP, CGMP, 21CFR-Part11, ICH guidelines and other legal and regulatory requirements, audit trail records cannot be modified or deleted and can be printed.

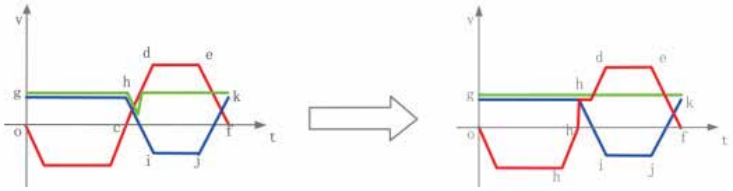
3000N Series HPLC

Features:

• Mainstream split design, complete system testing function, to meet most testing needs
• Customized acetonitrile-resistant check valve;
• The new cam curve design adopts electronic pulsation suppression technology and solvent compression to further reduce pressure fluctuations and ensure higher repeatability of test results,
• Standard configuration of plunger rod online cleaning function,
• 1800L/mm grating imported from France,
• Optional UV, ELSD, FLD, DAD, RID detectors from our company,
• Fully intelligent counter-control chromatography workstation

High Pressure Pump:

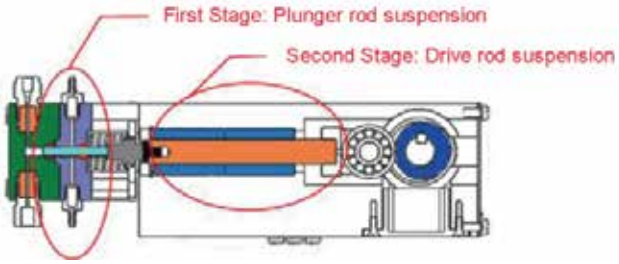
• Customized high-precision gradient valves ensure extremely high gradient repeatability.
• Two-stage suspension technology high-pressure constant-flow pump, which improves system service life, reduces the wear and tear of seals,and reduces cost of use for customers.
• Built in degasser to meet both high pressure pump and sampler cleaning fluid degassing.



New cam curve and electronic pulsation suppression

Two-stage suspension Drive Technology

Compared with the traditional hard connection method, the high-pressure pump adopts drive suspension technology, combined with the suspension plunger rod design of the imported pump head,significantly extending the service life of the seal and reducing the user's cost of use.



Methene-resistant check value:

The new check value greatly reduces the probability of possible check valve failure when using pure methane-based systems

Autosampler:

Features :

• High precision metering pump greatly improving the accuracy of the injection,
• Injection modes: full loop injection, partial injection, non-destructive injection;
• Imported key components: electric injection value, syringe pump,four optional rotary values, liquid lines and high/low pressure connectors,
• Dual system expansion design: optional switching value to complete dual system injection, online enrichment and other operations,
• Samples: 2mL, 120 vials;
• Auxiliary air pump for auxiliary pressurization and internal needle cleaning,
• Cooling: optional cooling module for low temperature preservation of samples;
• Built-in lighting: convenient for users to observe the sample injecton process

Technical Parameters :

Repeatability	< 0.5% RSD	Number of Samples	120 Vials (260, 2ml)
Linearity	>0.9999	Syringe	Stanard, 59put 9p{gal 250ul, 1000ul, 2500ul
Cross Contamination	<0.002%	Cooling Module	4-30C
Injection Volume Error	±1%	Injection Volume	1-100ul

Column Oven :

• Air circulation heating and cooling column oven, mild temperature control, uniform heat, high stability
• Provide 2-way 250mm column + protection installation position, to meet the majority of user needs.

Technical Parameters :

Temperature Control Range	4-85°C	Temperature Setting Resolution	0 1C
Temperature Stability	±0.02"C	Function	Heating, Cooling,Air Criculation

UV Detector :

• Imported light source: It is imported deuterium lamp and tungsten lamp,
• Flow cell: The new flow cell, polished optical path and extremely low post-column dead volume design improve system column efficiency;
• Dual wavelength detection. 2 wavelengths can be detected simultaneously,
• Wavelength scan: absorption spectrum can be scanned in the full range of light sources;
• Leakage detection: used for misoperation, overpressure and other situations resulting in the leakage of liquid alarm,
• Dual lamp position design: to meet the 188-900nm wavelength range of spectral options,
• Spectral calibration can be performed automatically, and the spectral cali bration algorithm is designed according to the grating spectroscopy theory model and the characteristic spectral line of deuterium lamp. Simple structure and accurate results.

Technical Parameters :

Baseline Noise	52.010Au	Wavelength Error	≤±0.1 nm
Baseline Drift	<1x10Au/h	Wavelength Repeatability	≤±01nm
Spectral Range	188 - 740nm (900,tungsten lamp)	Linearity Range	≥10(general parameters)
Minimum Detection Concentration		≤3.010^{-9}g/mL (naphthalene / methanol)	

DAD Detector :

Diode array detector, a highly efficient and powerful general-purpose detector for high periormance liquid chromatography systems. Its imported core components and integrated optical structure design provides stable and reliable performance. And it enables simultaneous detection of all wavelengths in the range of 190nm-80nm, with 1024 times more information than the UV detector. Based on the chromatographic functions, it provides a variety of unique functions such as spectrogram and matching calculation, maximum value graph, 30 view, contour line graph, peak purity calculation and spectral library management.

Technical Parameters :

Baseline Noise	≤4x10⁻⁵ Au	Spectral Range	190-800 nm
Baseline Drift	≤3x10⁻⁵ Au/h	Wavelength Error	s±0.1nm
Min Detection Concentration	≤2x10⁻⁸ g/mu	Wavelength Repeatability	s±01nm
Linearity Range	≥10⁴	Leak Detection	Standard Leak Detection Module

FLD Detector

• The fluorescence detector uses a DC deuterium lamp as the light source and has a dual monochromator structure, which allows you to flexibly set the excitation and emission wavelengths to meet your needs for the detection of different samples.

• Equipped with tw o operation modes,touch LCD display and chromatography workstation,and it provides two analog channel outputs and can also transfer data via RS232 serial port or Ethernet.

• It is suitable for the detection of polycyclic aromatic hydrocarbons, hydrocar bons, aflatoxins, vitamins, amino acids and many other substances

Technical Parameters :

Baseline Noise	≤5x10⁻⁶FU	Wavelength Error	±0.1nm
Baseline Drift	≤2x10⁻⁵FU/30min	Wavelength Repeatability	±0.1 nm
Spectral Range	(200 ~ 650) nm	Linearity Range	≥10⁴
Minimum Detection Concentration		≤3x10⁻¹⁰ g/mL (naphthalene / methanol)	

ELSD Detector

• Low-temperature evaporation design meets the detection requirements of thermally unstable substances;
• The new split mode expands the application range of evaporative light scattering detectors
• Three independent airflow controls for atomization, evaporation, and detection can meet the analysis of substances with different characteristics;
• The high-performance photomultiplier tu be ensures extremely high sensitivity Full touch 7-inch LCD screen, convenient operation.

Technical Parameters :

Baseline Noise	≤0.0037mV	Nebulization Temperature Range	Room Temperature~90oC
Baseline Drift	≤0.0026mV/30min	Evaporation Temperature Range	Room temperature ~110oC
Min Detection Concentration	≤1x10-6 g/mL (cholesterol/methanol)	Testing Room Temperature Range	Room Temperature ~ 60C
Evaporation Gas Flow Range	(0~ 3) SLM	Input Pressure	(4~7) bar

RID Detector

The RID detector is a universal detector with different refractive indices between the sample flow path and the reference flow path. It can detect most substances, especially for organic substances without UV absorption (e.g macromolecules, sugars, aliphatic- alkanes)

Technical Parameters :

Refractive Index Range	1.00~1.75	Deviation Adjustment Range	10 μRIU
Detection Range	0.25 ~ 512 RIU	Bias Resolution Capability	50nRIU
Drift	0.2 μRIU /h	Integrator Output (sensitivity)	DC 0 ~ 1V 4mV/μRIU, 16mV/μRIU)
Linearity Range	≥ 600 RIU	Cell Volume	8μL
Noise	≤2.5nRIU	Flow Rate	0.2 ~ 30mL/min (max) 10mL/min
Response Time	0.1s, 0.25s, 0.5s, 1s,1.5s, 2s, 3s, 6s	Max Back Pressure	50 kPa

AnalCHROM™ Workstation :

• All-digital signal: All-digital signal acquisition, avoiding the error of acquisition card sampling.

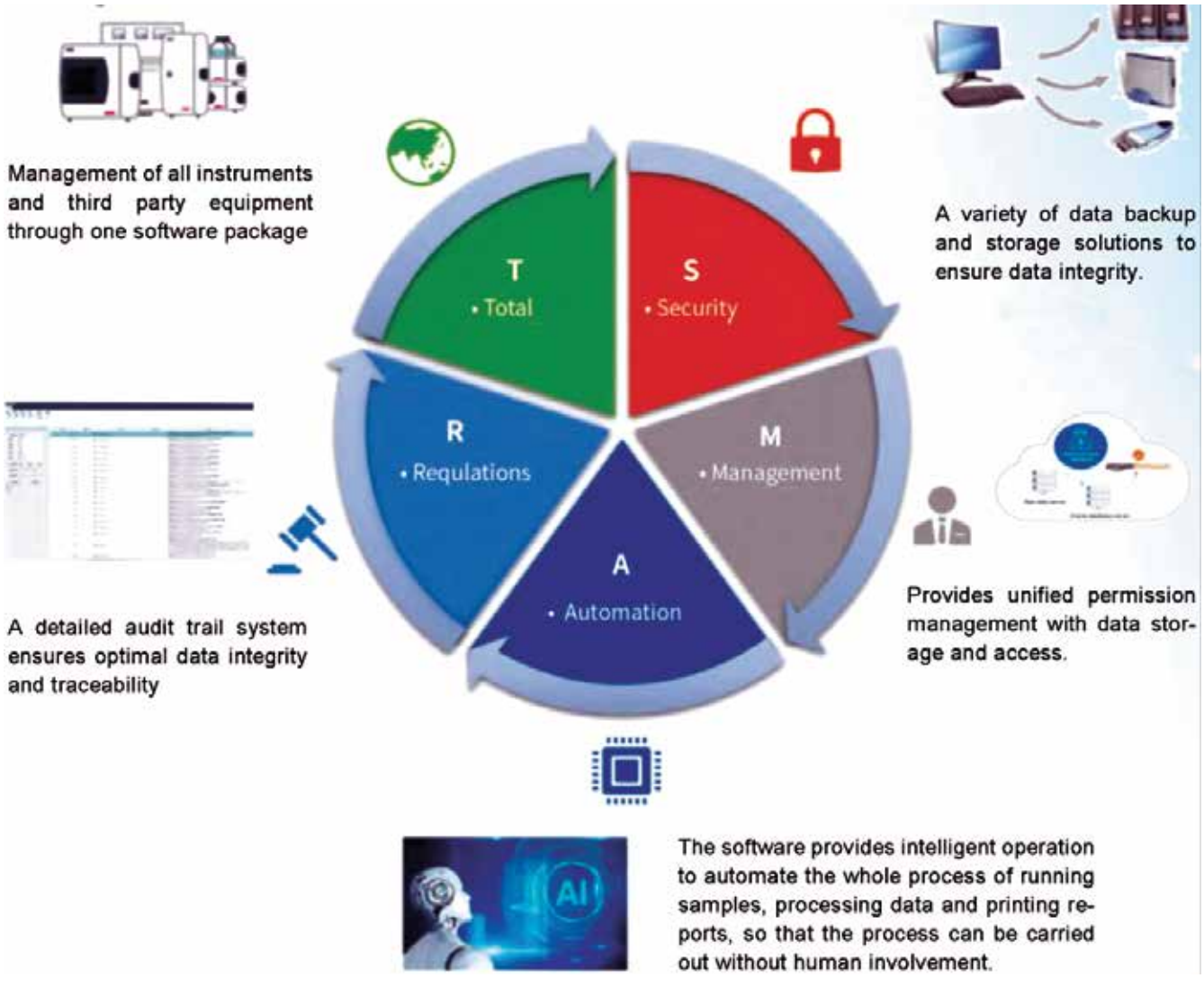
User-friendly operation. intuitive data processing methods and operating procedures for easy operation.

Multi-channel design: multiple detector signals can be detected simultaneously

Graphical counter-control interface: Visual inspection of the operation of the lower unit

Feature:

- Centralized configuration management functions
- Flexible and efficient management operations
- Audit trail permission management
- Safe and reliable data management
- Instrument counter control
- Real-time acquisition
- Simple and efficient operating environment
- Strict regulatory compliance
- Database storage
- Data processing
- Report printing



Column :

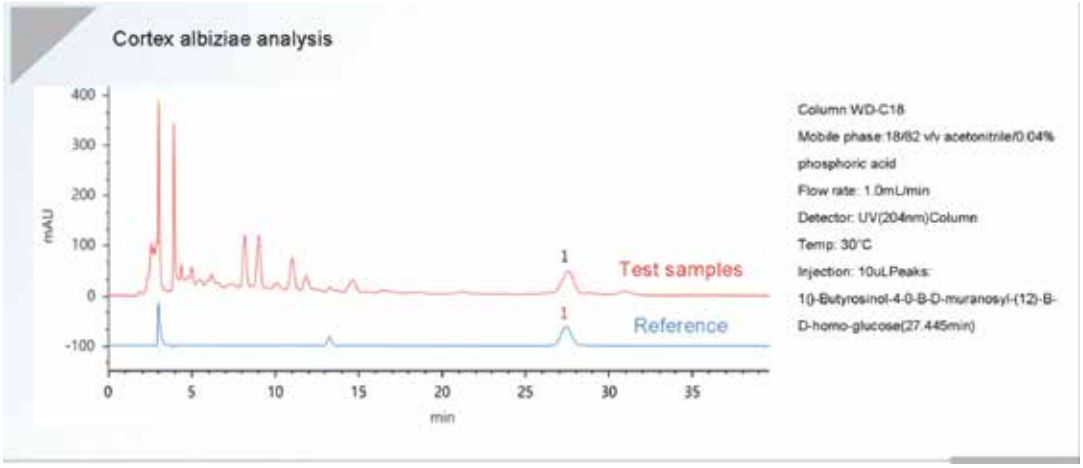
C18 general-purpose coolumn uses uniform size silica microspheres combined with advanced and stable bonding phase modification technology, which can separate different hydrophobic analytes and is widely used and cost-effective

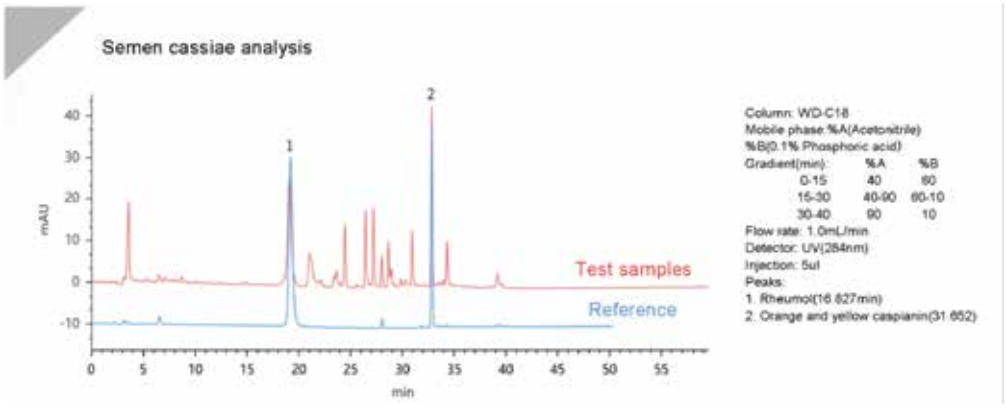
Model	Name	Description	Particle Size	Application
C18	Analytical Column	4.6250mm	5μm	General Testing

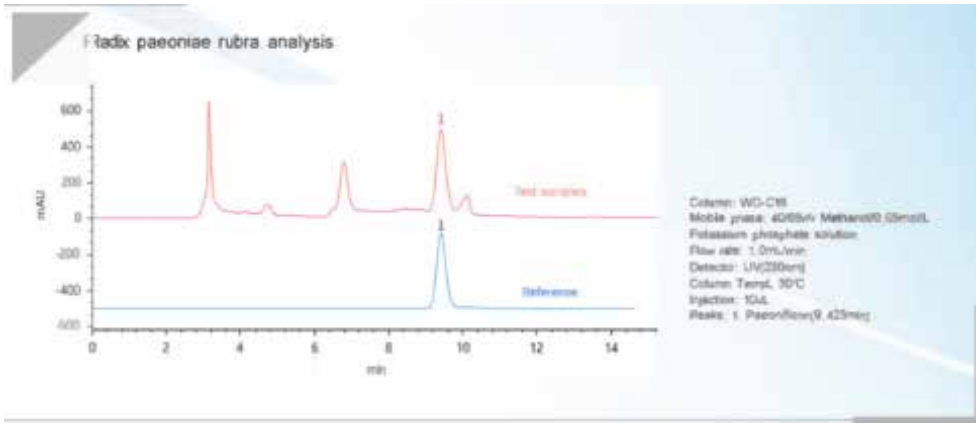
- Simple and efficient operating environment
- Strict regulatory compliance
- Database storage
- Data processing
- Report printing

Application Cases:

- Simple and efficient operating environment
- Strict regulatory compliance
- Database storage
- Data processing
- Report printing





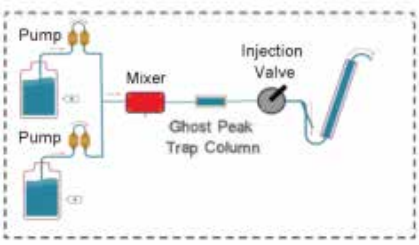


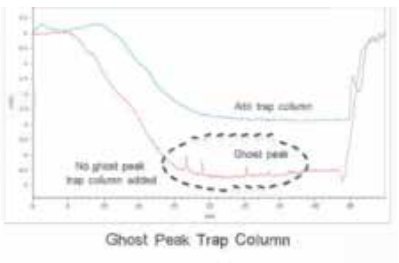
Consumables :

Liquid Phase Ghost Peak Trap Column

Loaded with high purity filler, with large specific surface area and strong adsorption, it can effectively remove non-polar and weakly polar impurities from the mobile phase, especially the mobile phase with buffer salts and acids added to reduce the appearance of ghost peaks.It has a long service life and is suitable for liquid chromatography gradient elution, which is widely used in the field of pharmaceutical field.

Ghost Peak Trap Column Installation Diagram





Ghost Peak Trap Column

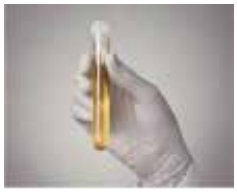
LC 3320 Series HPLC System Configuration

System	Options
Pump	Isometric Pump
	Binary Pump System
	Quaternary Pump System
Autosampler	Manual Injection
	Autosampler
	Autosampler(Cooling)
Column Oven	Heated Column Oven
	Heated Column Oven (Air Circulation)
	Heated and Cooled Column Oven (Air Circulation)
Detector	UV Detector
	DAD Detector
	FLD Detector
	ELSD Detector
AnalCHROM™ Workstation	Chromatography Workstation
	Accessory kit
	Solvent switching device
	Four-channel in-line degassing unit
	Dual-channel in-line degassing unit
Optionals	Chromatography column
	Amine column
	Photochemical derivatizer
	Columns for polycyclic aromatic hydrocarbons
	Double pump post-column derivatizer
	Computer
	Printer

Application Industry:

Drinking Water:
Organic substances, polycy-clic aromatic hydrocarbons, benzo (a)pyrene, etc.

Occupational Health Workplace:
Hydroquinone, p-nitroaniline, trichloroacetaldehyde, etc.



Animal Fluids:
Nitro phenols, creatinine, hippuric acid, methyl hip-puric acid, etc

Biomedical:

Herbal medicine: Herbal medicine and formula granules.

Life Sciences: Amino acids, organic ac-ids/amines, proteins, ste-roids, peptides, sugars, etc

Veterinary Medicine: Broad-spectrum antibiotics, such as penicillin

Western Medicine: Antibiotics, pharma-copoeia requirements

Pesticides: Glyphosate, paraquat, etc.

Application Industry (Some)

Nutrients: Proteins, amino acids, sugars, pigments, vitamins, organic acids, organic

Additives: Sweeteners, preservatives, coloring agents (synthetic colors such as lemon yellow, amaranthine

Contaminants: Mycotoxins (aflatoxins,E.coli toxins, etc.), trace elements, polycyclic aro-matic hydroc-arbons, etc.

Environmental Industry:

Gas: Aldehydes and ketones, polycyclic aromatic hydro-carbons, benzo(a)pyrene, etc.

Soil: 10 kinds of carbamate pesticides, 11 kinds of triazine pesticides

Water: Phenols, benzidine, di-methyl (dibutyl, dioctyl) phthalate, pesti-cides, etc

Chemical Industry:

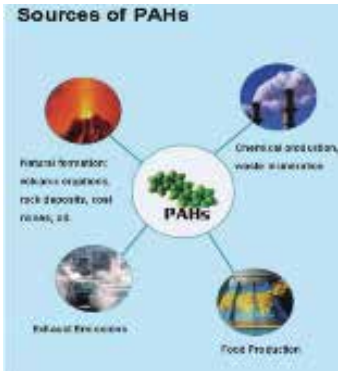
Petrochemical: Petroleum composition analysis, such as polycyclic aromatic hydrocarbons, heavy hydrocarbons, etc.

Polymers and Additives: Monomers, oligomers (polyethylene, polyamides), alkyd gums, polystyrene

Feed Industry:

Vitamins (B1, B2, D3, B6,B12), 18 amino acids (pre-column derived, manual in-line derived), adenosine, aflatoxin and other toxins

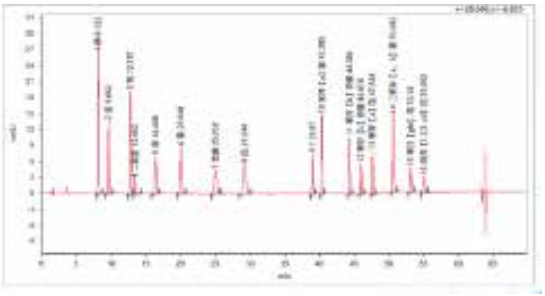
Polycyclic Aromatic Hydrocarbons PAHs:



Polycyclic Aromatic Hydrocarbons (PAHs) are volatile hydrocarbons produced during the incomplete combustion of organic materials such as coal, oil, wood, tobacco, and organic polymers, and are important environmental and food contaminants.

Test Elements: Determination of PAHs in water quality Test

Item	LC3200 Series HPLC
Pump	Binary/Quaternary Pump
Sampler	Manual/Autosampler
Column	C18 Chromatography Column
Detector	UV/FLD
Seperation System	Heated Column Oven

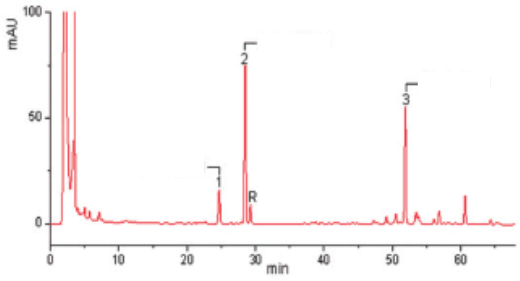


Medicine Formulation Granules:

Panax notoginseng, the name of medicine.It has the effect of resolvingblood stasis and stopping bleeding, activating blood circulation and fixing pain.Itis mainly used for treating bleeding disorders, bruises and injuries, stasis andswelling pain

Test Elements: Determination of panax notoginsengm

Item	LC3200 Series HPLC
Pump	Binary/Quaternary Pump
Sampler	Manual/Autosampler
Column	C18 Column(Octadecyl)
Detector	UV Detector
Seperation System	Heated Column Oven

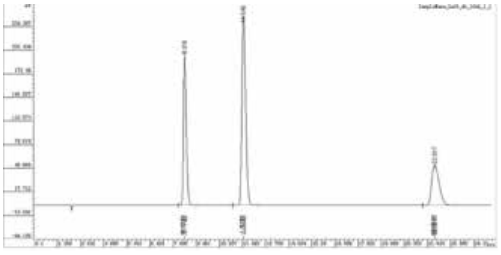


Food Additives:

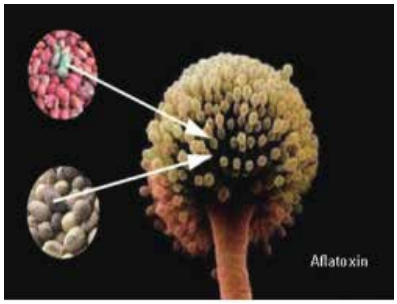
Benzoic acid,sorbic acid is an organic chemical preservative,can prevent food-spoilage, extend the shelf life of food, inhibit microbial reproduction in food. Sodium saccharin is a synthetic sweetener,its sugar level is 500 times that of sucrose,and the price is low.

Test Elements: Determination of benzoic acid, sorbic acid and sodium saccharin in food.

Item	LC3200 Series HPLC
Pump	Binary/Quaternary Pump
Sampler	Manual/Autosampler
Column	C18
Detector	UV Detector
Seperation System	Heated Column Oven



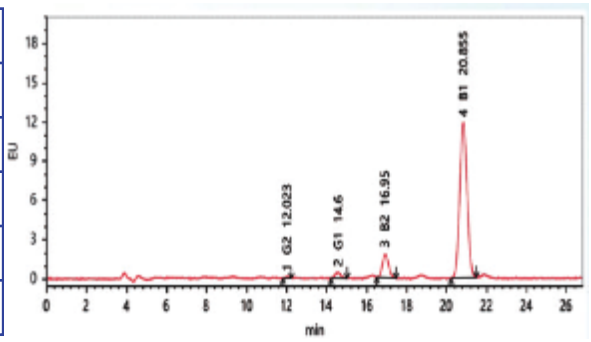
Toxins:



Aflatoxin (AFT) is a bifuranocyclic toxin produced by certain strains of Aspergillus flavus and Aspergillus parasiticus.There are about 20 kinds of derivatives, named B1, B2, G1, G2,M1, M2, GM, P1, Q1, toxic alcohol, etc.... These fungi are mainly par-asitic on peanuts, corn, rice, wheat and other grains and oil-seeds.

Test Elements: Determination of aflatoxin B and G groups in food

Item	LC3200 Series HPLC
Pump	Binary/Quaternary Pump
Sampler	Manual/Autosampler
Column	C18
Detector	FLD
Seperation System	Heated Column Oven

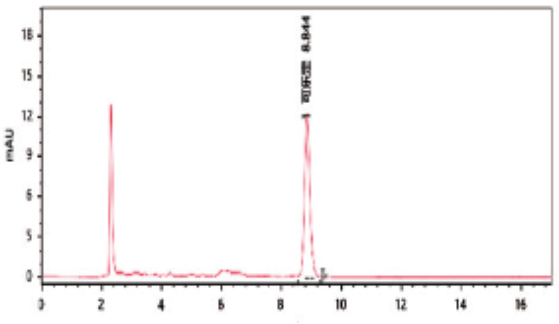


Clonidine Hydrochloride:

Clonidine hydrochloride is white crystalline powder; odorless. It is soluble in water or ethanol, very slightly soluble in chloroform and almost insoluble in ether.

Test Elements: Determination of clonidine hydrochloride

Item	LC3200 Series HPLC
Pump	Binary/Quaternary Pump
Sampler	AS3200 Autosampler
Column	C18
Detector	UV Detector
Seperation System	Heated Column Oven



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-TS 2080

Infra FTIR

Optima Gas Chromatograph 3007

Optima Gas Chromatograph

Flash Chromatograph

Atomic Absorption Spectrophotometer

Liquid Partical Counter

Optical Emission Spectrophotometer

STA

Semi Auto Bio Chemistry Analyzer

LCMS

GCMS

XRD

Total Organic Carbon 3800

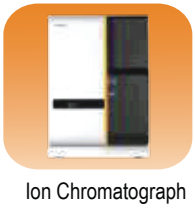
Fully Automated CLIA

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

ANALYTICAL FOUNDATION is a Nonprofit Organization (NGO) for the purpose of:

1. Research & Innovation **Scientist's awards & International Conferance visit sponsership / QC Professional Awards**: 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,Naturecure, Health Care, Ara, Events, Camps etc.

- A portion of profit of **ANALYTICAL GROUP** Company's goes into **ANALYTICAL FOUNDATION** for the aboce noble cause.

Reach us @

Analytical® Technologies Limited

Subsidiaries

USA Australia UK Malaysia Dubai

SCAN ME

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

HPLC Solutions | MultipleLabs | Infinite Multiplelabs LLP | Analytical Bio-Med | 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@analyticalgroup.net
info@hplctechnologies.com
info@multiplelabs.com

W:- www.analyticalgroup.net
www.hplctechnologies.com
www.multiplelabs.com

Sales & Support Offices:
across the country :
Distributors & Channel
partners World Wide
USA| UK| Australia| Dubai| Malaysia