



Bonna-Agela Technologies

www.agela.com



Flash Chromatography



About Bonna-Agela Technologies

Bonna-Agela Technologies Inc. is a separation technology company that serves chemists and biochemists in the field of drug discovery, food analysis, drug testing, environmental analysis and chemical research. We offer a full line of products designed to meet your separation and purification needs from bulk separation media to chromatography columns and SPE cartridges. Through continuing innovation, Bonna-Agela Technologies offers customers the best tools and solutions for separation, purification, and analysis of organic and bioorganic compounds.



Bonna-Agela Technologies conducts business in North America, Asia and Europe. We sell our products to end users, distributors, and OEM partners. Because of our unique business structure and superior production process, we are able to provide products of the highest quality at very competitive prices. We are also very proud of our full support for customers' applications, and we are willing to customize our products to meet any specific requirement of our customers. We are here to assist you in choosing the most appropriate technique and products for your separation needs. Our expertise in separation and unmatched business flexibility make us a very favorable source of collaboration for many customers in hopes to meet their specific needs.

Bonna-Agela Technologies has an uncompromised quality policy. All of our products are guaranteed for customers' satisfaction. We are satisfied only if you are!

Purification Solutions

A complete line of purification products is provided for the applications in the area of medicinal chemistry, natural product chemistry, fine chemical industry, petroleum chemical industry and biochemistry.

- ◆ Flash chromatography system; integrated and modular;
- ◆ Prepacked chromatography columns;
- ◆ Bulk media;
- ◆ Consumables and supplies;

CHEETAH™ Series Flash Purification Systems

They are integrated purification systems with all essential functions, including gradient solvent delivery, sample detection and fraction collection, and were designed for easy and fast flash purification. The systems are great replacement of traditional column chromatography.

Terminator of Traditional Column Chromatography...

By peak to tube match display, you can identify each fraction.

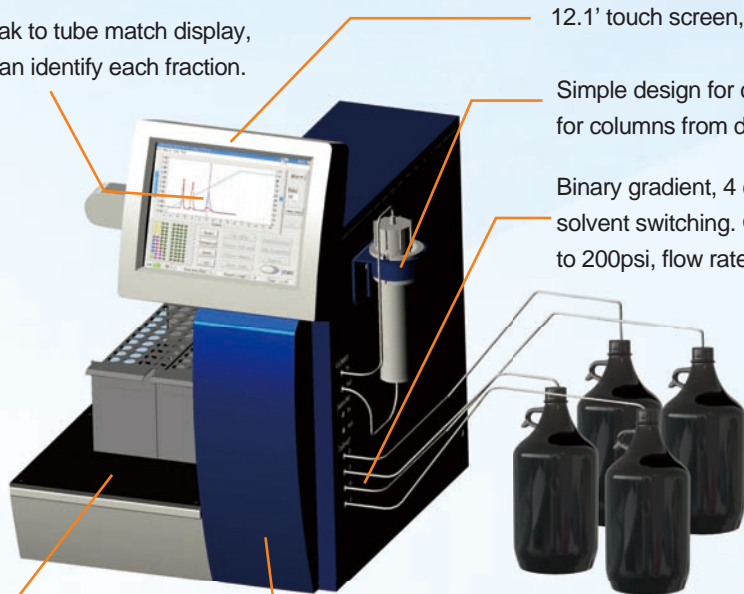
12.1' touch screen, easy to operate

Simple design for column holder, suitable for columns from different suppliers.

Binary gradient, 4 channels provide multi solvent switching. Operating pressure up to 200psi, flow rate up to 200mL/min.

Anti-corrosion surface may tolerate most solvents

Compact structure behind removable cover, convenient for maintenance and repair.



Main Features:

- ✓ Fully Integrated and Automatic: it is fully automatic from the sample injection to sample collection.
- ✓ Expandability: optional functions can be added upon requests. Compatible with many external detectors.
- ✓ Compatibility: compatible with most of flash columns on the market including disposable columns and glass columns.

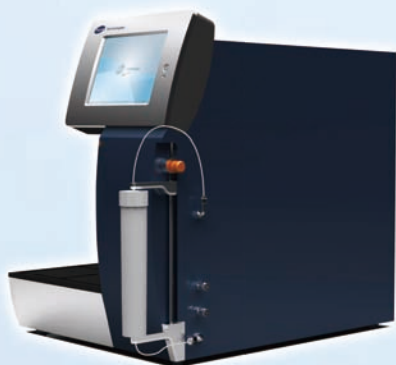
Advantages of CHEETAH™:

- ✓ Simple and Efficient: the process of purification becomes much simpler and more efficient.
- ✓ Low Cost: both the instrument's and the operation's cost are much lower than preparative HPLC
- ✓ Large Capacity: meets the requirement of sample-preparation from mg to kg
- ✓ Easy Operation: the friendly touch screen interface is convenient for operation
- ✓ High Speed: linear gradient elution makes fast separation possible
- ✓ Safe and Reliable

CHEETAH™ Technical Specifications

Cat. No.	CHEETAH™ 100		CHEETAH™ 200	
	FS-8200	FS-8200-Bio*	FS-9200	FS-9200-Bio*
Integrated Solvent Delivery Pump	Ceramic valveless metering pump, long life-time, high accuracy, maintenance free			
	Flow: 1-100mL/min Operating Pressure: 100psi		Flow: 1-200mL/min Flow Accuracy < ±1%, Flow Repeatability: < 0.5%	
Solvent Ports	2		2 (standard)/4 (optional)	
Gradient	Linear or step(or the combination) gradient, and can be modified on time			
Sample Loading Switch	Bracket bolt (standard)/Loading system(optional)			
Variable Wavelength UV Detector	With a PDA or CCD detector, multi-wavelength detection can be used to direct product collection.			
	Tunable wavelength range :200-400nm Noise: 3.0×10^{-3} AU Absorbance range :0-3AU		Wavelength accuracy: ± 1nm Drift: 5.0×10^{-3} AU	
Control Software	Integrated instrument control ; system operation data acquisition and fraction management, Windows XP operating system, touch screen design, intuitive operation; multiple USB expansion interfaces, large storage space, unlimited storage of experimental data. Automatic method converter.			
	Memory: 1Gb HDD: 160Gb		CPU: Dual Core 1.6GHz Touch Screen: 12.1"	
Two-dimensional Fractions Collector	Integrated X/Y fraction collector; have choices of presetted sizes and patterns/or self defined configumtion. Tube specification: F1-13mm,F2-15mm,F3-18mm,F4-25mm,F5-100mL flask.			
Chromatographic Column	4g-1500g prepacked cartridges; glass cartridges of variable sizes; many types of stationary phases to meet different application demands, connectors for columns from other suppliers			
Automatic Expanding of Run Time	At the end of a run, if the compounds are still not fully eluted, the run can be extended			
Certification	ISO9001 : 2000 ; CE			

*-Bio: All flow paths are made of peek or PTFE



CHEETAH™ Flash Purification System Software

Bonna-Agela's design on the software of CHEETAH™ Flash Purification System is user-frendly with convenience, maximum-flexibility and reliability.

Mark the Number of Tube Exactly

Gradient Curve

Display the Collecting Area

Show of Collection Tube

Deuterium Lamp, Gradient, Pressure and Time

B%	Start	End	Duration
1	0.0	0.0	10.0
2	0.0	100.0	10.0
3	0.0	0.0	1.0
4	0.0	8.0	1.0

ADD INSERT DEL

Rapid Modification of Gradient Curve On Time

During a run, by a simple click, users can easily change the gradient curve.

Directly Control of The Collector

Users can modify the collector with 2D collecting-software and can customize the configuration by selfdefining.

Directly Control of The Pump

The pump can be controlled directly without running a program, which benefits system conditioning and preparation, such as air removing or rapid solvent change.

CHEETAH™ HP 100

---- Integrated and Intelligent High Pressure Purification System

—Higher Efficiency, Higher Speed, Higher Purity !

- Compared to most of flash chromatography systems, HP100 is more efficient, faster and giving higher purity for purifications.
- Compared to most of conventional preparative HPLC, HP100 is more flexible, more expandable and more friendly to operate.

Main Features:

- ✓ Obtain high purity by higher separation efficiency
- ✓ Broader suitability: small to large molecules; synthetic to bio-molecules; complex mixtures; high throughput separation
- ✓ More expandable: more flexible and more functions than either flash systems or prep HPLC
- ✓ More friendly interface than prep HPLC

Applications:

- ✓ Purification of synthetic compounds from a complex mixture
- ✓ Purification of peptides, oligo-nucleotides, oligonucleic acids
- ✓ Isolation of natural products in high purity
- ✓ High throughput purification
- ✓ Purification of bio-molecules

Technical Specifications:

✓ Pump

Solvent Delivery	Dual piston, binary pump; high pressure gradient mixing; (quaternary gradient optional)
Flow Range	0.01-99.99mL/min, incremental 0.01mL/min
Flow Precision	±0.5%
Flow Consistency	RSD≤0.1%
Pressure Pulse	≤3 bar
Max Pressure	≤300 bar

✓ Detection

Wavelength	190-700nm dual channel	Remark
Lamp	D2/W	
Wavelength Precision	±1nm	
Baseline Noise	±0.75×10 ⁻⁵ AU	254nm, TC=1s
Baseline Drifting	1.5×10 ⁻⁴ AU	254nm
Adsorption Range	≥3AU	

√ Detection

Max Flow	200mL	
Collection Mode	Total collection; by peak; by window; manual collection	
Preset Configuration	F1-13mm tube (192) F2-15mm tube (192) F3-18mm tube (176) F4-25mm tube (120) F5-100ml flask (16)	Self configuration program available

√ Controller

Interface	12 inch Touch Screen
CPU	Intel Atom™ 1.6GHz Processor
Memory	1GB
Hard Drive	SATA 160GB 2.5" HDD,
Video Card	Intel GMA950 224MB

√ Media:

- Preparative HPLC columns
- Glass columns
- Disposable flash columns



FIEXA™ Modular Purification Series

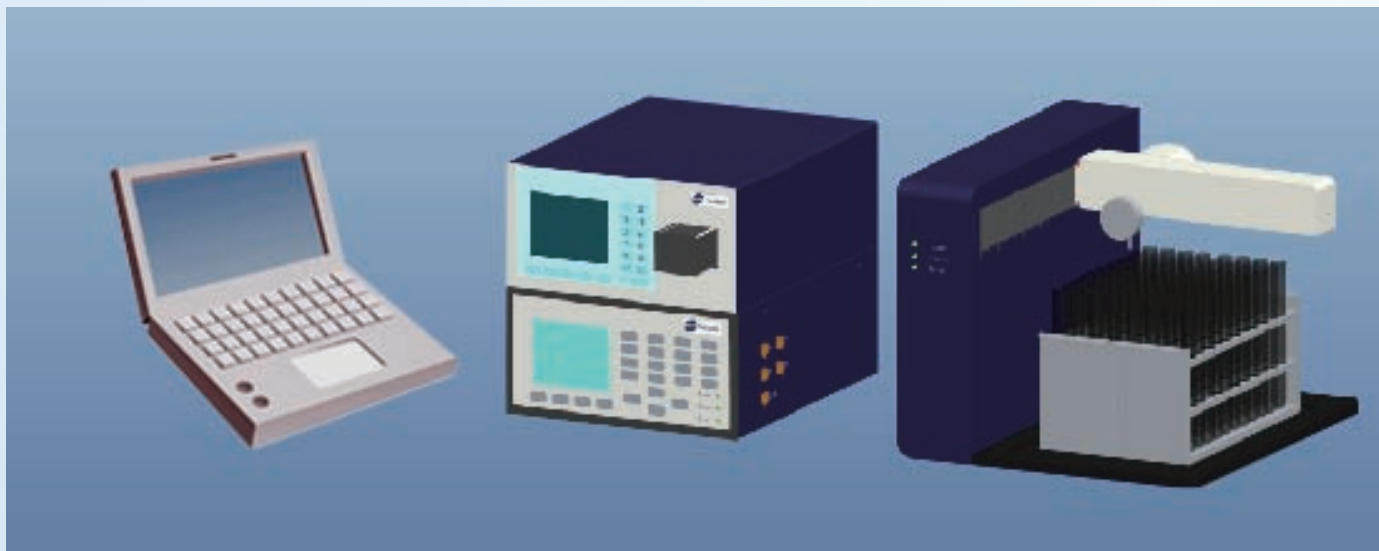
Bonna-Agela Technologies also offer modular flash chromatographic devices, to maximize the flexibility and minimize the cost for the users with different application needs. One may select a “good fit” combination from a large number of pumps, detectors and fraction collectors offered in this section, and configure them into a fully automated and computer programmable flash purification system.

Main Features:

- ✓ A large number of pumps, detectors and fraction collectors to select with a “one for all” fully programmable software, make users to have the maximum flexibility and capability without losing any operating integrity.
- ✓ All modular component devices can be run independently, or be integrated into programmable systems by RS 232 communication ports.
- ✓ A complete line of gradient pumps: a flow range from 0.3 mL/min to 4 liter/min, a max pressure ranging from 100 psi to 300 bar. All pumps may run binary gradient of organic and aqueous solvents. Biocompatible pumps are available for the separation of proteins and nucleic acids.
- ✓ In addition to standard UV detectors, ELSD and RI detectors are offered for the detection of non-UV absorption compounds. A PDA detector is offered with a UV-Vis scan feature. The system software may integrate a number of detectors on the market into the programmable operation. Fix wavelength UV detectors are also available for users having tight budget.
- ✓ The fraction collector features 6 preset configurations (the largest volume of the collecting vessel = 100 mL) and a self-configuration program, to maximize both simplicity and flexibility.

Main Applications:

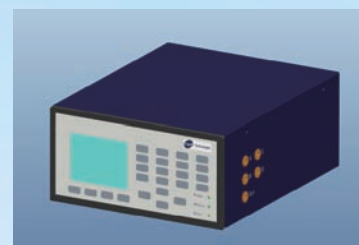
- ✓ Purification of synthetic compounds
- ✓ Isolation of pharmaceutical impurities
- ✓ Isolation of natural products
- ✓ Purification of bio-molecules



Pumps

Interface and Display Functions:

- ✓ Flow Setting
- ✓ Max Pressure Setting
- ✓ Current Flow Display
- ✓ Current Pressure Display
- ✓ Gradient Setting and Changing
- ✓ On/off Switch



	100psi/100 mL·min ⁻¹	300bar/100 mL·min ⁻¹	200psi/200 mL·min ⁻¹	200psi/1000 mL·min ⁻¹	200psi/4000 mL·min ⁻¹
Catalog Number	FS-6200-GP100	HP-Q-P050	FS-6200-GP200	FS-6200-GP1000	FS-6200-GP4000
Max Pressure	100 psi	300 bar	200 psi	200 psi	200 psi
Flow Range	0.5-100mL/min	1-100 mL/min	1-200mL/min	50-1000 mL/min	50-4000 mL/min
Solvent In-port	1/8 inch	1/8 inch	1/4 inch	1/2 inch	1/2 inch
Solvent Out-port	1/8 inch	1/8 inch	1/8 inch	1/4 inch	1/4 inch
Flow Precision	±1%	±1%	±1%	±2%	±2%
Gradient Precision	±1%	±1%	±1%	N/A	N/A
Gradient Type	Binary	Binary	Binary	Isocratic	Isocratic
Gradient Range	0-100%	0-100%	0-100%	N/A	N/A
Number of Solvent Ports	2	2 or 4	2 or 4	1	1
Communication Port	RS232	RS232	RS232	RS232	RS232

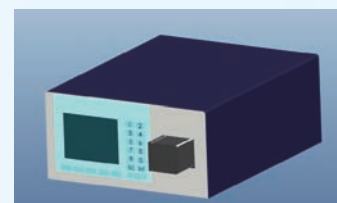
Detector UV and UV-Vis Detectors

Main Features:

- ✓ Reduced Disturbance by Airbubbles
- ✓ Bio Compatible Flowcell Available

Interface and Display Functions:

- ✓ Wavelength Setting and Changing
- ✓ Zeroing
- ✓ Output Frequency
- ✓ Attenuation



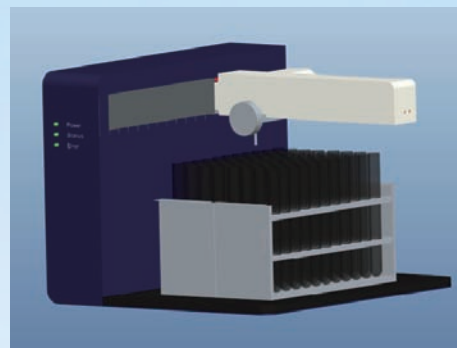
	2 Channel CCD Variable Wavelength UV Detector	UV-Vis Variable Wavelength Detector	UV-Vis Variable Wavelength Detector; Biocompatible	Fix Wavelength Detector
Catalog Number	FS-6200-UV	FS-J-UV_VIS	FS-J-UV_PPT	FS-J-UV254A
Wavelength	190-400 nm	190-700nm	190-700nm	254 nm*
Number of Channels	2	2	2	1
Drifting	2*10 ⁻⁴	2*10 ⁻⁴	2*10 ⁻⁴	2*10 ⁻⁴
Noise	2*10 ⁻⁴	1*10 ⁻⁵	1*10 ⁻⁵	1*10 ⁻⁵
Range	0-2.5 AU	0-2.5AU	0-2.5AU	0-2.5 AU
Flow Connection	1/8 inch stainless steel	1/8 inch stainless steel	1/8 inch PEEK	1/8 inch stainless steel
Communication Port	RS23	RS232	RS232	RS232
Back Pressure	<5psi	<5psi	<5psi	<5psi

* Other wavelength available

Fraction Collector

Interface and Display Functions:

- ◆ Collection Configuration
- ◆ Time/Volume Window
- ◆ Switch Between Force Collection and Waste
- ◆ Displaying Current Position and Configuration
- ◆ Self Defined Configuration Programming



Catalog Number	FS-6200-C100
Collecting Configuration	Preset for 13mm, 15mm, 18mm, 25mm tubes and 100 mL flask; self-configuration program available 15mm test tube: 100
Max Volume of Collection	200mL
Communication Port	RS 232
Max Flow	By peak (threshold, slop), time window, volume; Forced collection and forced waste;
Collection Mode	Forced move forward

PC Software:

Catalog Number	FS-6200-SOFT
Pump Modular	Flow control and instant change, gradient programming and instant change
Fraction Collection Modular	Collection mode programming; forced collection; forced "to waste"; collection configuration; forced arm moving
Detection Modular	Wavelength setting
Current Monitoring	Current chromatogram, flow, gradient, pressure
Reports	Chromatogram, report, method, in PDF file
Other Information Input and Display	User names, solvents, time, sample name, method converting from TLC, column selection etc

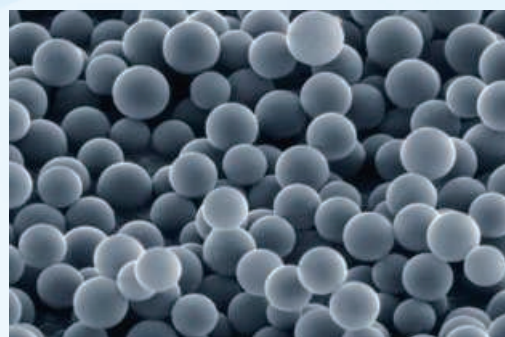
Purification Media and Consumables

Bonna-Agela's unique silica surface modification technology has effectively reduced the acidity of the silica and improved the quality of chromatography media. We provide the products of the highest quality at the best performance to price value. We can customize the products and develop the application methods according to customer's requests. The complete services are our highest pursue.

Bulk Media

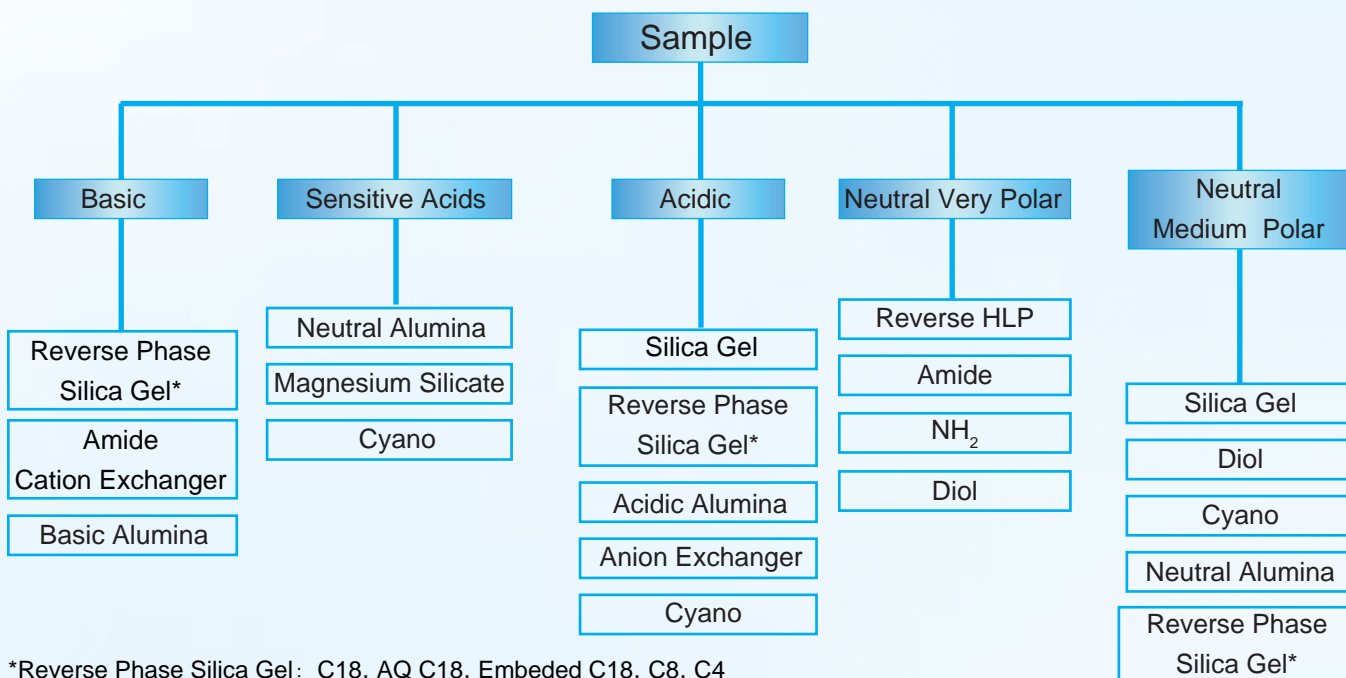
A complete line of bulk materials is available for preparative and process chromatography from gram to multi-kilogram quantities. The materials include the following chemistries of long life-time and excellent reproducibility.

- ◆ Conventional Silica (Irregular and Spherical)
- ◆ Reversed-phase Media (C18, AQ C18, Embedded C18, C8, C4, Poly styzene)
- ◆ Normal Phase Silica (Amide, Diol, NH₂, Cyano)
- ◆ Alumina (Neutral/Acidic/Basic), Diatomite, Florisil
- ◆ Ion Exchange Resin (SCX, SAX)



Remarks: the particle size of packing except the sphere silica gel is 40-60 um, pore diameter is 60 Å; the particle size of sphere silica gel is 20um and pore diameter is 60 Å.

Guidance for Material Selection



Prepacked Flash Chromatographic Columns

Bonna-Agela's unique packing technique ensures the performance of the cartridge and good reproducibility. The tubes made by polypropylene and Teflon materials guarantee the compatibility with various solvents. Our products are widely used with the advantages of high pressure and great performance.

Main Features:

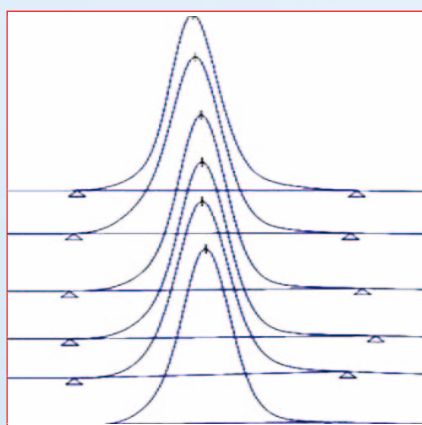
- ✓ High Pressure Tolerance
- ✓ Consistent High Performance
- ✓ Complete Line of Chemistry and Column Sizes
- ✓ In-column Sample Loading Available

Columns Parameters:

Specification	4g	12g	20g	40g	80g	120g	330g
Loading Capacity $\Delta CV=1$	0.01-0.02g	0.03-0.06g	0.05-0.1g	0.1-0.2g	0.2-0.4g	0.3-0.6g	0.75-1.5g
Loading Capacity $\Delta CV=2$	0.02-0.08g	0.06-0.24g	0.1-0.4g	0.2-0.8g	0.4-1.6g	0.6-2.4g	1.5-6.0g
Loading Capacity $\Delta CV=6$	0.08-0.4g	0.24-1.2g	0.4-2.0g	0.8g-4.0g	1.6-8.0g	2.4-12.0g	6.0-33.0g
Column Volume (mL)	8	24	40	80	160	240	600
Lowest Flow Rate (mL/min)	5	8	10	20	25	35	50
Highest Flow Rate (mL/min)	18	20	25	40	50	80	100
Pressure (PSI)	200	200	200	200	200	200	170
Length (cm)	7.0	9.0	11.0	14.0	21.0	23.5	23.5
Diameter	1.5	2.1	2.6	3.1	3.2	4.1	5.7
Diameter Height Ratio	4.7	4.3	4.2	4.5	6.6	5.7	4.1

Loading Capacity Calculation: $\Delta CV=1/Rf_1 - 1/Rf_2$

Matrix: silica gel, 40-60 μ m



Flash Columns Ordering Information

Surface Type	Cat. Number	Silica Amount (g)	Quantity (pk)
Silica(CS)	CS140004-0	4	20
	CS140012-0	12	20
	CS140020-0	20	20
	CS140040-0	40	10
	CS140080-0	80	5
	CS140120-0	120	5
	CS140330-0	330	1
	CS140800-0	800	1
	CS1401500-0	1500	1
Silica(CM)	CM140004-0	4	20
	CM140012-0	12	20
	CM140020-0	20	20
	CM140040-0	40	10
	CM140080-0	80	5
	CM140120-0	120	5
	CM140330-0	330	1
	CM140800-0	800	1
	CM1401500-0	1500	1
C18	CO140004-0	4	20
	CO140012-0	12	20
	CO140020-0	20	20
	CO140040-0	40	10
	CO140080-0	80	5
	CO140120-0	120	5
	CO140330-0	330	1
	CO140800-0	800	1
	CO1401500-0	1500	1
Amide	CH140004-0	4	20
	CH140012-0	12	20
	CH140020-0	20	20
	CH140040-0	40	10
	CH140080-0	80	5
	CH140120-0	120	5
	CH140330-0	330	1
	CH140800-0	800	1
	CH1401500-0	1500	1

*: Particle Size 40-60µm; Pore Size 60Å

Surface Type	Cat. Number	Silica Amount (g)	Quantity (pk)
NH ₂	CN140004-0	4	20
	CN140012-0	12	20
	CN140020-0	20	20
	CN140040-0	40	10
	CN140080-0	80	5
	CN140120-0	120	5
	CN140330-0	330	1
	CN140800-0	800	1
	CN1401500-0	1500	1
C8	C8140004-0	4	20
	C8140012-0	12	20
	C8140020-0	20	20
	C8140040-0	40	10
	C8140080-0	80	5
	C8140120-0	120	5
	C8140330-0	330	1
	C8140800-0	800	1
	C81401500-0	1500	1
Alumina Neutral	CA140004-N	8	20
	CA140012-N	20	20
	CA140020-N	40	20
	CA140040-N	80	10
	CA140080-N	150	5
	CA140120-N	200	5
	CA140330-N	550	1
	CA140800-N	1300	1
	CA1401500-N	2500	1
Alumina Basic	CA140004-B	8	20
	CA140012-B	20	20
	CA140020-B	40	20
	CA140040-B	80	10
	CA140080-B	150	5
	CA140120-B	200	5
	CA140330-B	550	1
	CA140800-B	1300	1
	CA1401500-B	2500	1

*: Particle Size 40-60µm; Pore Size 60Å

Surface Type	Cat. Number	Silica Amount (g)	Quantity (pk)
Alumina Acidic	CA140004-A	8	20
	CA140012-A	20	20
	CA140020-A	40	20
	CA140040-A	80	10
	CA140080-A	150	5
	CA140120-A	200	5
	CA140330-A	550	1
	CA140800-A	1300	1
	CA1401500-A	2500	1
SAX	CS140004-AX	4	20
	CS140012-AX	12	20
	CS140020-AX	20	20
	CS140040-AX	40	10
	CS140080-AX	80	5
	CS140120-AX	120	5
	CS140330-AX	330	1
	CS140800-AX	800	1
	CS1401500-AX	1500	1
SCX	CS140004-CX	4	20
	CS140012-CX	12	20
	CS140020-CX	20	20
	CS140040-CX	40	10
	CS140080-CX	80	5
	CS140120-CX	120	5
	CS140330-CX	330	1
	CS140800-CX	800	1
	CS1401500-CX	1500	1
C4	C4140004-0	4	20
	C4140012-0	12	20
	C4140020-0	20	20
	C4140040-0	40	10
	C4140080-0	80	5
	C4140120-0	120	5
	C4140330-0	330	1
	C4140800-0	800	1
	C41401500-0	1500	1

*: Particle Size 40-60µm; Pore Size 60Å

Surface Type	Cat. Number	Silica Amount (g)	Quantity (pk)
Sphere Silica	SS130004-0	4	20
	SS130012-0	12	20
	SS130020-0	20	20
	SS130040-0	40	10
	SS130080-0	80	5
	SS130120-0	120	5
	SS130330-0	330	1
	SS130800-0	800	1
	SS1301500-0	1500	1
C18 Sphere Silica	SO130004-0	4	20
	SO130012-0	12	20
	SO130020-0	20	20
	SO130040-0	40	10
	SO130080-0	80	5
	SO130120-0	120	5
	SO130330-0	330	1
	SO130800-0	800	1
	SO1301500-0	1500	1
AQ C18 Sphere Silica	SQ130004-0	4	20
	SQ130012-0	12	20
	SQ130020-0	20	20
	SQ130040-0	40	10
	SQ130080-0	80	5
	SQ130120-0	120	5
	SQ130330-0	330	1
	SQ130800-0	800	1
	SQ1301500-0	1500	1

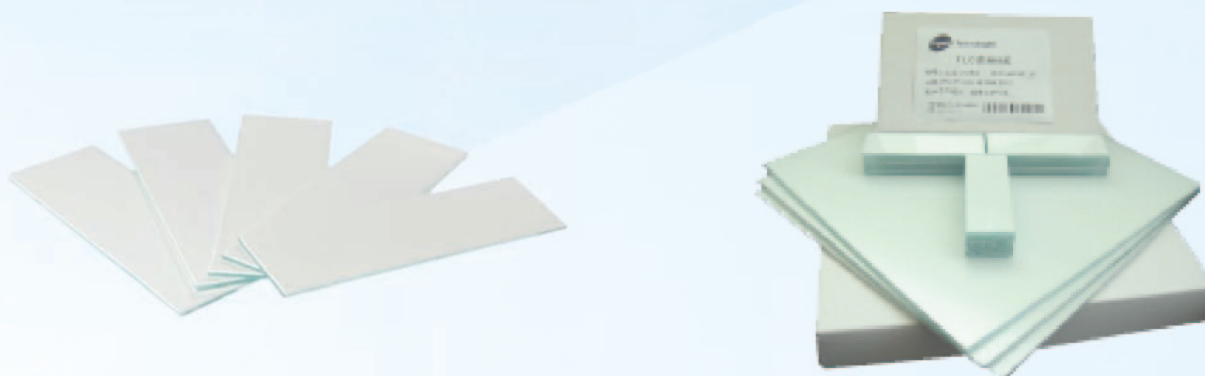
*: Particle Size 20-45µm; Pore Size 60Å Sphere Silica

TLC Plates

Bonna-Agela's TLC plate is made of 1mm thick smooth glass coated with 10µm silica bonded with different functional groups. Analytical TLC plate's silica layer is 250µm thick, used for the separation of small quantity sample; preparative TLC plate's silica layer is 1000µm or 2000µm thick, used for the separation of as much as several hundred milligrams' sample.

We can provide the TLC plates with the specifications ranging from 25x75 mm to 200x200 mm in size and with the types of G, GF254, according to the application need.

According to customers' need, we developed many kinds of coating materials, such as silica, deactivated silica, HILIC, NH2 etc. They can be used in the separation and purification process of most compound.



TLC plates

Media	Cat.No.	Specification/mm	Pack (pieces/box)
Conventional Silica Gel	T-CS7525-0	25x75mm,60Å,G	50
	T-CSF7525-0	25x75mm, 60Å,GF254	50
Deactivated Silica Gel	T-CM7525-0	25x75mm, 60Å,G	50
	T-CMF7525-0	25x75mm, 60Å,GF254	50
Amide Bonded Silica Gel	T-CH7525-0	25x75mm,60Å,G	50
	T-CHF7525-0	25x75mm, 60Å,GF254	50
Amino Bonded Silica Gel	T-NH7525-0	25x75mm,60Å,G	50
	T-NHF7525-0	25x75mm, 60Å,GF254	50

* Glass Separation Cartridge of Bonna-Agela Technologies

Glass Columns

In addition to the pre-packed columns, glass separation columns take significant part in the separation application for the following reasons:

- ◆ Reusable: one column tube can be used many times, saving the cost.
- ◆ Visibility: can directly “see” the separation result, when separate the colorful products.

The glass columns offered by Bonna-Agela Technologies have been widely applied in every field, featuring:

- ◆ Featured column head design for improving the efficiency and better sample distribution
- ◆ Convenient and fast solid sample loading
- ◆ High loading capacity



Name	Cat.No.	Pressure (bar)	Inner diameter of cartridge(mm)	Length (mm)	Capacity of silica(40-60um)(g)
Glass Cartridge	G31015-1	50-40	15	310	45
	G46015-1	50-40	15	460	70
	G31026-1	40-30	26	310	130
	G46026-1	40-30	26	460	200
	G46036-1	40-30	36	460	350
	G31049-1	30-20	49	310	450
	G46049-1	30-20	49	460	650

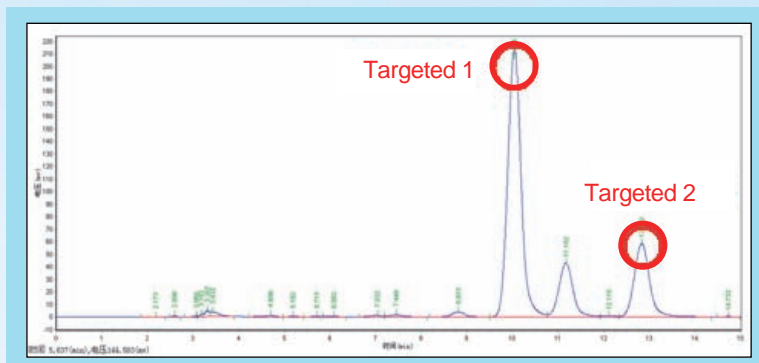
* We can also supply the glass column packing equipment, which makes use of the compressed gas to pack the glass column with packing materials of 20-200um particle size.

Application Examples

The Separation of Phenolic Compounds in Sesame Oil

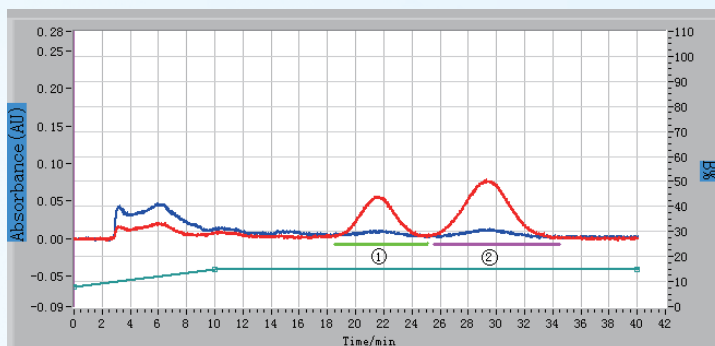
The HPLC Analysis of Crude Sample

Columns: Venusil XBP C18, 3um
Mobile Phase: methanol: water=75:25
Wavelength: 287nm
Flow Rate: 0.6mL/min



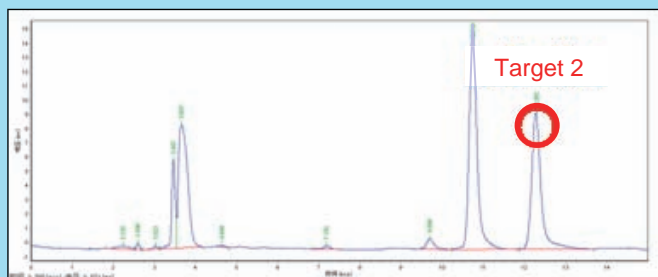
Purification Method:

Columns: CS140012-0x3
Mobile Phase: Petroleum ether - ethyl acetate
Wavelength: 287, 254nm
Flow Rate: 15mL/min
Sample Loading: 1mL crude sample
Collection: peak collection by threshold

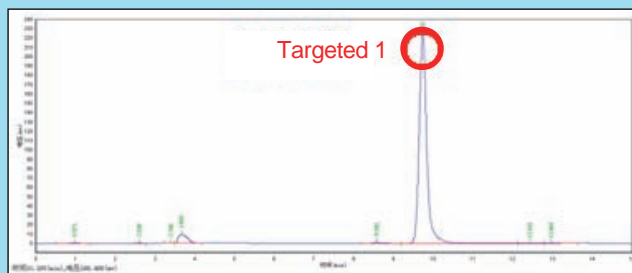


The Analysis of Sample after Purification

Columns: Venusil XBP C18, 3um
Mobile Phase: methanol: water =75:25
Wavelength: 287nm
Flow rate: 0.6mL/min



The HPLC analysis of fraction ②



The HPLC analysis of fraction ①

Further Purification of Fraction ②

Purification Method:

Columns: neutral alumina column (CA140012-N)

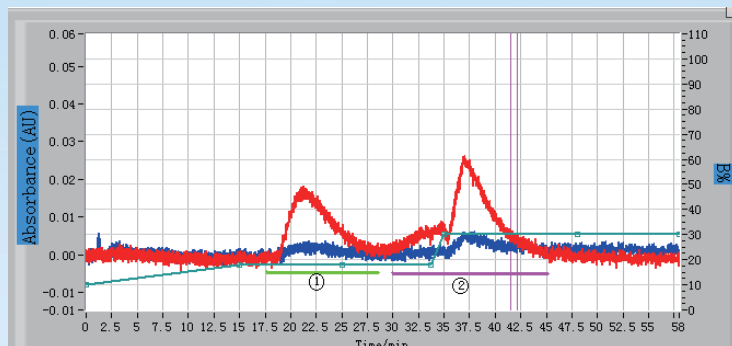
Mobile Phase: petroleum ether - ethyl acetate

Wavelength: 287 nm, 254nm

Flow Rate: 15mL/min

Sample Loading: 1mL

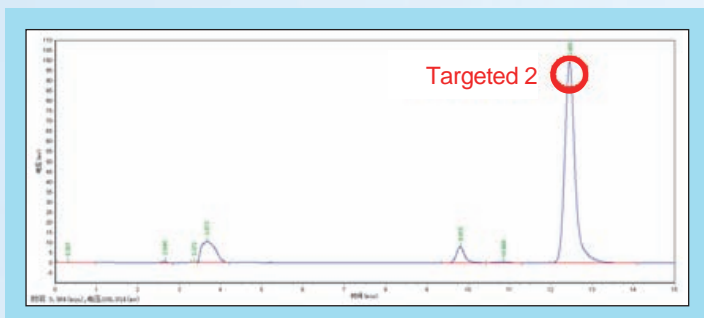
Collection: total collection, 10mL/tube



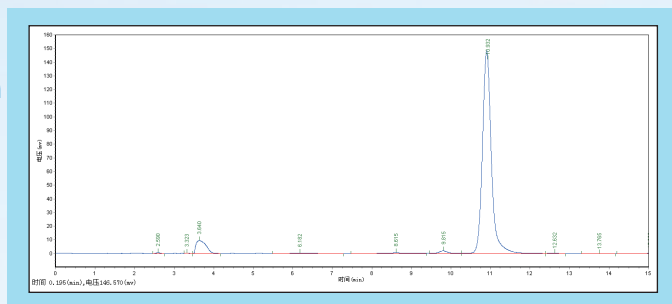
The HPLC Analysis after Secondary Purification

Columns: Venusil XBP C18, 3um

Mobile Phase: methanol: water=:75:25



The HPLC analysis of product ②



The HPLC analysis of product ①

The Separation Applications of Sample with Synthetic Mixture of Acidic Compounds

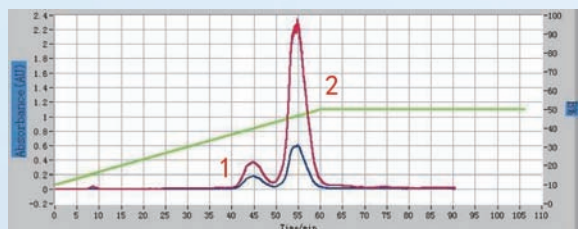
Purification Method:

Columns: CS140330-0

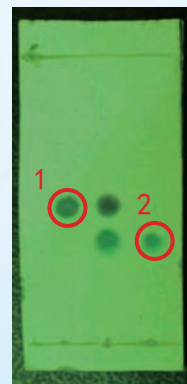
Mobile Phase: petroleum ether - ethyl acetate

Wavelength: 254nm, 280nm

Loading Amount: 6g



The TLC Analysis of the Mixtures of Fraction 1,2



The Separation Application of Complex Sample (Aherbal Extracts)

The HPLC Analysis of Crude Sample

Column : Venusil ASB -C18, 5um

Mobile Phase: methanol-water

Wavelength: 220nm

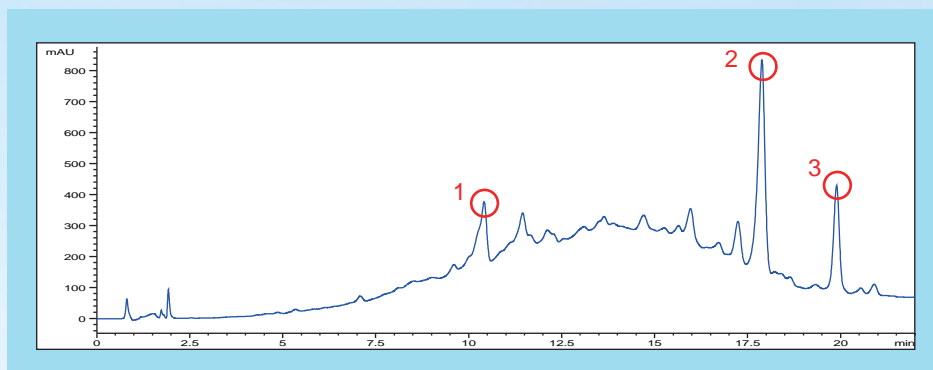
Flow Rate: 1mL/min

Mobile Phase Gradient:

0~30min 30~90% (methanol)

30~40min 90% (methanol)

40~45min 30% (methanol)



Purification Method:

Column: CO140012-0X3

Mobile Phase: methanol – water

Wavelength: 220nm, 205nm

Flow Rate: 15mL/min

Collection: total collection, 15 mL/tube



The HPLC Analysis of the Mixtures of Fraction 1, 2, 3

Column: Venusil ASB C18, 5um

Mobile Phase: methanol – water

Wavelength: 220nm

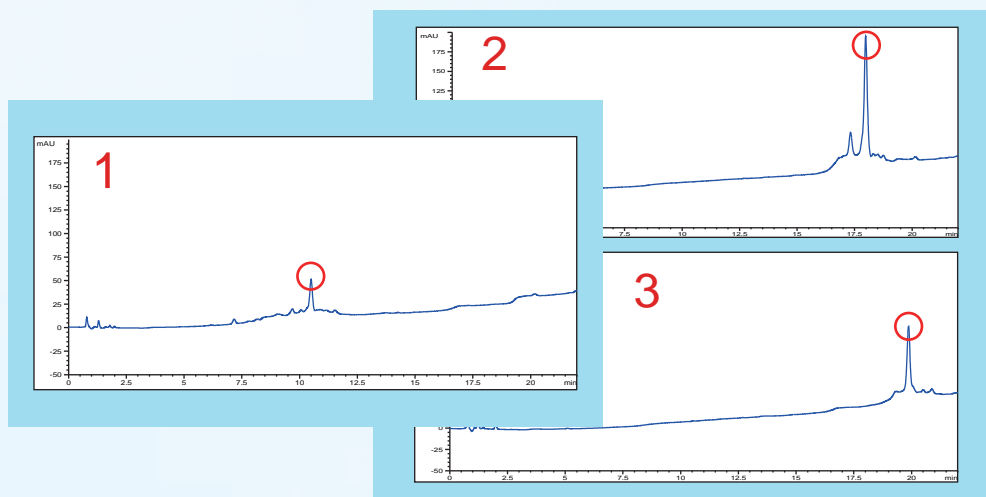
Flow Rate: 1mL/min

Mobile Phase Gradient:

0~30min 30~90% (methanol)

30~40min 90% (methanol)

40~45min 30% (methanol)



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