



LC 6000

HIGH PERFORMANCE LIQUID CHROMATOGRAPH

SCION Instruments brings Performance, Functionality and Reliability together into its impressive 6000 Series HPLC product line up, making it the chromatographer's choice in HPLC.

SCION 6000 Series HPLC

THE SCION 6000 SERIES HPLC AIMS FOR CONFIDENCE IN RESULTS THROUGH OUTSTANDING LIFE-TIME PERFORMANCE.

A robust design maximises uptime and productivity levels whilst minimises cost of operation.

The SCION 6000 Series offers an array of automation options for workflow optimisation, making our lab experience the best and easiest possible.



Superior core: High precision pump

- Combine advantage of binary and quaternary pump
- Four channel mobile phase for complicated separation
- Real-time feedback control system greatly suppresses liquid pulsation for excellent flow rate and gradient precision



Easy to use, fully automated and flexible configurations

- All modules are controlled by CompassCDS
- High-throughput autosampler with options (thermostat, sample tray, syringe, etc.)
- Various options for modules and full range of detector for different applications.



Smart and network based HPLC: new-era system management

- LED belt as an indicator of system status
- 21 CFR part 11 compliance
- Client/Server architecture and LIMS connection
- Remote control supported

Configuration Modules

6510 ORGANISER (SOLVENT CABINET)

6410 ULTRAVIOLET DETECTOR

6430 DIODE ARRAY DETECTOR

6440 FLUORESCENCE DETECTOR

6450 EVAPORATIVE LIGHT SCATTERING DETECTOR

6460 REFRACTIVE INDEX DETECTOR

6310 COLUMN OVEN

6210 AUTOSAMPLER

6220 AUTOSAMPLER WITH COOLING UNIT

6100 QUATERNARY PUMP



6100 Pump

— Accurate gradient and precise flow rate



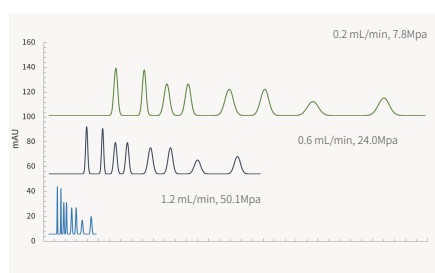
SCION 6100 quaternary pump uses high capacity dual plungers, with advanced real-time feedback processor and high frequency mix to provide better retention time repeatability.

- Up to 60 Mpa
- Better gradient and flow rate precision
- Better retention time repeatability to assure the quality of data
- Optional 6 channel degasser (4 channel mobile phase+2 channel wash solution)
- Standard plunger wash accessories, optional automatic plunger wash pump
- Various mixer available (Conventional, dynamic, semi-micro, etc.)

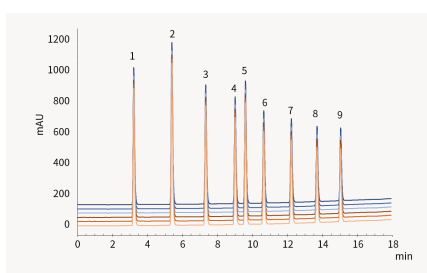
New quaternary low-pressure gradient

SCION 6100 pump combines the advantages of both binary high pressure gradient and quaternary low-pressure gradient via "post-pump mix" to provide the mix of mobile phase channels as good as that at high pressure.

Pressure limit up to 60 Mpa allow columns with smaller particle size, to shorten the analytical time and increase the efficiency.



Chromatograms of 8 kinds of aldehydes derivatized by DNPH at different flow rate



Overlaid chromatogram for alkylphenols (n=6)

The repeatability results of alkylphenol standards (n=6)

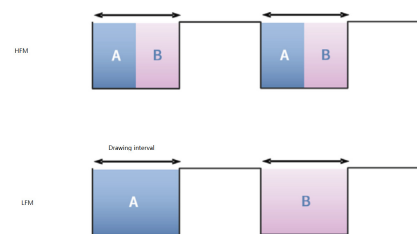
#	Compound Name	R.T. RSD (%)
1	Acetanilide	0.03
2	Acetyl benzene	0.04
3	Propiophenone	0.03
4	Phenyl ethyl ketone	0.02
5	Diphenyl ketone	0.02
6	Phenyl-1-pentanone	0.02
7	Caprophenone	0.02
8	Heptanophenone	0.02
9	Octanophenone	0.02

Unique flow control

SCION 6100 pump employed a dedicate processor with sensor to realize real-time inhibit the pulse without damper. It is robust, reliable and quiet.

High precision gradient mix

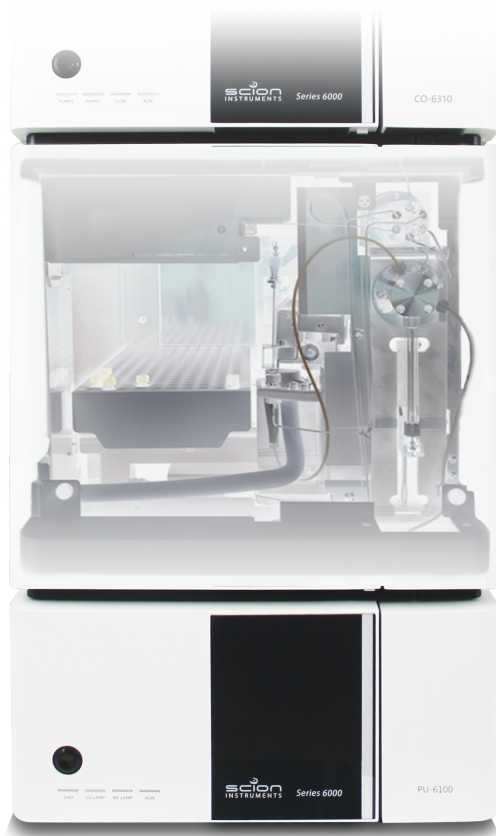
SCION 6100 PUMP provide high frequency mode (HFM). The switch frequency of proportional valve is increased to improve the precision of gradient



The schematic of High Frequency Mode (HFM)

6210/6220 Autosampler

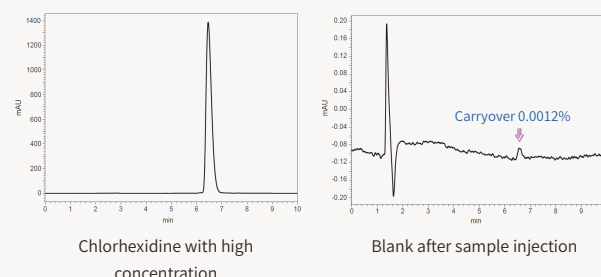
Automation with flexibility



6210/6220 autosampler has high sample capacity and injection accuracy. The adjustable injection speed can match the rapid separation.

- Pressure limit for injection valve 60 Mpa
- Ultra-low carry over
- Optional thermostat (cooling) unit
- Various options of syringe size and easy to replace

Minimize the carry over



Excellent injection volume repeatability

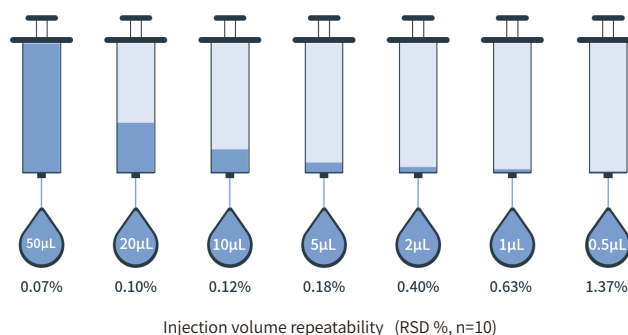
New syringe and motor with high precision to assure the injection volume repeatability, more reliable results can be achieved.

Manually injection valve option available

The manually injection valve kit includes the injection valve with mounting plate and necessary cables and accessories.

Thermostat option

Sample tray with drainage for condensed moisture under sample cooling is required. Thermostat option can keep biological or other samples stable to make sure the accuracy of results.



Column Compartment

—wide temperature range with precise control



6310



6320 (right part)

The temperature of column is crucial for the separation, affects the retention time, separation efficiency and selectivity.

SCION provides two models of column oven, 6310 and 6320, the compact one and the versatile one, respectively.

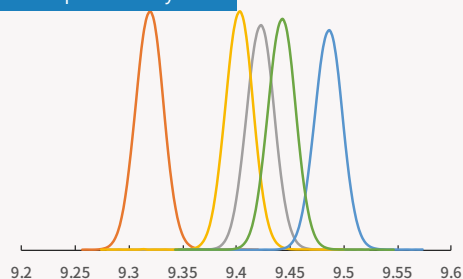
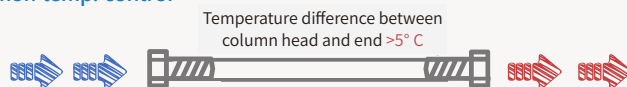
- Temperature control range from Temperature control range from 15° C below ambient to 85 ° C
- Leakage sensor
- Capacity for 4*250mm columns (6310), 4*400mm columns (6320)
- Reserved position for column switch valves (1 in 6310, multiple in 6320), and manually injection valve (6320 only)

Precise temperature control

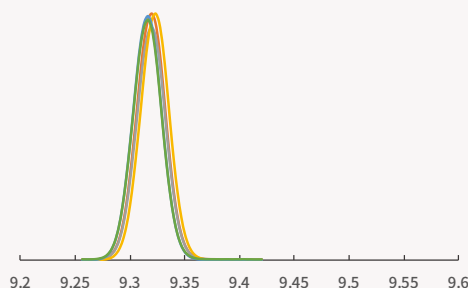
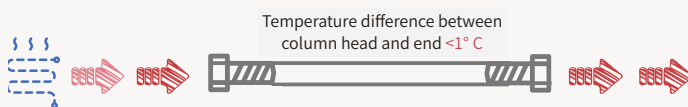
SCION 6310/6320 column oven use both Peltier and heating probe with air circulation for cooling and heating, respectively.

The influence of temperature precision of column oven to retention time repeatability

Common temp. control



More precise temp. control



LC6000 detector family

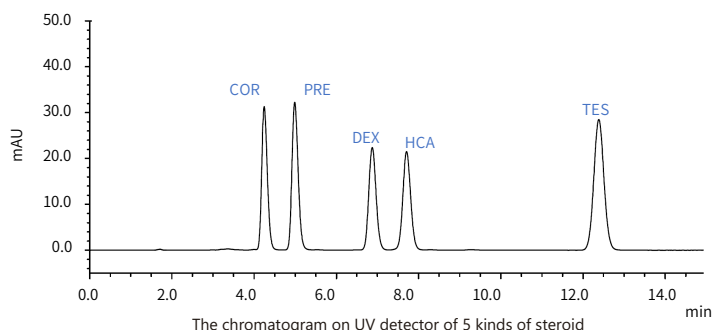
— Various detectors to fulfil application needs



SCION LC6000 provide a wide range of detector options, including UV Detector (UVD), Diode Array Detector (DAD), Fluorescence Detector (FLD), Refractive Index Detector (RID), Evaporative Light Scattering Detector (ELSD). All detectors can be fully controlled by Compass CDS, multiple detectors are able to be configured in one system and acquire data simultaneously.

6410 UVD

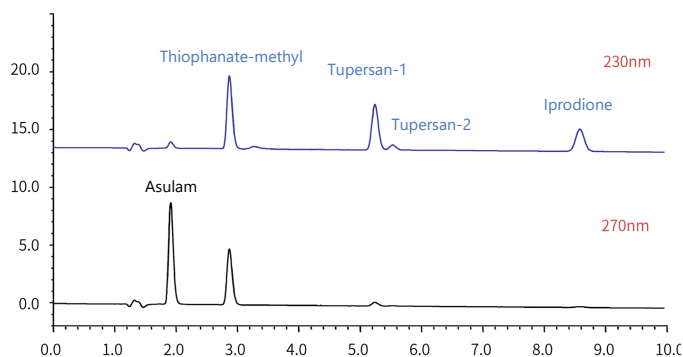
Long life time D2 lamp and advanced optical path design brings low noise level and good sensitivity. The position of flow cell is in the front so that the maintenance will be much easier.



The chromatogram on UV detector of 5 kinds of steroid

6430 DAD

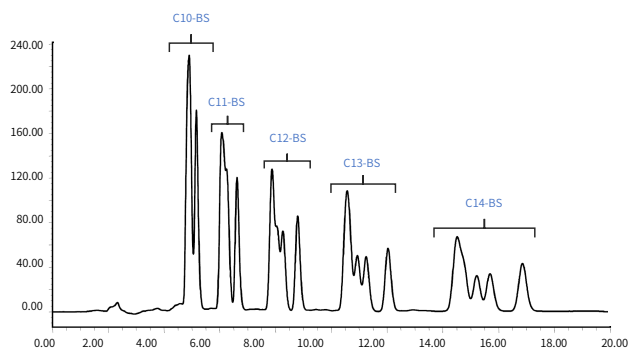
Industry leading diode array detector, can reach the same level detection limit as UVD. The noise and drift are also controlled at quite low level. Automatically wavelength check function via Hg lamp is included. Thermostat flow cell and other options are also available.



The chromatogram of pesticides at different wavelength

6440 FLD

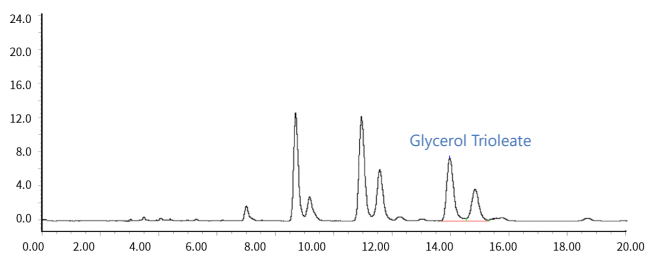
SCION 6440 FLD brings you the ultra-high sensitivity (Water Raman peak $S/N \geq 3000$) via industrial leading optical path design, combining with more compacted flow cell and adjustable slit. Wavelength auto-calibration is also a standard function via Hg lamp.



Chromatogram from SCION6440 FLD for alkyl benzene sulfonate anionic surfactant

6450 ELSD

SCION 6450 ELSD is suitable for the analytes which has no/weak UV absorption. It can be used in series with other non-destructive detector. The accurate temperature and flow control assured the stability of the signal.



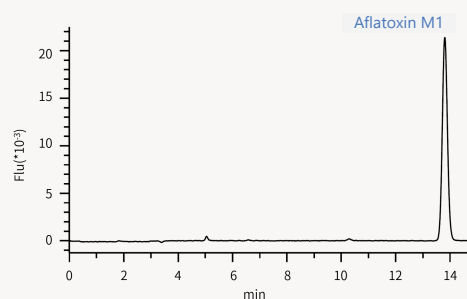
Chromatogram of glyceryl trioleate in SCION 6450 ELSD

6460 RID

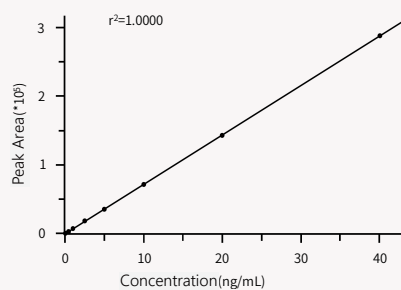
SCION 6460 RID has a temperature adjustable flow cell (30-50 °C). The shorter stabilization time (less than 1 hour) can improve the efficiency and throughput of analysis.

Ultra-high sensitivity fluorescence detector

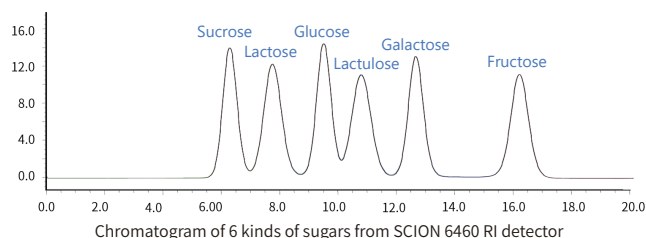
SCION 6440 FLD can reach a quite low detection limit of aflatoxin even without derivatization. The linearity and repeatability is also good for 20ng/mL standard injection. RSD of peak area is 0.8% (n=6)



Chromatogram of standard with concentration of 20ng/mL



Linearity of the concentration range 0.1-40ng/mL



Chromatogram of 6 kinds of sugars from SCION 6460 RI detector

Compass CDS

— For professional instrument and data management

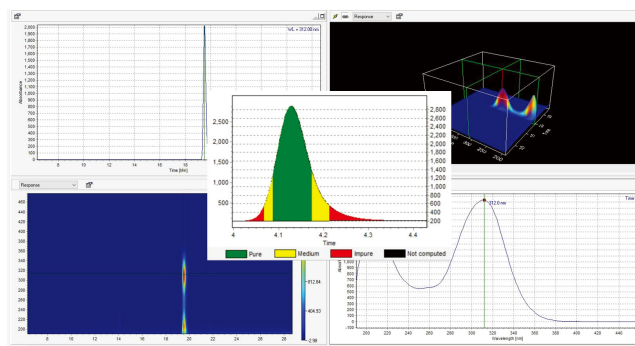


Chromatography Data System

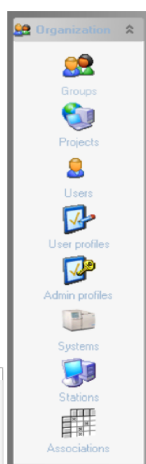
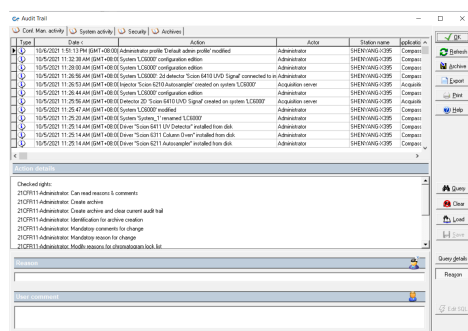
Compass is an powerful chromatography data system, including instrument control, data acquisition & process, and customized reporting.

User friendly and smooth operation

- User defined GUI for data/systems view and tool bars
- Powerful data process and smart auto integration assured the accurate result
- Multiple plug-ins and user defined variables for customized functions and calculation
- Various report template and easy to edit

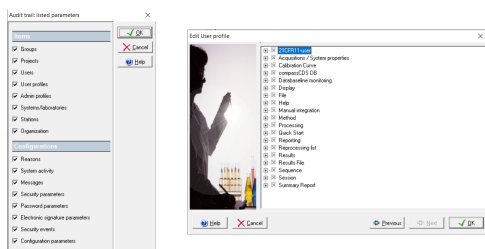


3D Chromatogram from DAD



Fully regulatory compliance

- 21CFR part 11 and GMP/GLP compliance
- Unique architecture, Stand-alone and Client Server can be realized in the same version, no instruments number limit, simplified server configuration and requirements
- Compatible with mainstream LIMS system



SCION LC 6000 solutions for various industries

Pharmaceutical

Analysis of Combination Drugs HPLC-DAD

Column	C18 5µm x 4.6mm x 150mm
Temp	25 °C
Mobile Phase	A: Phosphoric Acid Buffer B: Methanol
Gradient	0-6mins: A30:B70% 6.1-15mins: A10:B90%
Flow Rate	1mL/min
DAD	220-400nm Ibu 237nm, Para 254nm
Injection Vol	20µL

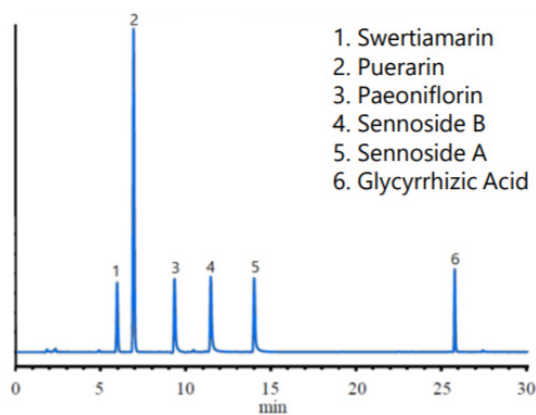
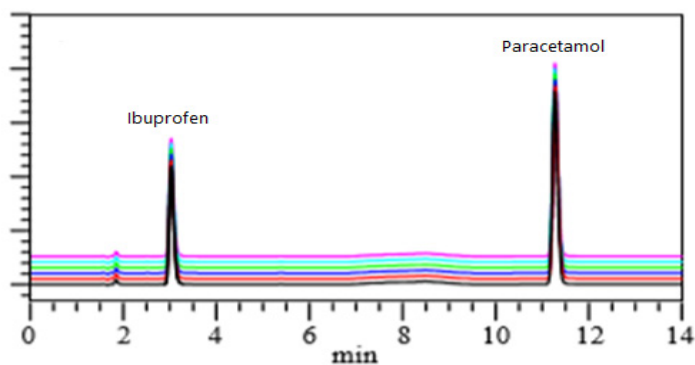
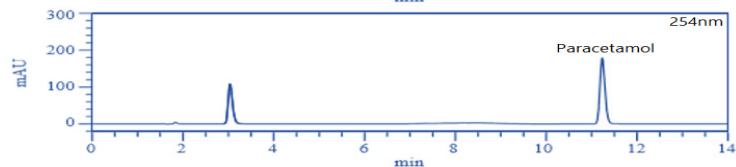
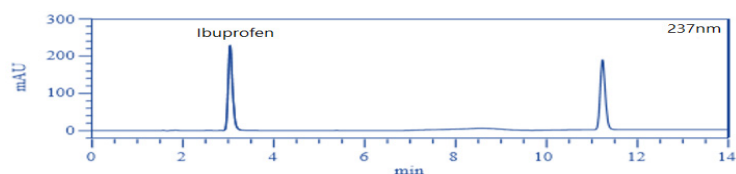


Figure 1. Analytical standard chromatogram (50mg/L)

Pharmaceutical

Analysis of Analysis of Glycosides in Medicines

Column	C18 3µm x 4.6mm x 150mm
Temp	40 °C
Mobile Phase	A: 10mmol/L monopotassium hydroxide (pH 3.0) B: Acetonitrile
Gradient	0mins: B10%: A90%, 20 min B30%: A70%, 25-35 mins B70%:A30%, 35.1-50 mins B10%:A90%
Flow Rate	1mL/min
DAD	245nm
Injection Vol	50µL

SCION LC 6000 solutions for various industries

Food	
Simultaneous Analysis of Synthetic Food	
Dyes by HPLC-DAD (AN0065) & Analysis of	
Catechins by HPLC-UV (AN0063)	
Galocatechin	GC
Galocatechin Gallate	GCG
Epigallocatechin	EGC
Epigallocatechin Gallate	EGCG
Epicatechin	EC
Epicatechin Gallate	ECG
Catechin	C
Catechin Gallate	CG
Caffeine	CA

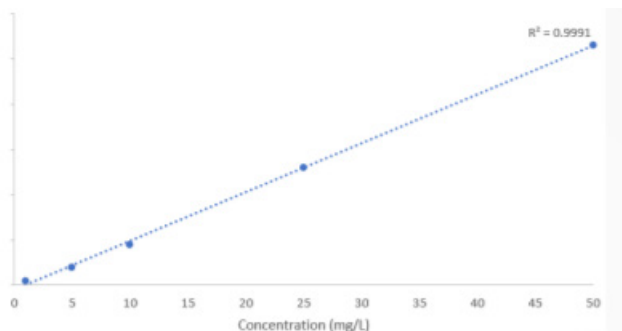


Figure 1. Calibration curve of epigallocatechin (EGC) 1-50mg/L

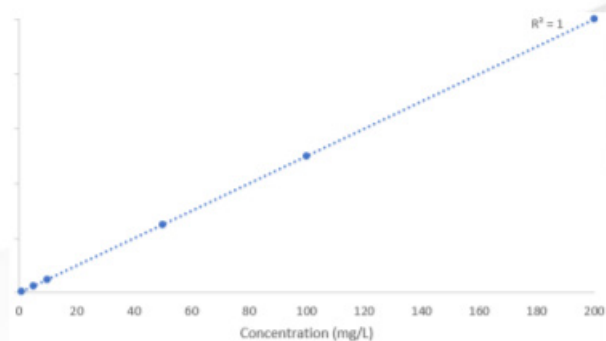


Figure 2. Calibration curve of caffeine (CA) 1-200mg/L

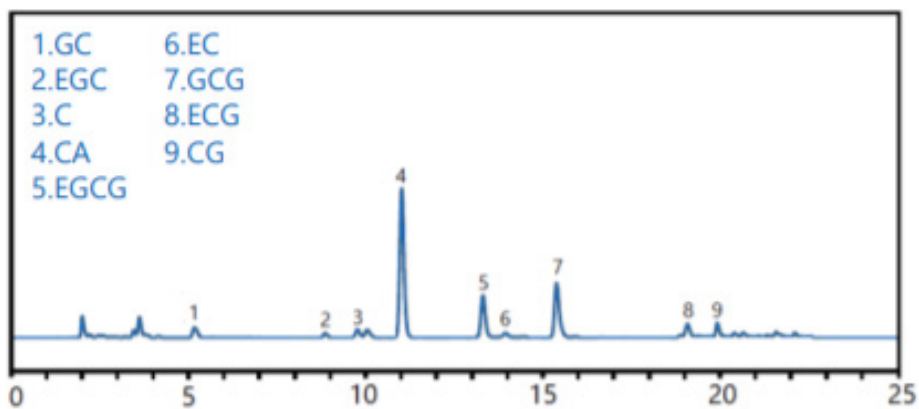


Figure 3. Chromatogram and compound identification of green tea sample

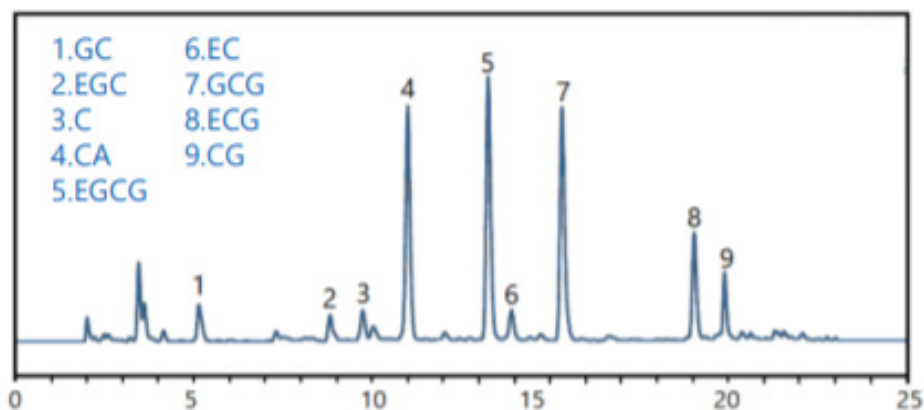


Figure 4. Chromatogram and compound identification of the supplement

Provide your LC columns and consumables with SCION quality



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