

ELITE



Agris 1100+

High Performance Liquid
Chromatography System



Suzhou Elite Technology Co., Ltd. is a high-tech enterprise specializing in the R&D, production, and sales of scientific instruments, with a particular focus on liquid chromatography. Our products cover a wide range of fields, including chromatography, preparative separation, and in vitro diagnostics. Our main offerings include high-performance liquid chromatography systems, chromatography workstation software, LC-MS systems, gas chromatography systems, preparative purification chromatography systems, metering pumps, columns, and related accessories.

Our customers are widely distributed across research institutions, universities, pharmaceutical companies, the food industry, the petrochemical sector, as well as environmental protection and testing agencies.

For 30 years since our founding, Elite Technology has been growing and flourishing. Throughout these years, we have remained committed to innovation and exploration. Not only have we continuously improved our chromatography product lines, but we have also provided users with a wealth of method development and application cases, ensuring prompt pre-sales support and outstanding after-sales service. We have devoted ourselves to the field of liquid chromatography, successfully building an exceptional brand defined by elite products.

For thirty years, we have remained steadfast in independent R&D, ensuring full control over every stage of our products' lifecycle. With a customer-centric approach, we are dedicated to solving real-world challenges, advancing high-quality and rational domestic alternatives, and creating greater value for our customers.

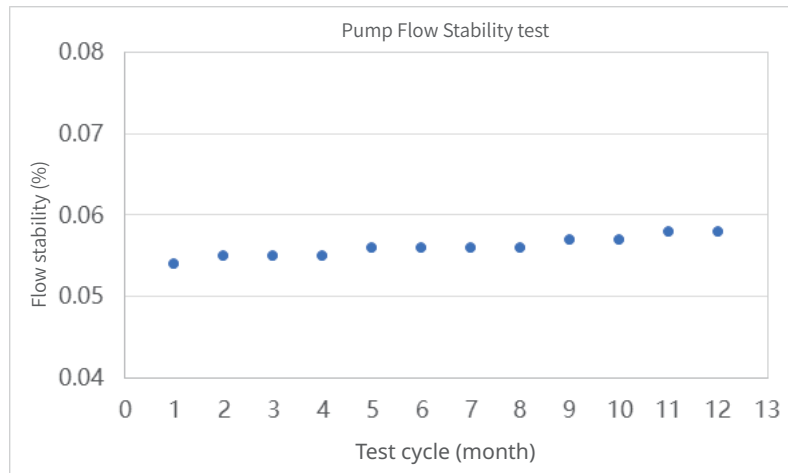
Awards & Honors

- National Torch Program Key High-Tech Enterprise (2011)
- Project Certificate of National Torch Program (2008)
- BCEIA Gold Award (1993, 2003, 2013, 2015)
- CISILE Independent Innovation Gold Award (2007, 2013)
- CISILE Independent Innovation Silver Award (2009)
- ANTOP Award for Excellence in Domestic Replacement of Key Components (2017)
- Third Prize of CAIA Science and Technology Award (2015)
- Liaoning Province Intellectual Property Advantageous Enterprise (2016)
- National Intellectual Property Advantageous Enterprise (2017)
- First Prize of Dalian Science and Technology Progress Award (2016, 2018)
- Third Prize of Liaoning Province Science Progress Award (2017)
- Third Prize of Liaoning Provincial Patent Award (2019)
- Listed Enterprise of SIP "Specialization, Refinement, Differentiation, and Innovation" Plan (2022)
- Listed Enterprise of Liaoning Provincial "Specialization, Refinement, Differentiation, and Innovation" Plan (2024)

P1100+ High-Pressure Constant-Flow Pump

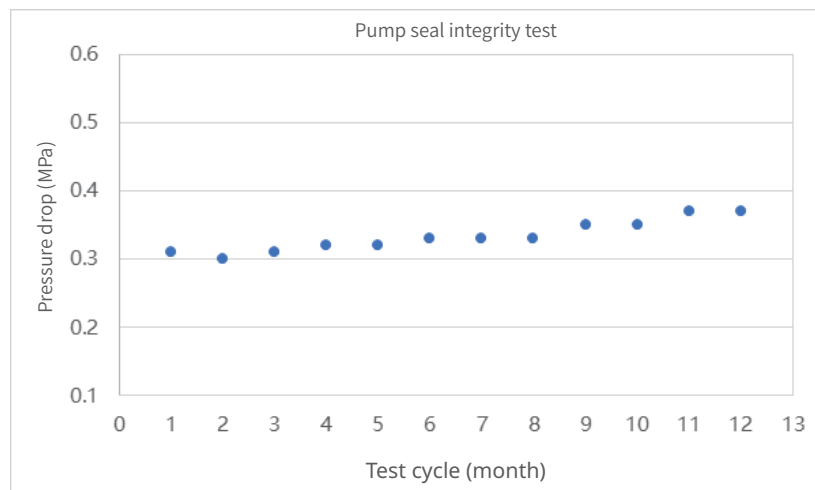
● Pump Flow Stability

During the 12-month test period, the flow stability of the P1100+ high-pressure constant-flow pump ranged from 0.054% to 0.058%, demonstrating the pump's excellent stability, which ensures the reproducibility of the test results.



● Pump Seal Integrity

During the 12-month test period, the pressure drop of the P1100+ high-pressure constant-flow pump ranged from 0.31 MPa to 0.37 MPa, demonstrating the pump's high quality, which ensures durability and reliability over prolonged operation.



D1100+ UV-Vis Detector



● Features

- Optimized light path heat dissipation structure ensures stable performance with low noise and minimal drift.
- The grating rotation mechanism is driven by a high-precision stepper motor, ensuring excellent accuracy of the detection wavelength.
- Automatic spectral scanning facilitates the selection of optimal wavelength for sample analysis.
- Programmable wavelength-time switching approach enables sensitive detection of different sample components.
- The detection cell features high pressure resistance, effectively expanding the flow rate range.

Agress 1100+ HPLC

● Delivery pump

Flow range	/	0.001-10.000 mL/min, Increment: 0.001 mL/min
Flow accuracy	/	$\leq \pm 0.3\%$
Flow stability	/	$\leq 0.085\%$
Maximum working pressure	/	45 MPa
Pressure pulsation	/	1%

● Autosampler

Injection volume range	/	0-100 μ L
Injection repeatability	/	$< 0.3\%$
Injection linearity	/	$R^2 > 0.999$
Carryover	/	$< 0.005\%$
Vial configuration	/	120 positions $\times$ 2 mL

● Column Oven

Temperature control range	/	5 °C above ambient to 99 °C
Temperature precision	/	≤ 0.1 °C
Temperature accuracy	/	± 0.5 °C
Column capacity	/	2 $\times$ 300 mm columns

● UV-Vis Detector

Light source	/	Deuterium lamp
Wavelength range	/	190-700 nm
Spectral bandwidth	/	8 nm
Wavelength accuracy	/	± 1 nm
Baseline drift	/	1.5×10^{-4} AU/h
Noise	/	$\pm 1.0 \times 10^{-5}$ AU

O 1100+ Series Column Oven

The O1100+ series column oven is the temperature control unit for the 1100+ series high-performance liquid chromatography system. It is also fully compatible with other LC models and can be operated stand-alone. The series comprises two models: O1110+ and O1120+.



● Features

- Imported thermostat and sensor deliver superior precision and stability in temperature control.
- Integrated, all-in-one design ensures ease of use.
- Heating elements utilize advanced TPC technology combined with film-heating technology, multiplying service life.
- Built-in alarm and circuit breaker protection provide enhanced operational safety.
- 485 communication capability (O1120+).

S 1100+ Autosampler



● Features

- 8-position calibration function for enhanced injection precision.
- Relative motion between the sample tray and needle to reduce cycle time.
- Redesigned injection mode for significantly streamlined fluidic connection.
- Unique needle design that eliminates clogging.
- Exceptional mechanical accuracy and long-term stability.

RID-3110 Differential Refractive Index Detector

The RID-3110 Differential Refractive Index Detector is a versatile, universal detector widely employed in LC application, with particular suitability for GPC and carbohydrate analysis. The RID-3110 detector offers proven reliability and straightforward operation.



Features

- Rapid stabilization upon power-up.
- Dual-stage temperature control significantly minimizes baseline drift caused by ambient temperature fluctuations.
- Uses the same optical system as the RI-101.
- Cost-effective with reasonable price.

Technical specification

Refractive index range /	1.00-1.75	Cell volume /	8 μ L
Noise /	2.5 nRIU	Temperature control /	30-50 $^{\circ}$ C
Drift /	Lower than or equal to 200 nRIU/h	Maximum flow rate /	10 mL/min

DG3120/DG3130 Degasser



Features

- Efficiently remove dissolved gases in mobile-phase through an automatic, continuous vacuum degassing process.
- Microstepping motor control technology enables continuous pump operation across both low- and high-speed cycles, minimizing baseline noise, reducing system noise, and reducing wear.
- PFA membrane technology delivers superior degassing performance with a reduced internal volume and excellent chemical resistance.
- Its compact design and small footprint allow seamless integration with any HPLC system, making it an ideal accessory for high-performance liquid chromatography system.

D3251L Fluorescence Detector

The D3251L fluorescence detector is a multi-signal fluorescence detector featuring rapid online scanning capability and spectral data analysis functionality.



Features

- Exceptional sensitivity with a water Raman S/N of ≥ 4000 .
- Variable slit design with selectable emission monochromator bandwidths of 15 nm and 30 nm. The 30 nm slit is recommended for high-sensitivity analysis.
- Built-in Hg lamp wavelength calibration function utilizes the 254 nm characteristic emission line to calibrate UV wavelength. The lamp and flow cell require no positional adjustment and are front-accessible for replacement, simplifying routine maintenance.
- Analog signal output unit.

Technical specification

Light source	/	150 W Xenon lamp	Fluorescence spectral bandwidth	/	15 nm, 30 nm (variable)
Excitation wavelength setting range	/	200–850 nm	Wavelength accuracy	/	± 3 nm
Fluorescence wavelength setting range	/	250–900 nm	Wavelength repeatability	/	$\leq \pm 0.5$ nm

D3270 Evaporative Light Scattering Detector

The D3270 is a universal evaporative light scattering detector capable of detecting any analyte with a volatility lower than that of the mobile phase. It finds broad application in the analysis of polymers and surfactants in the pharmaceutical, food, and chemical industries.



Features

- Optimized circuit design for effective noise reduction.
- Stable temperature control ensuring consistent evaporative performance.
- Programmable time-based gain adjustment and mobile phase safety shutoff.
- Integrated gas flowmeter eliminates the need for additional configuration.

Technical specification

Light source	/	650 nm high-stability laser	Evaporator tube temperature	/	Ambient temperature–150 °C
Baseline noise	/	≤ 0.02 mV	Eluate flow rate	/	0.01–3 mL/min
Baseline drift	/	≤ 0.05 mV/30 min	Gas consumption	/	1.5–3 L/min

PD 3100 Post-column Derivatization Reactor

The PD3100 post-column derivatization reactor incorporates an advanced design philosophy, featuring a fluid path constructed entirely from non-metallic materials, precision temperature control, and seamless integration capability with HPLC instrumentation—delivering simplicity, efficiency, and accuracy in LC analysis.



Features

- Combines dual-derivatization reaction module design, dual independent precision temperature control modules, and an integrated cooler in a single compact unit.
- All-inert fluid path—wetted materials consist entirely of PEEK and Teflon FEP, ensuring a wide range of applications.
- Independent temperature control—features intelligent, self-regulating temperature management with an automatic over-temperature cutoff protection circuit.
- Adjustable back-pressure valve—minimizes detector equilibration time.
- Wide chemical compatibility—resistant to commonly used acids, bases, organic solvents, and surfactants.

PD 3110 Photochemical Derivatization Module

The PD3110 photochemical derivatization module is a post-column derivatization device designed for the determination of aflatoxins and sulfonamides. Its operating principle relies on UV irradiation to enhance the fluorescence response of the target analytes, enabling subsequent detection by a fluorescence detector.



Features

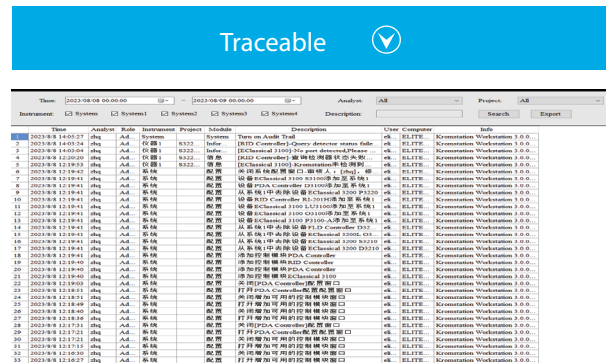
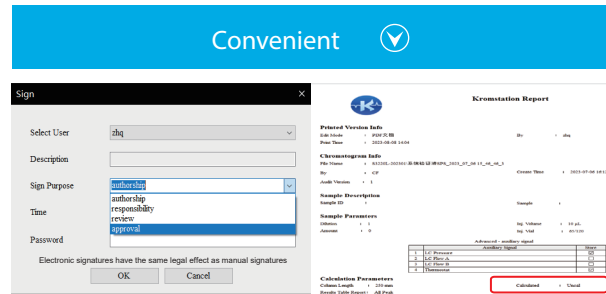
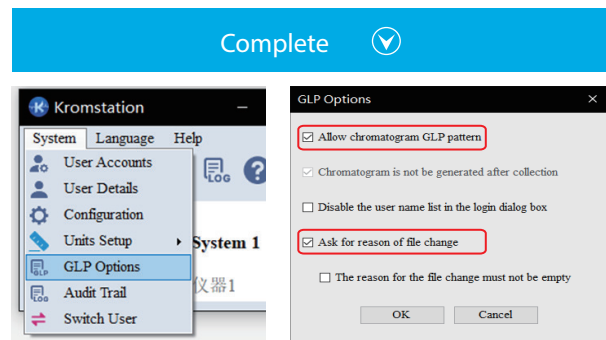
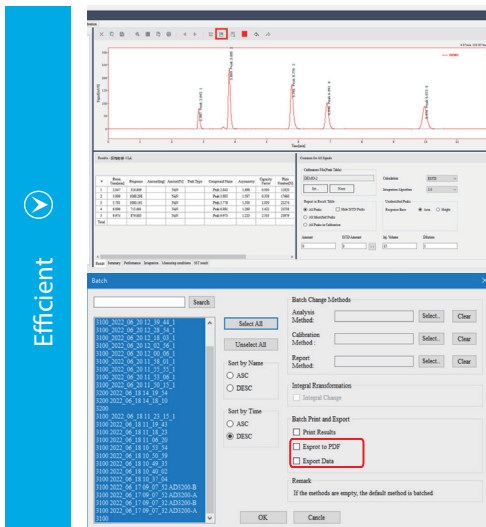
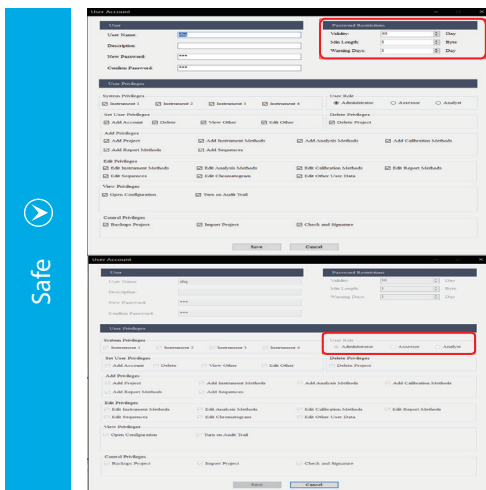
- Reagent-free operation, significantly reducing the cost of use.
- Substantial enhancement of detector sensitivity for targeted analytes.
- Simple and straightforward operation.

Chromatography Data Workstation

The Kromstation chromatography data workstation is the LC system workstation software developed by Elite, which is CNAS certified. With Kromstation you can control the LC and complete various operations with a personal computer, with superb database, audit trail, GLP compliance, data archiving and backup, electronic signature, user permissions, networked administration and other functions; the interface is simple and easy to get started.

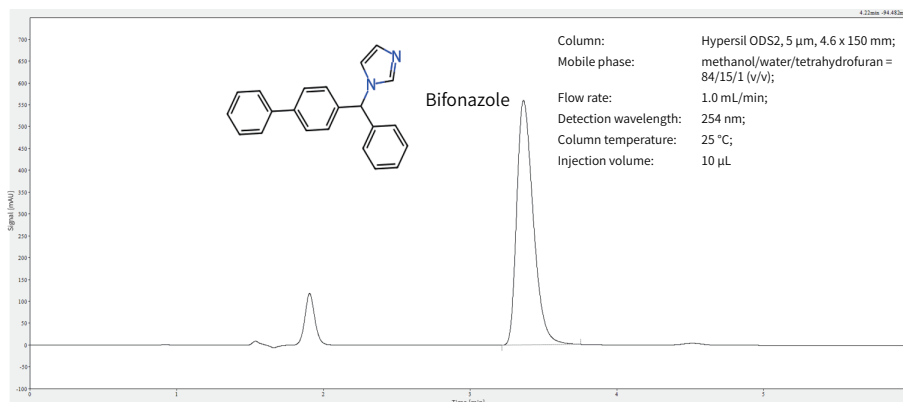
Features

- Audit trails and electronic signatures comply with FDA 21CFR Part11 data integrity management specifications.
- System management functions meet the security requirements of various workflows.
- Provides multi-level access management and electronic approval for analysis data stored in the database.
- Detailed user information can be saved to create a review history.
- Customized reports are available, combining multiple data items.



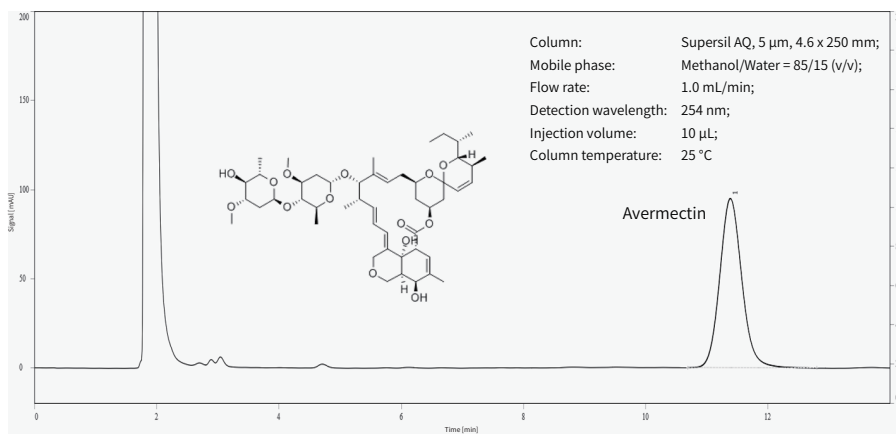
Aggress 1100+ HPLC Applications

Testing of bifonazole cream



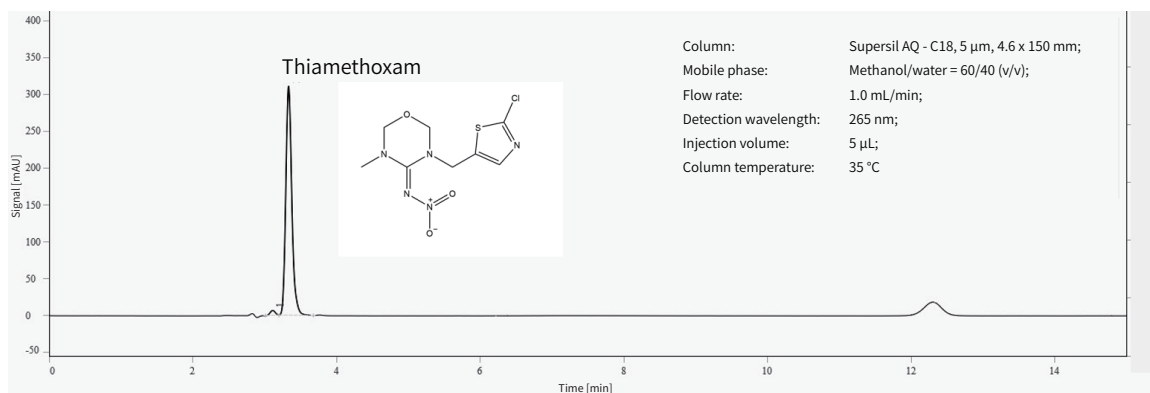
Chromatogram of bifonazole cream sample

Determination of avermectin in veterinary drug



Chromatogram of avermectin

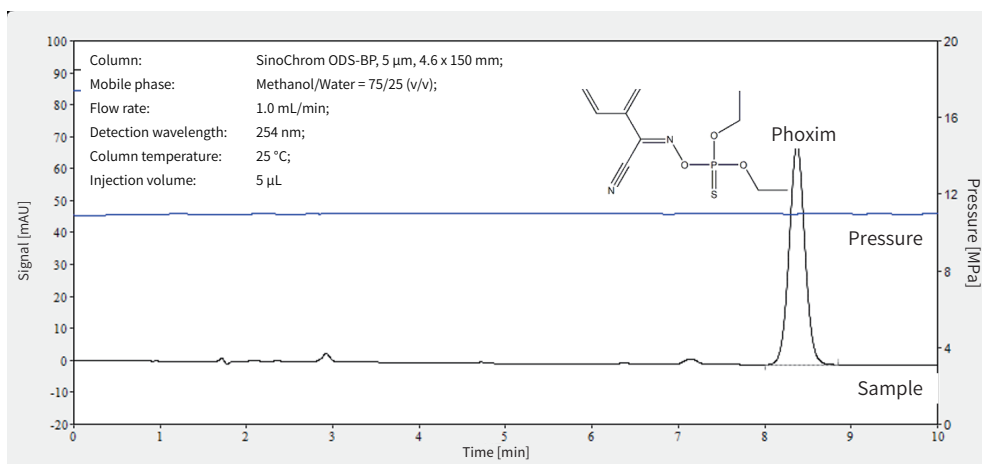
Testing of the granular pesticide thiamethoxam



Chromatogram of the granular pesticide thiamethoxam

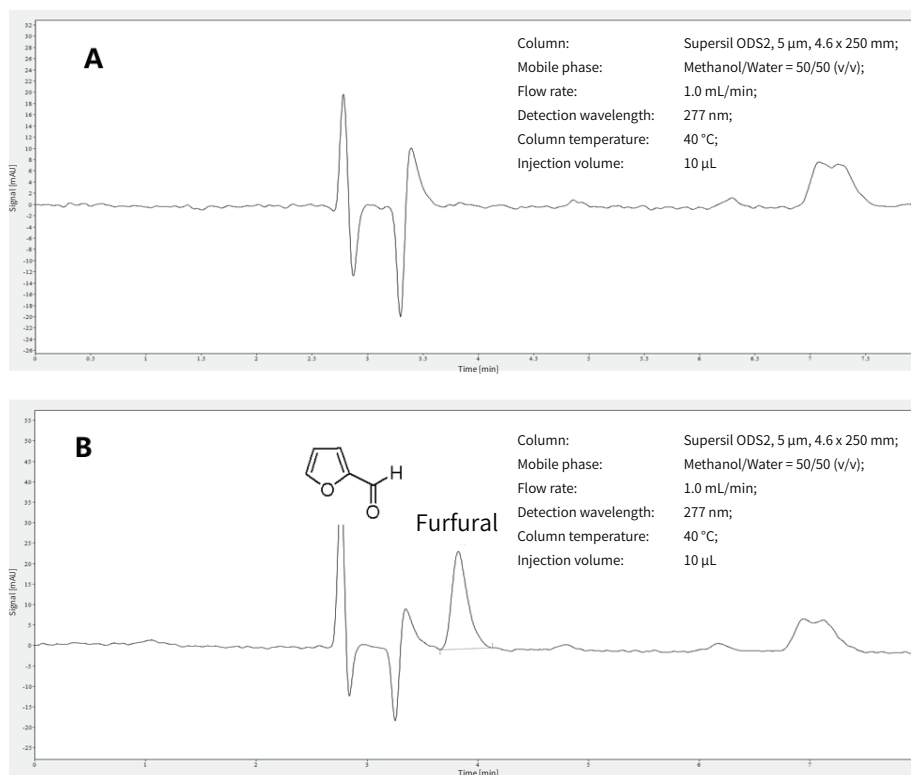
Agress 1100+ HPLC Applications

● Determination of crude phoxim



Chromatogram of crude phoxim

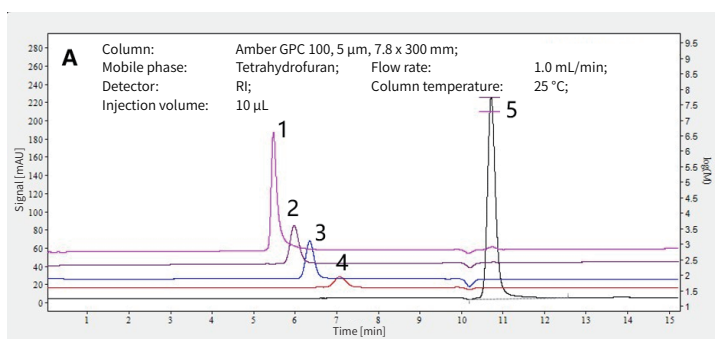
● Determination of furfural in transformer oil



Chromatogram of transformer oil sample: (A) Chromatogram of transformer oil sample; (B) Chromatogram of transformer oil sample spiked with furfural standard.

Agress 1100+ HPLC Applications

● Molecular weight determination of polyurethane acrylate



(A) Overlaid chromatograms of polystyrene and toluene standards:

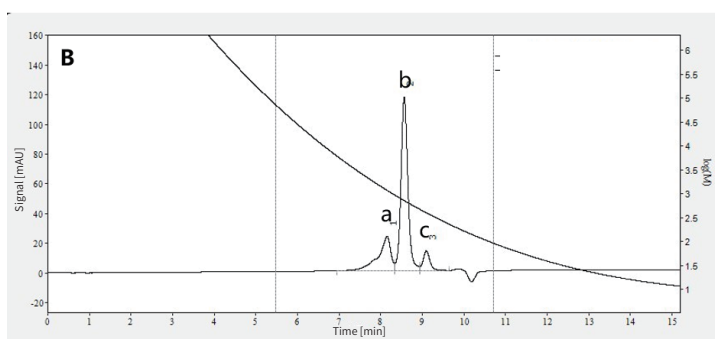
peak 1 is polystyrene MW 74000,

peak 2 is polystyrene MW 28500,

peak 3 is polystyrene MW 16600,

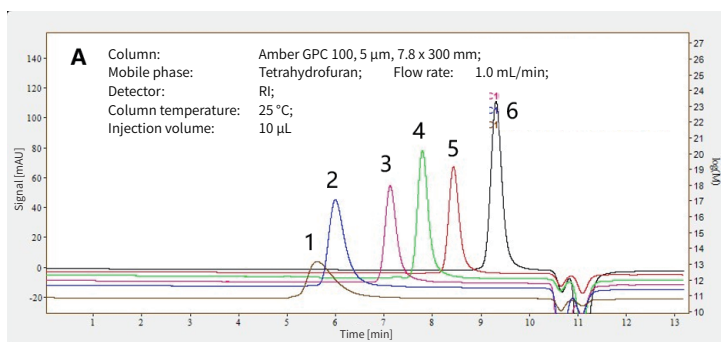
peak 4 is polystyrene MW 5110, and

peak 5 is toluene MW 92;



(B) Chromatogram of polyurethane acrylate sample. The weight-average molecular weight of the main components in the samples measured by size exclusion chromatography is between 400 and 1500.

● Molecular weight determination of silicone rubber



(A) Overlaid chromatograms of polystyrene standards:

peak 1 is polystyrene MW 1571000,

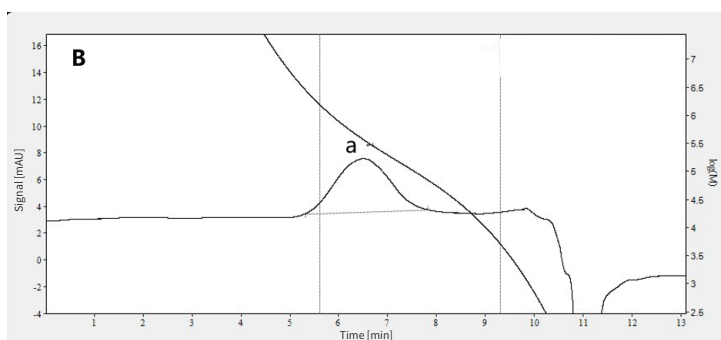
peak 2 is polystyrene MW 758900,

peak 3 is polystyrene MW 171000,

peak 4 is polystyrene MW 74000,

peak 5 is polystyrene MW 28500, and

peak 6 is polystyrene MW 5110;



(B) Chromatogram of the silicone rubber sample. The weight-average molecular weight of the main component in the sample measured by size exclusion chromatography is MW 477900.



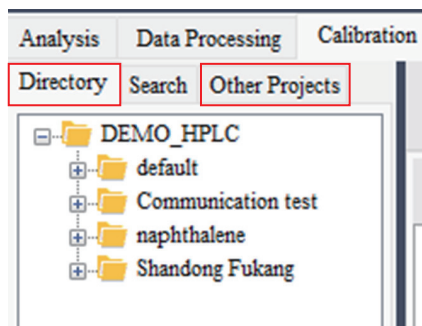
About Elite

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Chromatography Data Workstation

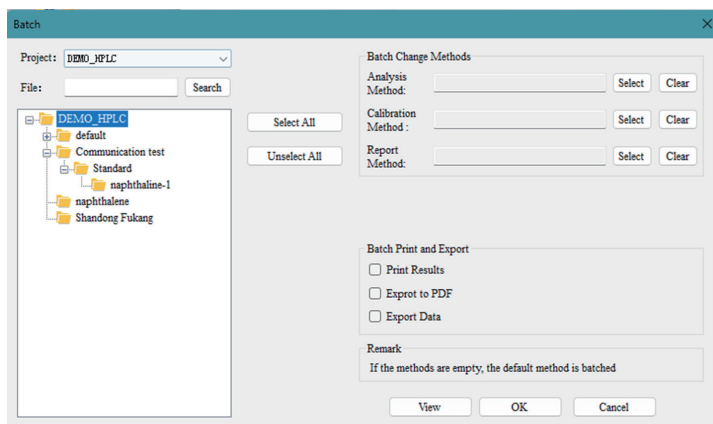
Cross-Project Data Access

Supports viewing, processing, and retrieving data from external projects.



Data Structure

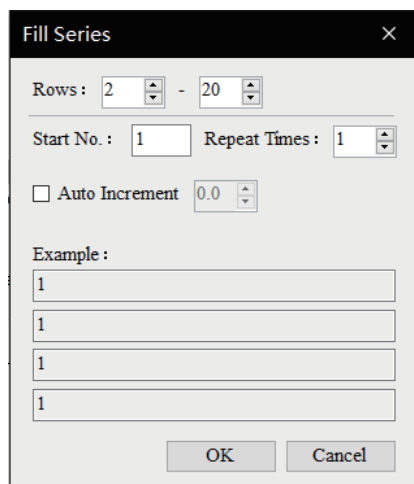
Chromatogram display switched to tree view



Sequence Filling

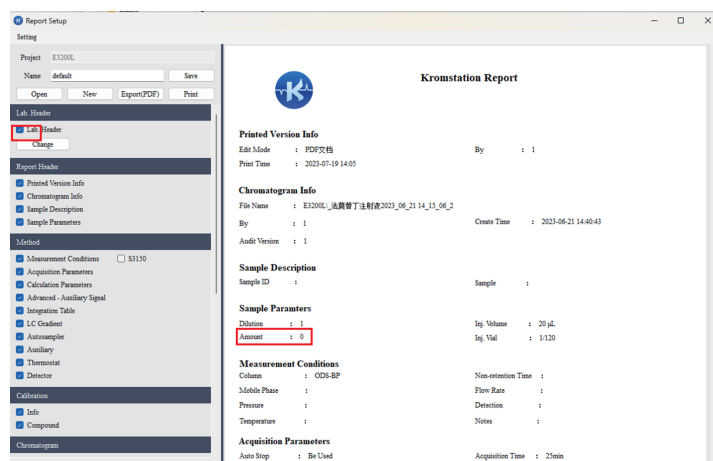
New "Insert rows" function (up to 999 rows);
Support the filling of vial positions, injection numbers, volumes, sample IDs, and chromatogram names.

Supports single-row and multi-row copy/paste within the sequence;



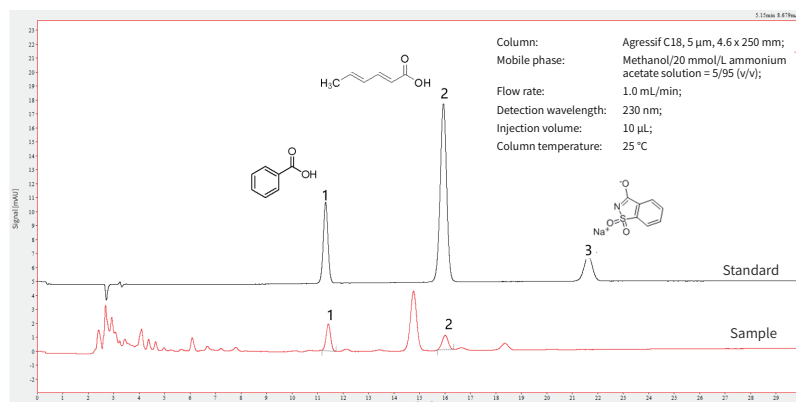
Report Format

Features include customizable text sizing and formatting, configurable placement for parameters and charts, and integrated audit versioning: "0" for original, incremented by 1 for each subsequent edit.



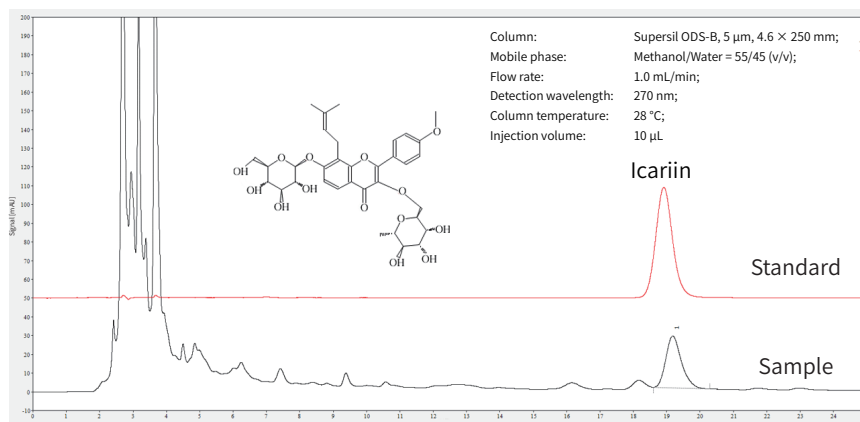
Agress 1100+ HPLC Applications

● Determination of benzoic acid, sorbic acid, and saccharin sodium in prepared food



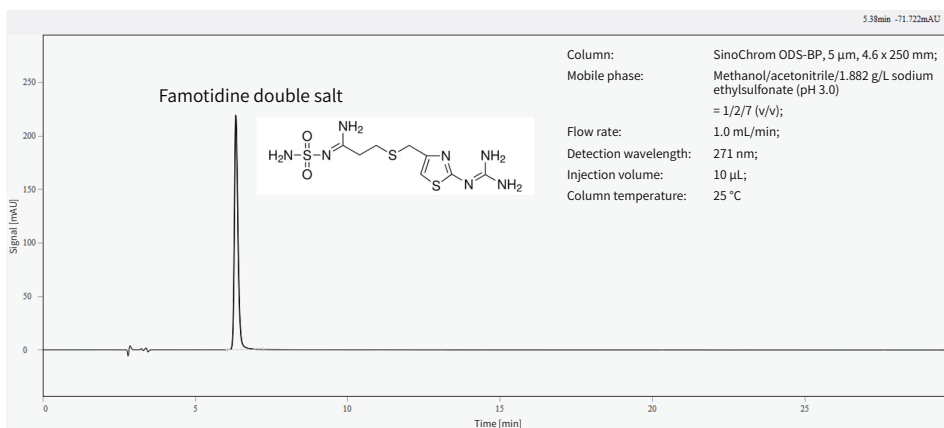
Chromatogram of prepared food sample and standard: peak 1 is benzoic acid, peak 2 is sorbic acid, and peak 3 is saccharin sodium.

● Testing of Rong Gui Bu Shen Oral Liquid



Chromatograms of Rong Gui Bu Shen Oral Liquid sample and icariin standard

● Testing of famotidine double salt



Chromatogram of famotidine double salt (sample dissolved in mobile phase)

Agress 1100+ High Performance Liquid Chromatography System



Features

- Compatible with both normal-phase and reversed-phase solvents, suitable for use in GPC systems, and supports solvent exchange.
- An optimized, high-efficiency heat dissipation structure ensures stable system operation under demanding condition.
- The fully upgraded sealing design minimizes system performance degradation and consistently delivers accurate test results.
- The front panel is coated with a corrosion-resistant finish, enhancing the product's durability against a wide range of solvents.
- Compatible with Kromstation , compliant with data integrity regulations.

P1100+ High-Pressure Constant-Flow Pump



Features

- The floating guided plunger design, combined with a high-quality plunger rod and sealing ring, ensures stable and durable operation of the system.
- The dual-plunger, in-series reciprocating mechanism is combined with a compact cam-driven short-stroke design to deliver minimal and stable pump pulsation.
- The stepper motor with microstepping control ensures stable gradient and mobile phase composition.
- Dual correction for mobile phase compressibility and flow rate ensures accurate flow delivery.
- Real-time pressure display with upper/lower pressure limit alarm function.
- Pressure unit displayed can be set to MPa, psi, or bar.

Pump Flow Accuracy

During the 12-month test period, the flow accuracy of the P1100+ high-pressure constant-flow pump ranged from -0.02% to 0, demonstrating the pump's excellent flow stability, which ensures the reliability of the test results.

