

ELITE

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Product Catalog

Suzhou Elite Science & Technology Co., Ltd

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ABOUT US

Suzhou Elite Science & Technology Co., Ltd is a high-tech enterprise specializing in the R&D, production and sales of liquid chromatography and other scientific instruments. Our products cover a wide range of fields such as analysis, separation & preparation and clinical diagnosis systems. Our main products include high performance liquid chromatography (HPLC), gas chromatography(GC), chromatographic workstation software, LC/MS, preparation/purification chromatography system, metering pump, chromatographic column and HPLC accessories. Our customers are widely distributed in scientific research institutions, universities, pharmaceuticals, food, petrochemicals and environmental protection & testing organizations.

Elite Technology has developed for over 30 years since it's first established. In the past years, we have always stuck to the principle of innovation and exploration. We have developed 6 generations of liquid chromatography products including various pumps, detectors and autosampler etc. Meanwhile we also provided a wide range of method development and application cases for various types of users, ensuring rapid pre-sales response and excellent after-sales experience. We dedicated ourselves in the field of liquid chromatography and have successfully established an outstanding brand all over the world.

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EClassical 3200L

UHPLC

EClassical 3200L UHPLC is a fully upgraded UHPLC system based on EClassical 3200. Multiple temperature control modes of the column oven make the temperature more precise; the "ultra-fast injection" mode of the autosampler makes the analysis process faster, and the new refrigeration function can ensure the stability of the analysis process even for biological samples; the entire system is free of other electromagnetic interferences depending on electromagnetic compatibility (EMC) function, making the instrument more stable.

- ☆ Perfect solution for ultra-fast analysis, suitable for clinical research, disease screening, biological sample analysis, QC release test and other fields.



- Special seal design, maximum pressure of the pump up to 90 MPa.
- Fastest injection by autosampler within "1 s".
- Unique lateral incision injection needle, needle inner and outer wall washing, sample residue rate <0.002%.
- Peltier element temperature controller, supplemented with air circulation fan, making the ramp rate faster
- Column switching system is optional, supporting method development experiment with up to 6 HPLC columns without manually changing columns.
- High-precision self-calibrated A/D converter and new high-quality optical system, improving the detector's signal-to-noise ratio
- 2-position 6-way valve or 2-position 10-way valve optional, with functions such as online SPE and multi-dimensional chromatography.

- VWD as standard, detection cell temperature controllable (room temperature +5-55°C)
- DAD, ELSD, RID, FLD, MS and other detectors optional
- Automatic wavelength check, energy optimization of deuterium lamp and simultaneous output of digital and analog signals, making it more practical.
- Kromstation is new chromatographic workstation software independently developed by Elite Technology, which conforms to CNAS certification. In addition to a powerful database, this workstation also has functions of audit tracking, GLP mode, data archiving & backup, electronic signatures, permission settings, and network management.

EClassical 3200

HPLC

Elite has always been taking the products as the core, seeking balanced development, giving consideration to software and hardware, and creating more efficient and professional new products of the times by virtue of fashionable design and full sincerity. The EClassical 3200 HPLC system meets the ever-increasing regulatory requirements and redefines industrial design of the domestic liquid chromatography, improving the automation, continuity, and integrity of the analytical process, demonstrating the flexibility of practical choices and the stability of laboratory results, and satisfying the feasibility of low-cost and high-efficiency laboratory operation.

- ☆ New industrial design and unique core technology, meeting the application needs of routine analysis and rapid separation.



- Maximum pressure of pump up to 70 MPa, binary pumps, quaternary pumps, and dual binary pumps optional, making analysis more efficient and satisfying various analytical experimental requirements.
- Double-seal floating plunger for accurate fluid delivery, new drive control method, effectively guaranteeing the durability and precision of the instrument
- Dual leak sensor and leak guide groove, making the leak alarms more timely and precise
- Online dilution and derivatization functions of the autosampler, making complex sample analysis easier

- Column switching valve for online SPE, rapid analysis method development, multi-dimensional chromatography and other advanced applications.
- VWD as standard, and detectors such as DAD, ELSD, RID, FLD, MS optional
- Kromstation chromatographic data management system developed based on the database, fully meeting regulatory requirements while guaranteeing the flexibility, and suitable for QC analysis and research.

EClassical 3100

HPLC

Elite has optimized its liquid chromatography products based on the core technology and launched the EClassical 3100 liquid chromatography system. High-pressure constant-flow pump continues the low pulsation to ensure infusion stability. PID segmentation technology combined with temperature calibration curve and single-point correction, ensuring the accuracy and repeatability of the column oven and enriching the diversified system configuration options, such as low pressure quaternary pump, autosampler, diode array detector, and post-column derivatizer.



- Two modes of manual injection and automatic injection supported
- New injection mode and system piping connection design, minimizing the peak diffusion effect, suitable for trace analysis, while ensuring injection repeatability and accuracy.
- Maximum pressure of the pump up to 45 MPa, imported high-quality critical components, ensuring the infusion stability and durability for long-term operation.
- Optimized flow control technology, improving the accuracy and repeatability at low flow rates
- AC phase modulation, supplemented with temperature calibration curve and single point correction, ensuring accuracy and repeatability of temperature within the set range and shortening the temperature holding time to less than 30 min.
- VWD, DAD, RID, FLD and other detectors optional, ensuring that as much information as possible can be collected during the separation process
- DAD granted with patent titled "Secondary spectrum eliminating device for chromatograph", eliminating secondary spectra and ensuring the accuracy of detection results.
- Chromatographic data management system that meets regulatory requirements, keeping chromatography analysis efficient while meeting stringent data security and traceability requirements.

Agress 1100

HPLC

Elite Agress 1100 is a cost-effective liquid chromatography analysis system. It adopts Elite's mature and reliable mechanical structure, optical structure and circuit structure. It has stable performance and functions that meet the needs of regular customers. It is widely used in chemicals, universities, feed, pesticides, veterinary drugs, environment and other industries.



- Optimal performance and reliability for conventional liquid phase applications
- Modular design for easy installation and maintenance
- Maximum pressure of the pump up to 42 MPa and flow rate up to 10 mL/min, suitable for a variety of applications.
- Analytical injection valve, with very high precision and accuracy and an injection volume of 1 μ L ~ 5 mL.
- Compact size, easy to place, suitable for compact spaces
- The VWD has an energy alarm function for turning on the deuterium lamp to remind the user to check the status of the instrument. It has three working modes: single wavelength, time wavelength program and pump-off spectrum scanning
- 2 \times 16-bit blue LCD display screen, friendly interface and keyboard operation, making it more convenient to control the instrument.
- Conforming to ergonomic design principles, giving users comfortable experience

Liquid chromatography system

Related modules

☆ PD 3100 post-column derivatizer

PD 3100 post-column derivatizer adopts advanced design concept, non-metallic material for full liquid flow path, precise temperature control method, convenient to connect with HPLC, while ensuring simple, efficient and accurate liquid chromatography analysis



☆ PD 3110 photochemical derivatizer

PD 3110 photochemical derivatizer is a derivatization device for aflatoxin and sulfonamide testing, and can be connected to any brand of liquid chromatograph. No derivative reagents are required during the photochemical reaction process, which makes experiments cost much lower. It has features of fast speed, low toxicity and simple operation in aflatoxin testing, and has been added as a new aflatoxin testing method in the Pharmacopoeia 2020.



☆ DG3100/3110 degasser

DG 3100/3110 degasser removes gases dissolved in the mobile phase by automatic continuous vacuum degassing method with high efficiency. The imported Teflon® AF degassing membrane is used, which has good degassing.



☆ AD3000 adapter

As an accessory of HPLC, it supports collection and processing of chromatographic data, and can control the chromatograph components (except the detectors) through RS485 communication. It is compatible with GC, LC, IC and CE systems of most manufacturers, and has become an ideal choice to replace the integrators, data processors and traditional workstations.



Gel permeation chromatography system

The gel permeation chromatography system follows the principle of gel chromatography and makes use of the spatial size effect of gel pores to separate molecules of different sizes. Heavily contaminated samples often need to be purified with GPC first, and then analyzed with HPLC, GC, or GC-MS/HPLC-MS; GPC can eliminate interfering substances in a targeted manner, thereby improving the accuracy of analysis and protecting the analysis system.



- A sample pretreatment and purification technology used in the fields of environment, medicine, and food, such as pesticide residues, polycyclic aromatic hydrocarbons (PAHs), and antioxidants.
- High-precision constant flow pump, with stable flow and good repeatability
- Stainless steel gel purification column, strong pressure resistance, shorter operation time and higher work efficiency at high flow rate.
- Fully automatic fraction collector, easy to operate

Determination of semi-volatile organic compounds in soil and sediment

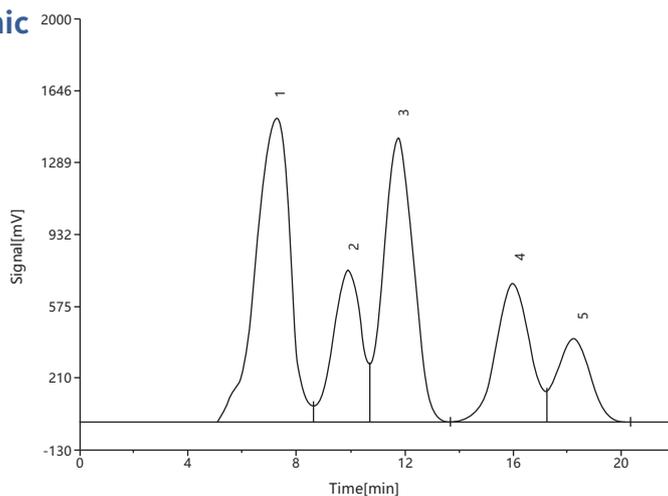
Chromatographic column: EliteUQ Bio-Beads S-X3

20×300 mm

Flow rate: 4.0 mL/min

Detection wavelength: 254 nm

Injection volume: 5.0 mL



Determination of antioxidants in food

Chromatographic column: EliteUQ Bio-Beads S-X3

25×400 mm

Mobile phase: cyclohexane/ethyl acetate =50/50

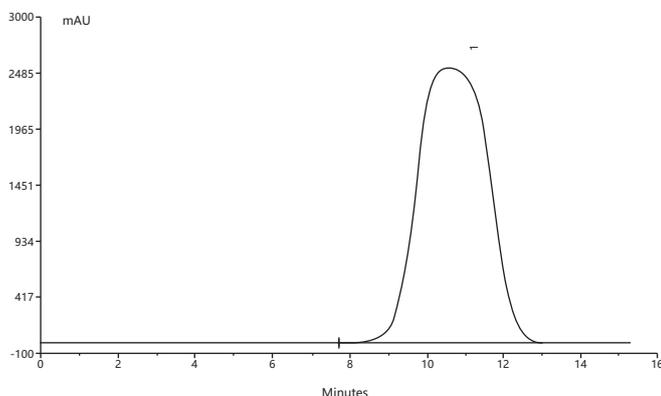
Flow rate: 5.0 mL/min

Detection wavelength: 254 nm

Injection volume: 5.0 mL

Collection: eluent (8~13 min)

Determination of antioxidant standard, 500 µg/mL



GC Products

Relying on advanced technology and functions, Elite GC can help you quickly complete your analysis needs and provide reliable overall laboratory solutions in the fields of environment, food, beverage, forensic identification, petrochemicals, material testing and teaching.

☆ Fully automatic GC 2100

- Dual channel, dual channel design with two injection ports and two detectors in the main body of the instrument. One instrument can meet a variety of needs
- Programmable pneumatic control (PPC)
- Intelligent built-in automatic liquid sampler
- A variety of injection ports and detectors available
- Color graphic touch screen
- Micro-channel flow control technology
- Streamlined design, intuitive full-color touch-type human machine interface (HMI)
- Real-time signal display and 8 languages optional
- Complete function, hundreds of settings available, easy to learn



☆ GC2020 gas chromatography system

- Its gas path is under high-precision full EPC electronic flow control, and comes standard with a reverse control workstation, which can be used with a variety of autosamplers.
- It is widely used in many fields such as petroleum, chemicals, environmental protection, food safety, disease control, education and scientific research
- Electronic Pressure Control Unit
- Software operating system with excellent user experience
- Modular structure design, a variety of high-performance detectors such as FID and FPD optional.



☆ GC2011 gas chromatography system

- A wide variety of detector units
- Powerful detector expansion function
- Super-efficient back-opening door design
- Powerful and perfect power-on self-diagnosis function, intuitive display of fault information, power-off storage protection function, automatic screen saver and power interference resistance.



☆ GC2010 gas chromatography system

- High cost performance, full function, wide use
- Chinese/English LCD display, self-diagnosis, power-off protection
- 7 independent temperature control areas, temperature control accuracy better than 0.1°C, modular design of vaporizing chamber, detector and amplifier
- 3 independent samplers are optional, and users can choose 6-way injection valve, converter, etc. according to their own analysis requirements.



GC

Related products

Elite has different types of gas chromatography injectors to meet different analysis needs and improve detection efficiency and accuracy.



Automatic headspace sampler



Fully automatic headspace sampler



Automatic gas sampler



Automatic liquid sampler

MS² Vertical 9100

Triple quadrupole LC/MS

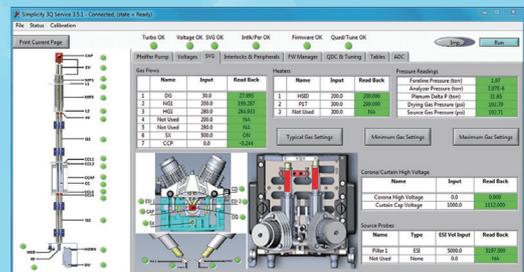
Elite MS² Vertical 9100 LC/MS uses EClassical 3200L UHPLC and MS² Vertical9100 triple quadrupole mass spectrometer. It fully leverages the advantages of the EClassical 3200L UHPLC system with elevated pressure tolerance in terms of intelligence, "ultra-fast injection", and long-term stable and accurate operation, combining high sensitivity, contamination resistance, random combination of dual ion source, and millisecond switching of positive and negative ions of the MS² Vertical 9100 triple quadrupole mass spectrometer, truly realizing fast, sensitive, convenient and stable long-term LC-MS/MS test run.



- Dual source ion source**
Two independent ion sources, offering flexible grouping of different ion sources
- Ion Derived Cleaning**
Provides high sensitivity while ensuring long-term instrument operation
- Mass spectrometry interface**
Suitable for any liquid phase flow rate, providing lower background noise and more reliable data results for routine analysis
- Laminar ion transport**
Electric field-free ion transport technology
- Mass analyzer**
High accurate four-stage rod mass analyzer provides high stability and accuracy in mass analysis precision
- Collision cell**
Fast collision cell design, short scanning cycle, zero cross-contamination
- Modular**
Maintenance -friendly modular design, plug and play
- Unified field detector**
Positive and negative ion mode acquisition without high voltage switching

Software features

- Modular design, simplicity and clarity puts everything under control
- The Data Acquisition Module is automated, making method creation and batch data acquisition easier.
- Allow multi-window viewing, spectral overlay and signal-to-noise calculations.
- Total ion chart (TICs) and extracted ion charts (XICs) are available for data analysis and evaluation
- Data Processing Software quickly loads data from collected data files, making it easy to handle high-throughput sample analysis.
- Troubleshooting software allows you to view set and actual values of instrument parameters to quickly diagnose and troubleshoot hardware problems.



LC-MS/MS software

EClassical 3140AP

Semi-preparative system

EClassical 3140AP is an analytical-semi-preparative integrated LC system that provides you with a complete automatic HPLC application solution for compound analysis and preparation. This system supports easy switching between analytical and semi-preparative systems, and has functions of sample injection and fraction collection.



- Good accuracy and repeatability
- A wide flow range, needs for laboratory-level sample analysis and semi-preparative separation satisfied simultaneously
- Optimized configuration and pipe connection, convenient switching between analytical system and semi-preparative system
- Series-connected reciprocating constant flow pump, low infusion pulsation
- One machine dual-use, greatly reducing device procurement costs

EClassical 3500/3700

Semi-preparative HPLC

EClassical3500/3700 semi-preparative HPLC is widely used for sample separation and purification in the fields of medicine, biochemicals, environmental protection, and quality control. As a preparation system, it can be used for purification of synthetic drug substances, preparation of standard substances, purification of final products, etc., and is an ideal choice for small-scale R&D of traditional Chinese medicine; it is suitable for use as a high-precision feed pump in some special fields.



- The system is robust, safe, efficient, highly flexible, durable, gradient accurate, and highly cost-effective, and is a device developed for preparation and purification from laboratory scale to production scale.
- Wide range of working flow rate, from 0.01 mL/min to 100.00 mL/min
- Solvent displacement through high flow flushing (60 mL/min), reducing solvent displacement time and improving work efficiency
- The gradient mixer adopts multi-volume design, which can adjust the mixed volume according to different conditions
- Power-on self-test (power test; deuterium lamp status test)
- Time wavelength program function
- Full-spectrum scanning
- Display of error messages
- English and Chinese interface

Elite IPC

IPC system

Preparation chromatography is used to separate pure compounds from mixtures. It is a process of separation, purification and enrichment, and has become one of the most effective separation techniques in separation science. Now it has gradually moved out of the laboratory and is widely used in industrial production in the fields of separation and purification of biology and medicine, called industrial preparation chromatography (IPC). IPC series products are mainly used for purification, separation and enrichment of industrial samples.



☆ Elite IPC-50 industrial preparation chromatography system

- This system consists of two P3700 high-pressure constant flow pumps, one UV3100 that can monitor each component online, Elite DAC-50 dynamic axial compression chromatography column, and a high-pressure 6-way injection valve or feed pump.
- Preparation of gram-level samples
- Mainly suitable for small and medium-sized preparation such as laboratory preparation or semi-preparation, and suitable for scale-up research of preparation process
- Easy to use and low cost

☆ Elite IPC-100 industrial preparation chromatography system

- This system consists of two P500+ high-pressure constant flow pumps, one UV3100 that can monitor each component online, Elite DAC-100 dynamic axial compression chromatographic column, and a high-pressure 6-way injection valve or feed pump.
- It is a preparative HPLC system designed to meet the separation and purification needs of small R&D groups, and it is robust and highly cost-effective.
- It can prepare several grams of samples, and has become the ideal choice for small traditional Chinese medicine R&D groups in the beginning

☆ Elite IPC-150 industrial preparation chromatography system

- This system consists of two P1000+ high-pressure constant flow pumps, one UV3100 that can monitor each component online, Elite DAC-150 dynamic axial compression chromatographic column, and a high-pressure 6-way injection valve or feed pump.
- It is a preparative HPLC system designed to meet the separation and purification needs of large purification laboratories, and it is highly automatic and highly cost-effective.
- It can prepare samples by 10 g
- It is a good choice for large purification laboratories

F3310

Fraction collector

F3310 fraction collector is an automatic fraction collection device launched by Elite, and can meet the collection requirements of both analytical samples and preparative samples, including but not limited to HPLC system, chromatography purification system, and biochemical product preparation and purification applications.



- Blue breathing light belt, indicating different statuses of instrument (operation, collection and fault), intuitive display of operation status, and strong sense of science and technology
- Ultra-precise robotic arm operation, pulley drive, ensuring the accuracy of the collection position under the premise of fast operation.
- Software delay volume setting, making collection more accurate
- Compatible with various specifications of 96-well plates and standard test tube rack collection containers on the same main tray base
- Multiple collection modes available, meeting the needs of various samples and scenes
- Intelligent leak alarm function, timely detection of instrument leak alarm due to fault
- The workstation can intelligently set the tray types of different specifications and support visual display, providing convenient services for collection.
- The workstation software can visually display the collection status corresponding to the absorption peak for easy indexing.

S3320

Preparative autosampler & fraction collector

S3320 preparative autosampler & fraction collector is a fully automatic device independently developed by Elite that integrates automatic sampling and fraction collection.



- Open instrument structure design, making it easy to observe the instrument status
- Excellent flow rate stability and injection accuracy within the flow rate of 1 mL/min~100 mL/min and under different injection volumes.
- Independent sample injection and fraction collection pipe design, special cleaning structure, three additional unique cleaning methods, almost zero cross contamination
- Compatible with test tubes of various specifications, variable structures and flexible configurations.
- Multiple collection modes available, suitable for various detectors
- Leak alarm function, finding any abnormality in the sampling process at any time

EPP

Series metering pumps

The medium and high pressure metering pumps independently developed by Elite have the advantages of accurate flow rate, stable pressure and corrosion resistance, and are available in various materials. These pumps are suitable for university experiments, scientific research and development, pharmaceutical manufacturing, biotechnology, petrochemicals and other fields.

These pumps are especially suitable for feed of high-precision catalyst evaluation unit and microreactor.



- Microprocessor control, double-drive pump head design, multi-point flow curve correction, accurate flow rate
- Automatic compensation of flow rate according to system pressure, ensuring smooth flow and high stability
- Reciprocating metering pump, effectively controlling fluid pressure pulsation, small pulsation.
- Real-time pressure detection and display, high pressure/low pressure alarm, safe and reliable
- Flow gradient performance over time
- Conversion display mode of a variety of pressure units (MPa, psi, bar)

☆ 316L stainless steel high-pressure metering pumps

- The pump heads and pipes of this series of high-pressure pumps are made of high quality 316L stainless steel, especially suitable for conveying organic solvents, and this series is widely used in chemicals, pharmaceuticals, food and other fields.



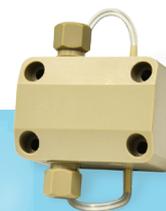
☆ Titanium alloy high-pressure metering pumps

- The pump heads and pipes of this series of high-pressure pumps are made of titanium metal, which is more corrosion-resistant and stronger than stainless steel, and this series is suitable for petrochemicals, coal, dyes, chemicals and other fields



☆ PEEK high-pressure metering pumps

- The pump heads and pipes of this series of high-pressure pumps are made of PEEK material, with good corrosion resistance and complete biological compatibility, this series is especially suitable for delivering fluid with biological activity.



☆ Fluorine medium-pressure metering pump

- This series of medium-pressure metering pumps are mainly made of fluorine materials, which can withstand all organic and inorganic solvents. At present, it is suitable for petrochemicals, fine chemicals, biopharmaceuticals and other fields.



☆ Hastelloy high-pressure metering pumps

- The pump heads and pipes of this series of high-pressure metering pumps are all made of hastelloy, with good corrosion resistance and excellent thermal stability, and this series is mostly used in the fields of aviation and chemistry.



2D liquid chromatography system

Elite 2D liquid chromatography system (hereinafter referred to as E3200L 2D-LC) relies on EClassical 3200L HPLC/UHPLC liquid chromatography (hereinafter referred to as E3200L) fully independently developed by the company and becomes a clinical detection technology platform for the efficient separation of neuropsychiatric drugs through new system upgrade and hardware & software integration.



- Solvent switching system with highly integrated control, online preparation of mobile phase
- Exclusively patented pulse damper and gradient mixer, significantly reducing pulses and improving the mixing effect
- Autosampler with automatic dilution and derivatization functions and optional refrigeration module, compatible with biologically active samples while ensuring ultra-precise injection accuracy and meeting the pre-column derivatization needs of special drugs.
- The VWD uses new independent detection cell and static angle control technology, features high precision, high sensitivity, low noise, etc., and can meet the needs of clinical drug concentration monitoring.
- DAD optional, supporting real-time full-spectrum scanning, identification of all impurities and avoidance of false positives
- The column oven supports precise temperature control of up to 6 chromatographic columns, and integrates two 2-position 6-way/2-position 10-way switching valves to achieve efficient separation of difficult samples in 2D separation mode, simplifying clinical sample pretreatment method
- The entire E3200L 2D-LC system is stable and reliable, with excellent method reproducibility. Combined with the Kromstation chromatographic workstation software, it achieves the clinical analysis and test effect of automation, continuity, and excellent reproducibility, greatly improving the overall work efficiency and reported turnover efficiency

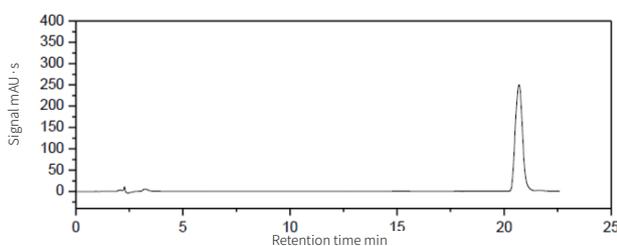
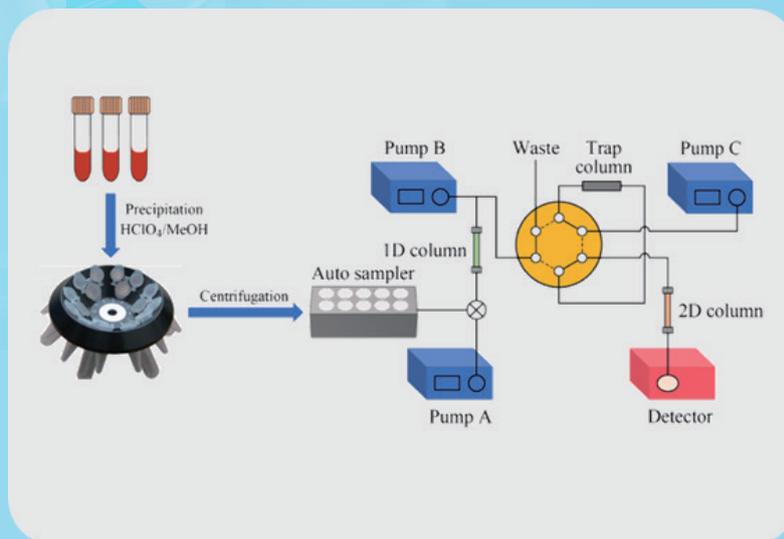


Figure 1 Chromatogram for separation of Vitamin D2 and D3 by conventional HPLC (50 µg/mL)

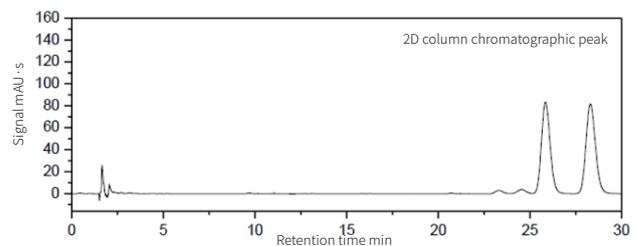


Figure 2 Chromatogram for separation of Vitamin D2 and D3 by 2D chromatography (50 µg/mL)



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