

UHPLC

Advance Efficiency UHPLC Solutions

Chromai®

Innovation for Better Life

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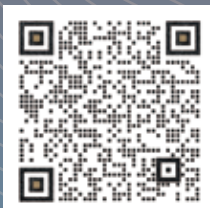
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Meet more application scenarios and analysis needs



BEIJING

Chromai | Beijing Headquarter R&D

SUZHOU

Chromai | Suzhou Supplychain Base & Production center

Company profile

Chromai is a prominent high-tech enterprise based in China, specializing in the research, development, production, sales, and service of analytical testing instruments and medical diagnostic tools. As a member of both the China Instrument and Control Society and the China Association for Medical Devices Industry. Chromai places a strong focus on intelligent scientific instrumentation, analytical testing, and precision medicine. With a commitment to independent innovation, Chromai holds internationally advanced technologies and numerous core patents, reflecting its dedication to pioneering advancements in the industry. Chromai's vision is to reshape the global industry market structure and establish itself as a distinguished international brand.

Chromai boasts leading-edge UHPLC technology, a fully automated IVD (In Vitro Diagnostic) 2D UHPLC system, an automatic biological sample pretreatment platform, and a range of reagent consumables, offering complete end-to-end solutions for various analytical processes. Chromai is dedicated to enhancing analytical efficiency, reducing operational costs, and adding significant value for customers. To support its goals, Chromai has established subsidiaries like the Beijing R&D Center and the Suzhou Supply Chain Center, furthering its capabilities in innovation and supply chain management.



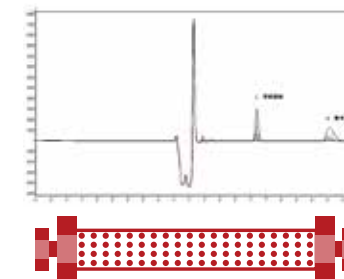
Efficient and numerous solutions for UHPLC

Make your laboratory more efficient

Chromai's UHPLC systems are designed for long-term, continuous, and stable operation, offering a variety of models and configuration options. With enhanced analysis and detection efficiency, these systems ensure reliable and confident results, making them a trusted choice for your laboratory needs. Whether for routine analyses or complex sample detection, Chromai's UHPLC systems provide the performance and consistency you can count on for accurate and dependable outcomes."

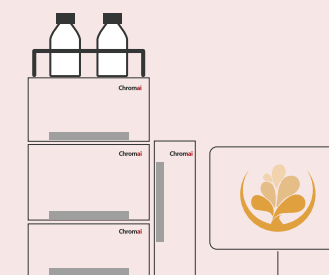
ANALYTICAL EFFICIENCY AND STABLE

Chromai's leadership in independent R&D, technological innovation, and development experience ensures that your applications achieve optimized analysis efficiency and superior detection performance. By integrating innovative chromatographic separation technologies and advanced features, our systems deliver stable separation and detection, giving you confidence in the accuracy and reliability of your results everyday."



FLEXIBLE RICH CONFIGURATION

With a wide range of options, flexible configuration combinations, and powerful proprietary software, along with an enterprise network version, Chromai ensures the seamless operation of your analytical experiments. Our systems are easily integrable and expandable, with modules and configurations that can be upgraded to meet diverse application needs, providing the flexibility to adapt to various requirements.



CUSTOMIZABLE

Fully self-developed software and hardware systems, along with flexible and diverse module combinations, can offer customized integration and tailored solutions. Additionally, the SDK development kit accelerates development, enabling faster implementation of specialized applications.



Comprehensive UHPLC Solutions

- ✓ Adapt to different experimental scenarios
- ✓ Can be realized all application scenarios
- ✓ Meet different procurement budget

Powerful and complete LC product line, from routine analysis to complex sample analysis, from analysis to preparation;
Covering from 1.7um ultra efficient analysis, to 3-5um conventional analysis, to 7-20um preparation and purification;



Leaps

Economical and durable, stable and durable quality, it is the best choice for reducing project investment and quickly obtaining return on investment.

Leaps Pro

Reliable and durable with full loop non-destructive injection, ultra-high cost-effectiveness, widely meeting user's needs.

Leaps 2D

Higher precision, good stability, and efficient implementation of more complex sample analysis to meet more application scenarios and analysis needs.

Leaps Bio

The system flow path adopts biologically inert materials, which are corrosion-resistant, reduce the adsorption of biomolecules, ensure integrity,

Leaps Prep

preparation system, from automatic injection to automatic fraction collection, from control operation to analysis.

Frontier

Top model, new ultra-high pressure HPLC, leading the technology of UHPLC in China

Leaps

**Economical and durable,
high cost-effectiveness**

- ▶ The cost-effective king of self-made UHPLC
- ▶ Ultra-efficient grade resolution and robustness
- ▶ Beyond the routine to ensure confident analysis



▶ Pressure delivery beyond conventional

- The maximum pressure resistance is 10500PSI (720 Bar), surpassing the conventional and improving the efficiency.
- Fluctuation pressure suppression technology, no damper required, fluctuation pressure < 10PSI.
- Support multiple solvent mixing modes.



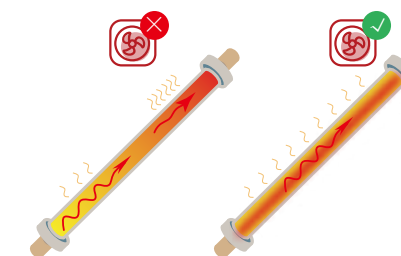
▶ Efficient sample delivery and analysis

- Ultra-high injection repeatability, with a variety of injection modes, to ensure accurate and reliable quantitative results.
- Flexible sample tray options (2*54 or 2*96 well plates) and optional sample chamber refrigeration.
- Inner and outer needles comprehensively reduces sample residue to <0.0025%.
- Running across sequences, the graphical sample tray selection interface makes sample injection easier to set up and analyze.



▶ Accurate and fast temperature control system

- Large-capacity column oven, which can accommodate 4 pieces of 300mm long chromatographic columns.
- Forced air circulation design, maintain $\pm 0.1^{\circ}\text{C}$, making the temperature field more uniform.
- Semiconductor temperature control, expanding the temperature control range to 4°C - 85°C .



Leaps Pro

Seeking higher
efficiency the most

- ▶ UHPLC level, advance efficiency experience
- ▶ Reliable, durable, and non-destructive injection of full loop ring
- ▶ More cost-effective, can meet the budget of customers
- ▶ Meet the efficient injection and stable needs



High pressure transportation

- Maximum pressure: 10599 PSI (720 Bar), improves the analysis efficiency.
- Stability, lower flow rate, enabling long-term work with small proportions.
- Pressure pulsation suppression technology, pressure pulsation < 10PSI.
- Rear flushing system and needle washer fluid degassing system.



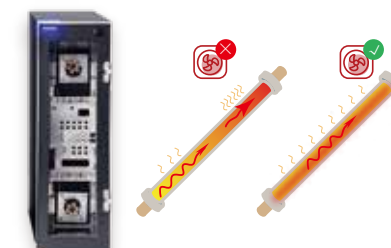
Efficient sample transportation and analysis

- Full loop autosampler, non-destructive injection, minimum injection volume: 0.1uL, suitable for small volume and trace analysis with an injection accuracy of 1% RSD microliter.
- Sample tray: 4 * 54, orifice plate: 4 * 96 (compatible), with high throughput.
- High-efficiency integrated cooling system 4 °C - 40 °C.
- Support cross sequence operation, allowing multiple projects to be analyzed in sequence without the need for manual intervention.



Accurate and fast temperature control system

- Large capacity column oven, can place 4 pieces of 300mm columns.
- Forced wind circulation and optimized heat dissipation wind tunnel system make the temperature field more uniform.
- Semiconductor temperature control, increase the temperature control range to 4 °C - 85 °C.
- Support automatic 10 way valve and 6 way valve, achieving dual column and multi column switching function.



More comprehensive detector adaptation

- Can be paired with UVD, DAD, FLD, ELSD, RID, etc.
- Support MS access.



Leaps 2D

Higher efficiency for complex analysis

- ▶ 2D separation, doubling the peak capacity
- ▶ Easy determination, reduce the pre-treatment
- ▶ Ultra-efficient grade, higher analysis efficiency
- ▶ Analysis of natural medicinal ingredients and herbal extracts
- ▶ Quality control of traditional Chinese medicine, analysis of toxic and harmful substances in the environment
- ▶ Differential proteomics, in vivo drug analysis, etc



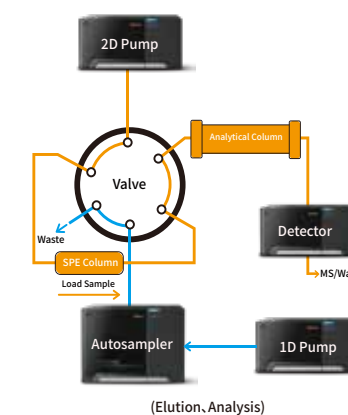
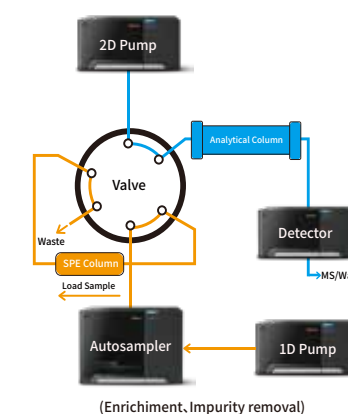
▶ Simplify the pre-processing to ensure double the analysis efficiency

- Leading UHPLC analysis technology improves the analysis efficiency.
- Online purification and enrichment, simplified pre-treatment, improve the detection sensitivity.
- Meet your needs for analyzing complex matrices such as herbal medicine extracts, food samples or polymer synthesis products.



▶ Multi-column switching, perfect determination of complex samples

- Work with a multi-column switching system, the determination of low-concentration samples can be realized, and multiple samples can be measured at the same time.
- Support automatic transfer between 1D-column and 2D-column through automatic valve switching.
- Fully automated sample loading, improve the ease of use, without complicated manual intervention.
- Quickly obtain analysis results through heart-cutting, multiple heart-cutting, and high-resolution sampling.
- Automatic selection between 1D and 2D modes, and select the appropriate separation performance according to the complexity of the sample.



▶ Optional matching, perfect compatibility

- Disruptive method transfer, seamless upgrades.
- Perfect module compatibility, easy to upgrade.
- Parallel double columns and series SPE greatly improve the efficiency.
- Dual ternary pumps, support parallel independent operation and post-column derivatization.

Leaps Bio

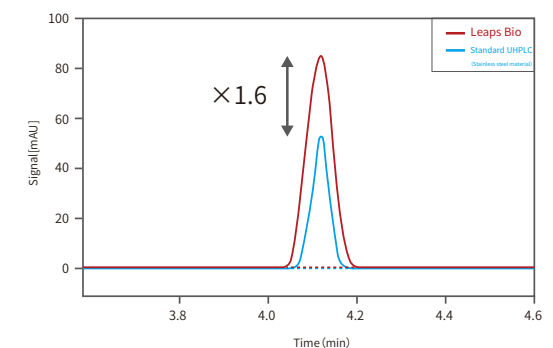
Ensure the stability and reliability of biological analysis

- ▶ Bio-inert sample flow path.
- ▶ Peek, titanium and other biocompatible materials.PEEK.
- ▶ Easily adapts to biological and extreme pH applications.
- ▶ Minimizes losses due to metal adsorption.



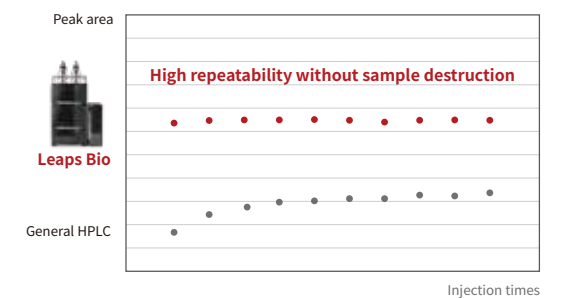
▶ Bioinert material, anti-corrosion and adsorption

- The flow path is made of non-stainless steel material, which can maintain the integrity of macromolecules, and protein drugs have no adsorption and no tailing.
- Biocompatible solvents and sample flow path ensure biomolecular integrity.
- Effectively eliminate sample loss due to metal adsorption and achieve excellent sensitivity.



▶ Easy to handle extreme situation

- In the face of high salt or extreme pH conditions, avoiding problems such as corrosion or clogging.
- Applicable to various chromatographic modes such as reversed phase, ion exchange, size exclusion, hydrophobic interaction, etc.
- Maximize sample recovery and minimize carryover.



▶ Flexible application collocation

- Comprehensive bio-inert system, including pumps, flow paths, injection valves, injection needles, flow cells and other fluid circuit components.
- Infusion pump plunger cleaning peristaltic pump, reduce salt precipitation.



Leaps Prep

Efficiently solve
preparation problems

- ▶ Automated preparative system.
- ▶ From injection to fraction collection, from run to analysis.
- ▶ Solve various semi-preparation and preparation applications.
- ▶ Support extension to high pressure 2D system.



▶ Infusion systems for high pressure preparation

- Flow range: 0~150mL/min.
- Pressure range: 0~400Bar(@0~50 mL/min).
- Supports up to 4 solvents for a variety of application scenarios.



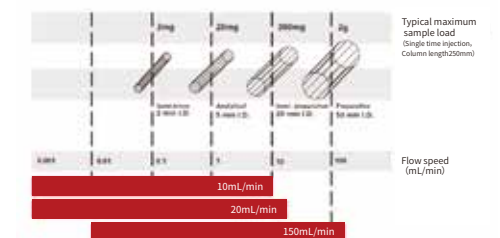
▶ Large-volume injection and robust separations

- Support multiple injection modes such as 5mL large volume.
- Flexible sample tray selection, support 2/5/7mL and other sample bottles.
- Optional cooling of the sample trays.
- Support upgrade of 2D - Prep UHPLC System.



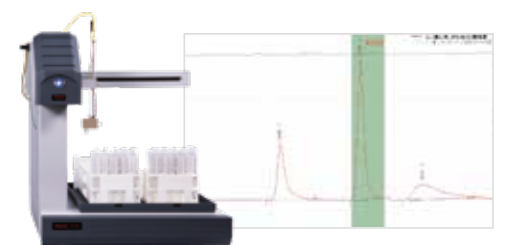
▶ High efficiency separation and column switching function

- Large-capacity column oven, supporting 50mm ID preparative columns.
- Efficient separation, supporting mg-g level injection.
- Forced air circulation design makes the temperature field more uniform.
- Optional double-valve switching to realize automatic desalination and impurity removal function of dual columns.



▶ Automatic fraction collection system

- Automatic injection, automatic fraction collection.
- Automatic peak threshold, slope, area collection condition determination.
- A variety of sample tray specifications (30mm, 16mm, 13mm).



Frontier

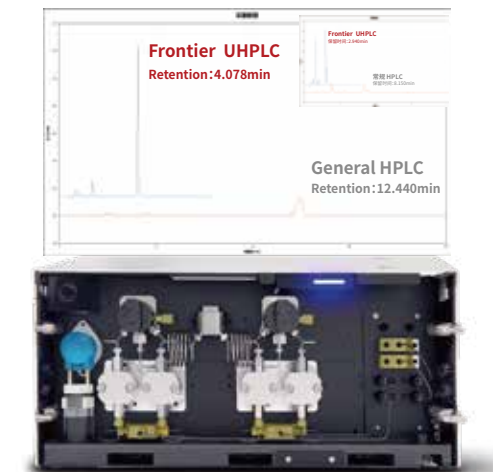
A new generation of Ultra-Efficient HPLC

- ▶ Establish a new benchmark for domestic UHPLC
- ▶ Higher performance, higher efficiency
- ▶ Ultra-high pressure improves analysis efficiency



Perfect analytical productivity experience

- Ultra-high pressure up to 16000PSI (1100 Bar), bringing ultra-high separation efficiency.
- Ultra - low dispersion reflection flow cell reduce the extra-column volume, improves the sensitivity, and fully meets the needs of ultra-efficient analysis.
- Ultra-stability, lower flow rate, small ratio can run stably and accurately for a long time.



Higher experience sample delivery

- Full loop autosampler, non-destructive injection, small volume and trace analysis.
- High-efficiency integrated cooling system can reach the set temperature range of 4°C~40°C in 30 minutes.
- Overlapped injection capability eliminates wait time for fast injection cycles.
- 4X sample tray, 216 bits (54*4) or 384 bits (96*4) to achieve higher throughput.
- Multi-solvent cleaning options to effectively avoid cross-contamination; equipped with high-strength and long-life sampling needles.



Flexible for more application expansion

- Expand the LC/MS combination, so that can better match the mass spectrometry system to achieve comprehensive control and coupling.
- Adhering to the concept of long-term commitment to openness, we can provide SDK development integration to achieve seamless system integration.

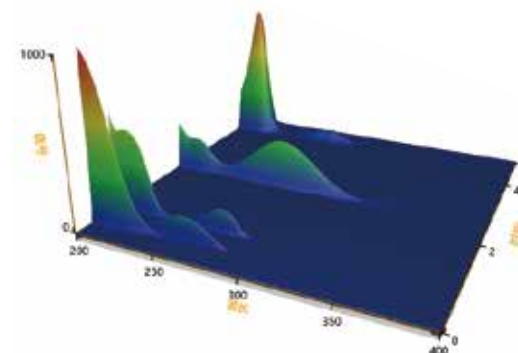


Excellent detection performance

Diode array detector



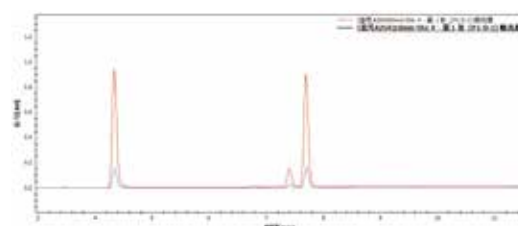
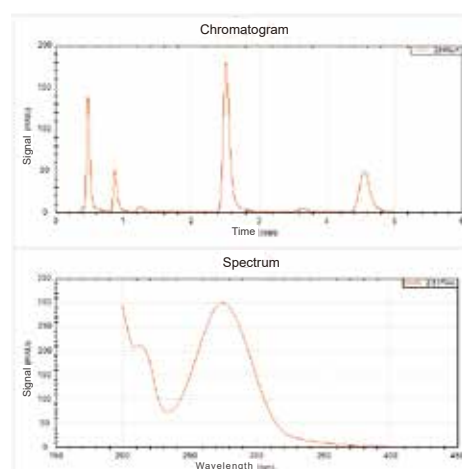
- ◆ 1024 Pixels, wavelength range: 190~900nm; reference wavelength to eliminate background interference, drift correction function.
- ◆ The slit width: 1.2nm and 8nm optional, and can output high-resolution spectra to obtain more accurate monitoring data.
- ◆ Simultaneously monitor 12 channel wavelengths, all channel sample wavelength, sample bandwidth, reference wavelength and reference bandwidth can be selected.
- ◆ 3D spectrum monitoring, peak purity calculation function.



- ◆ Ultra-high sensitivity, low dispersion total reflection flow cell



- ◆ The maximum optical path length is 90mm, achieving 9X signal sensitivity



Comparison of 10mm optical path and 60mm optical path total reflection flow cell

UV - Vis detector



- ◆ The optical path is automatically switched, wavelength range: 190~900nm.
- ◆ Up to 100Hz allow easy acquisition of even extremely narrow peaks.
- ◆ The linear range of 2.5AU for handle high concentration samples.
- ◆ Standard wavelength time program, wavelength switching detection.
- ◆ The module is easy to maintain, the light source is easy to replace, and a variety of flow cells can be selected.

Fluorescence detector

- ◆ Long life light source with a wavelength range of 200-800nm
- ◆ Support pre column derivation and post column derivation



Aflatoxin

Food safety: it can be used for the detection of harmful substances in food, such as fungal mycotoxins, pesticide residues, etc

Vitamin

Chemical analysis: precise analysis of fluorescent dyes, fluorescent probes, and other substances can be achieved in organic synthesis, environmental monitoring, drug development, and other areas

Amino acid

Biological sciences, it has a wide range of applications, such as gene expression analysis, protein interaction research, cell imaging, etc

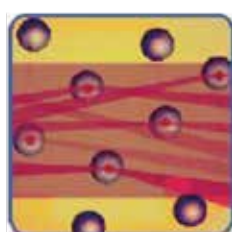
Polysaccharides

Medical diagnosis: it can be used for the detection of disease markers, such as tumor markers, pathogens, etc

Excellent detection performance

Evaporative scattering detector

ELSD principle:



3 Detection

Sample enter the detector and irradiated by a beam of light, and their scattered light is converted into an electrical signal by a photomultiplier tube to obtain detection.



2 Evaporation

Evaporation: Droplets enter the heated drift tube, the mobile phase is evaporated, and the sample is suspended in the solvent vapor.



1 Atomization:

The column eluent is mixed with nitrogen gas through a pinhole to form a uniform mist like droplet.

- ◆ Universal detector can detect any sample with lower volatility than the mobile phase, and has high sensitivity to thermally unstable and semi volatile compounds
- ◆ ELSD has high sensitivity, is insensitive to temperature changes, and has a stable baseline
- ◆ Widely used in Chinese medicine, and simple preparations, fatty acids, sugars, amino acids, polymers and other substances.
- ◆ Online filtering with adjustable pressure design ensures a clean air source and stable airflow, keeping the detection tank clean and avoiding pollution
- ◆ Precise temperature control system ensures high-precision detection
- ◆ Pre atomization chamber for easy cleaning and maintenance
- ◆ Optional GPC molecular weight control

Application scope of ELSD

- ◆ Antibiotic analysis
- ◆ Library of undifferentiated amino acids, plant sterols, and a series of natural product compounds

Traditional
Chinese medicine

Saponins/Alkaloids
Terpenes/Carbohydrates/Steroids

Carbohydrate

Monosaccharides
Oligosaccharides/Polyols

Polymer
surfactants

Polysorbate/Polyvinyl Alcohol

Lipid

Phospholipids
Triglycerides/Fatty Acids

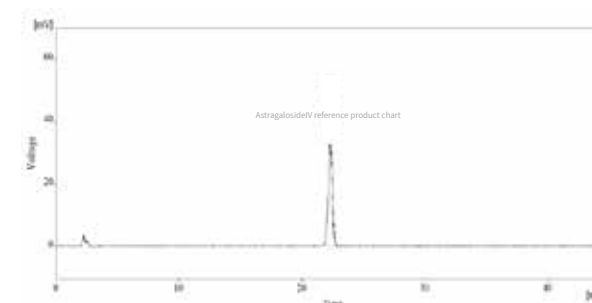


Fig 1:Astragaloside IV reference product chart

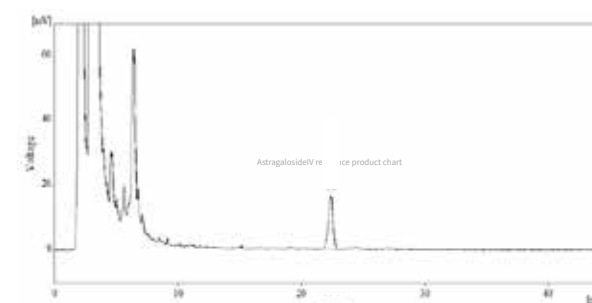


Fig 2:Colla Corii Asini reference product chart

Conditions:

Chromatographic column: Lotus C18, 4.6*250mm, 5um

Column temperature: 40°C

Flow speed: 1.0mL/min

Mobile phase: water/acetonitrile (68/32)

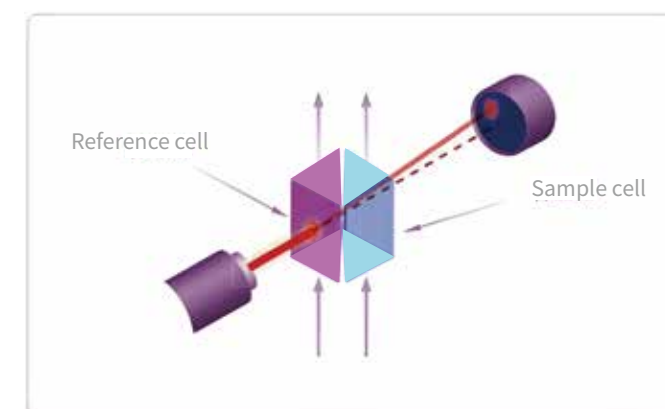
Running time: 45min

Drift tube temperature: 40°C

Gain value: 7

Filter: 3s

Refractive index detector



- ◆ By using a temperature control system and an automatic flushing balance system, external environmental interference can be reduced and the baseline can be quickly balanced
- ◆ Optional GPC molecular weight control

- ◆ Refractive index is a universal detector, whose main principle is to deflect light passing through compounds based on their different refractive indices. The degree of light deflection is proportional to the concentration of the sample, and component detection is carried out based on the different refractive indices of substances with different concentrations.

- ◆ As long as the appropriate solvent is selected, almost all substances can be detected, and the sensitivity for sugar detection is high, with a detection limit of up to 10⁻⁸g/mL

Premium quality chromatographic column packing Ensure stable and efficient separation

Lotus

HPLC/UHPLC



Reverse Separation Mode

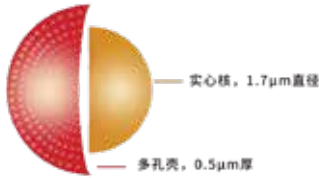
Lotus C18/Polar C18

Lotus C8

Lotus Phenyl/PFP

Separation mode of normal phase and HILIC

Lotus NH2/HILIC



Lotus Core-Shell

Efficient conversion of achievable methods

Bio LC



LotusBio SEC



LotusBio SAX/SCX

Prep LC



Lotus PREP

Comprehensive Data Security and Regulatory Compliance

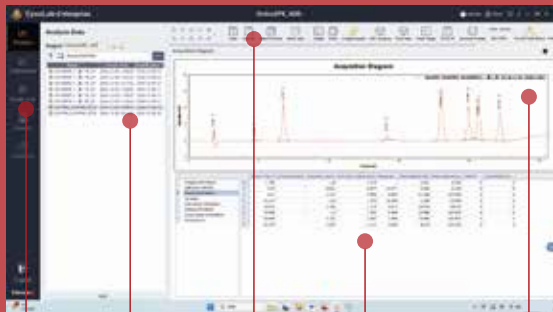
Improve your experimental efficiency in an all-round way



EyouLab CDS

The new generation of EyouLab's intelligent chromatographic data system is built on a robust, database-driven foundation, ensuring compliance with regulatory standards, including FDA 21 CFR Part 11, GMP, and GLP. This system offers extensive instrument control capabilities and is optimized for applications in sample preprocessing and precision medicine.

EyouLab offers flexible deployment options to suit diverse lab needs, including stand-alone, enterprise, network, and IVD edition. These options significantly enhance the capabilities of customer laboratories by enabling comprehensive data monitoring and management, online diagnostics and maintenance, and interactive access to a method library.



Control panel

Multi-channel data acquisition

Automatic sequence

Instrument monitoring

Audit trail

Data file list

Powerful data processing

Complete attribute parameters

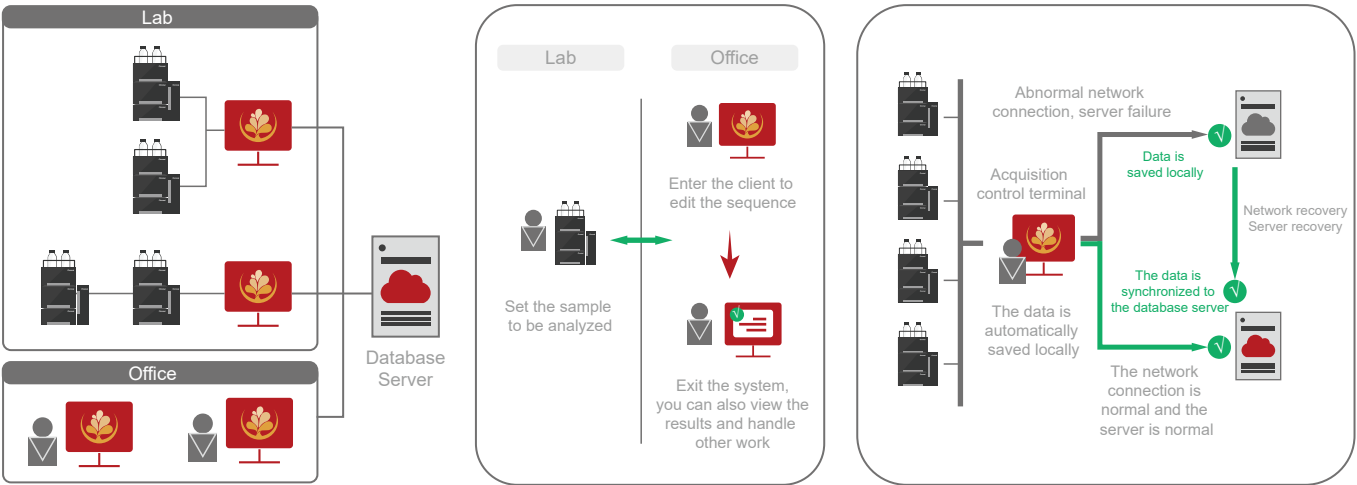
Multi-mode data display

- ✓ Security of physical electronic data. ✓ Easy remote access control ✓ Free access web analysis system
- ✓ Compliance with regulatory applicability requirements. ✓ Each acquisition terminal can control 4 sets of instruments.
- ✓ Unified management and retrieval of data. ✓ Simple installation, start-up, operation and maintenance.

Advanced network version architecture

The enterprise network version can comprehensively solve data security and regulatory compliance issues, makes enterprise laboratory management in secure and more efficient, and reduces operating costs and risks.

- The ability to access all instruments and data anytime, anywhere, and the client and acquisition end operate independently
- Flexible network deployment, support for remote access and control
- Centralized storage of data and methods, safe backup and archive management
- Centralized device, user permissions, audit trail management
- Once the network connection is abnormal or the server fails, data collection, analysis, and storage can still be carried out independently. When the network returns to normal and the server returns to normal, the data at the collection end will be automatically updated and uploaded to the server.



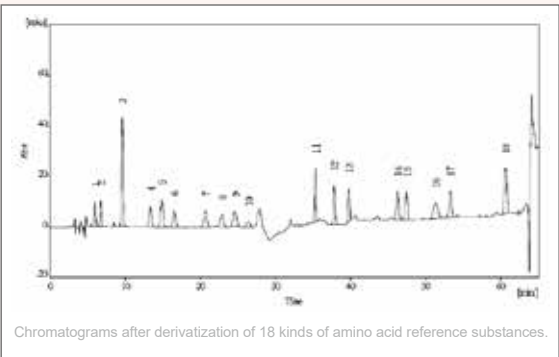
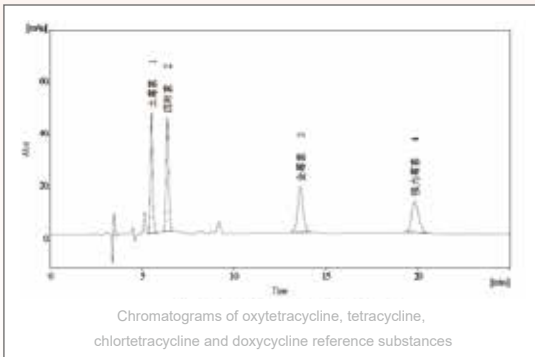
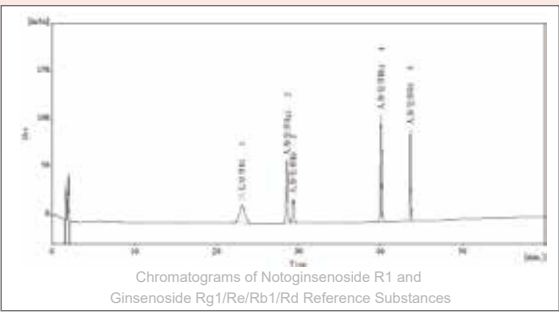
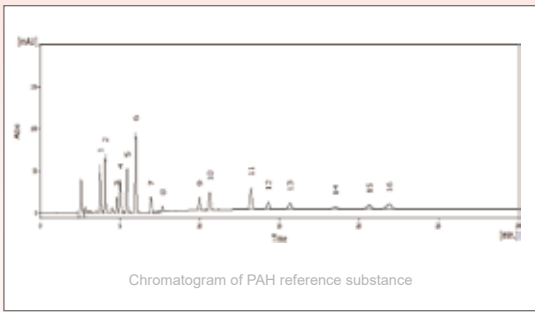
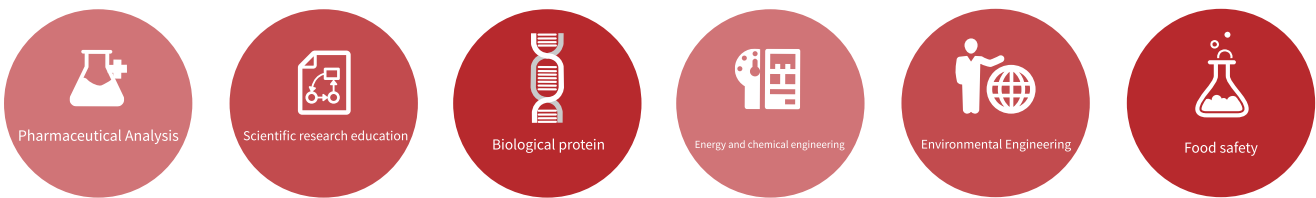
Intelligent and easy to use, unlimited expansion

- Integrated normalization window, simple interactive interface, simplified, easy to use and convenient
- Graphical monitoring interface, can get the equipment running status at any time
- Convenient and easy-to-use report editing, the template can be called at any time
- Powerful data processing functions, providing up to 25 integration functions and calculation methods, supporting noise and drift calculations
- Advanced automatic peak width, automatic threshold algorithm, self-adaptive data collection, automatic adjustment algorithm to achieve the best integration effect



Diverse and comprehensive applications and solutions

Chromai's expert application development team focuses on rigorous methodology verification across diverse fields, developing and testing new methods to deliver the latest industry-specific application methodologies and tailored solutions. This dedication ensures that analytical experiments remain competitive, adaptable, and applicable over time. Chromai's solutions support a wide range of industries, including pharmaceutical analysis, clinical testing, proteomics, environmental protection, food safety, agriculture, forestry, animal husbandry, fishery, chemical manufacturing, education, and scientific research, addressing the unique needs of each sector with precision and innovation.



Perfect service system

Help you analyze and experiment efficiently

When our system starts to run, we assign dedicated engineers to manage instrument installation, commissioning, and standardized training. Our engineers also provide regular preventive maintenance and rapid response services to ensure your instruments operate seamlessly. Whether conducting routine analyses or specialized applications, our comprehensive service system delivers reliable and efficient support, giving you peace of mind and helping you maintain peak laboratory productivity.



Full UHPLC solution

Analytical type



Leaps



Leaps Pro



Leaps 2D

Prep. type

Analytical type

Biocompatible type



Leaps Prep



Frontier



Leaps Bio

 **Smart Lab** By **Chromai**
Automated Smart Laboratory Solution

RocketLAB
From Beginner to Professional
Solution for Chromatography Education

Reasonable investment, long-term use for return

Chromai provides you with a full range of instruments and diversified training services, which can greatly extend instrument uptime, simplify management and protect laboratory investment. With preventive maintenance, you can protect your instrument from a variety of potential elements. High-quality materials and convenient operation can achieve better overall laboratory efficiency. Help application experiments to shorten analysis time, reduce the cost of comprehensive application experiments, and improve the comprehensive return on investment of laboratories on the basis of compliance with strict regulations.

Solid Laboratory Investment

Chromai'S UHPLC is designed as a flexible and robust platform for analysis and testing, enabling full customization of module configurations, method development, solution design, and database expansion. When you're ready to upgrade, Chromai offers easy modular and configuration updates along with non-disruptive method transfers, maintaining your existing workflows. This approach allows for seamless lab enhancements, reducing maintenance costs and protecting your investment by boosting capabilities without needing to overhaul your system.

Complete method database

Chromai products offer flexible system configurations and customizable method settings, ensuring compatibility across different modules. Whether for ultra-fast analysis, supercritical fluid chromatography (SFC), or simple method evaluation, Chromai provides a range of system combinations tailored to your specific goals. With seamless storage and backup options, established method data can easily transfer to new instruments, allowing consistent method compatibility. This adaptability means samples can be analyzed effectively by adjusting analysis conditions as needed, supporting a streamlined, versatile workflow across varied applications.

Fine workmanship, quality benchmark

Chromai products adhere to stringent production standards and quality control protocols, with high-quality components that ensure extended instrument uptime. Advanced built-in diagnostic and maintenance tools enhance reliability and operational safety, enabling longer intervals between maintenance checks. By using Chromai products, you can achieve faster, more stable analysis results, optimizing productivity while maintaining dependable performance over time.

Make analysis and detection more efficient
accurate, and user-friendly

Innovation for Better Life