

Notice of discontinuation of Develosil 100 Diol and 300 Diol

Dear Valued Customers,

In order to stay efficient in our production processes, we have decided to discontinue offering Develosil 100 Diol and 300 Diol columns. Production of these columns will conclude on December 31, 2021. We will continue to take orders for these products only until our packing material stock is depleted.

We recommend reviewing the specifications of FlexFire 120 SEC and 300 SEC columns. These columns may work as effective substitutes for your projects. Please visit our website (<https://develosil.us/>).

Production end date	12/31/2021
Sales end date	Sales will end when packing material stock runs out.
Recommended substitutes	FlexFire 120 SEC, 300 SEC

Please see the attached list for detailed information on discontinued products.

We apologize for any inconvenience this may cause to our valued customers. We appreciate and value our business relationship and appreciate your understanding in this matter.

Please contact us if you have additional questions.

Develosil USA
10060 Carroll Canyon Rd. Ste. 100 San Diego, CA
92131
Phone: 858-800-2433
Web: <https://develosil.us/>

List of discontinued products

Develosil 100 Diol

Part Number	Stationary Phase Name	Particle Size (um)	Type of Column		i.d. (mm)	Length (mm)
DI11520050W	100Diol-5	5	semi-micro		2.0	50
DI11520100W	100Diol-5	5	semi-micro		2.0	100
DI11520150W	100Diol-5	5	semi-micro		2.0	150
DI11520250W	100Diol-5	5	semi-micro		2.0	250
DI11546050W	100Diol-5	5	analytical	compression	4.6	50
DI11546100W	100Diol-5	5	analytical	compression	4.6	100
DI11546150W	100Diol-5	5	analytical	compression	4.6	150
DI11546250W	100Diol-5	5	analytical	compression	4.6	250
DI11580035W	100Diol-5	5	semi-prep		8.0	35
DI11580150W	100Diol-5	5	semi-prep		8.0	150
DI11580300W	100Diol-5	5	semi-prep		8.0	300
DI115P1250W	100Diol-5	5	semi-prep		10.0	250
DI115P2250W	100Diol-5	5	prep		20.0	250

Develosil 100Diol Guard column

Part Number	Stationary Phase Name	Particle Size (um)	Type of Column		i.d.	Length
Packing Type						
DI11546010W	100Diol-5	5	Guard column	for i.d. 4.0mm, 4.6mm, 6.0mm	4.6	10
DI11580010W	100Diol-5	5	Guard column	for i.d. 8.0mm, 10.0mm	8.0	50
DI115P2050W	100Diol-5	5	Guard column	for i.d. 20.0mm	20.0	50

Develosil 300 Diol

Part Number	Stationary Phase Name	Particle Size (um)	Type of Column		i.d.	Length
DI31520050W	300Diol-5	5	semi-micro		2.0	50
DI31520100W	300Diol-5	5	semi-micro		2.0	100
DI31520150W	300Diol-5	5	semi-micro		2.0	150
DI31520250W	300Diol-5	5	semi-micro		2.0	250
DI31546050W	300Diol-5	5	analytical	compression	4.6	50
DI31546100W	300Diol-5	5	analytical	compression	4.6	100
DI31546150W	300Diol-5	5	analytical	compression	4.6	150
DI31546250W	300Diol-5	5	analytical	compression	4.6	250
DI31580035W	300Diol-5	5	semi-prep		8.0	35
DI31580150W	300Diol-5	5	semi-prep		8.0	150
DI31580300W	300Diol-5	5	semi-prep		8.0	300

DI315P1250W	300Diol-5	5	semi-prep		10.0	250
DI315P2250W	300Diol-5	5	prep		20.0	250

Develosil 300Diol Guard column

Part Number	Stationary Phase Name	Particle Size (um)	Type of Column		i.d.	Length
Packing Type						
DI31546010W	300Diol-5	5	Guard column	for i.d. 4.0mm,4.6 mm, 6.0mm	4.6	10
DI31580010W	300Diol-5	5	Guard column	for i.d. 8.0mm,10.0mm	8.0	50
D315P2050W	300Diol-5	5	Guard column	for i.d. 20.0mm	20.0	50

Columns for HPLC/UHPLC



FlexFire 300 SEC

FlexFire 120 SEC



FlexFire 300 SEC FlexFire 120 SEC

SEC (size exclusion chromatography) column for easy analysis of high molecular weight compounds

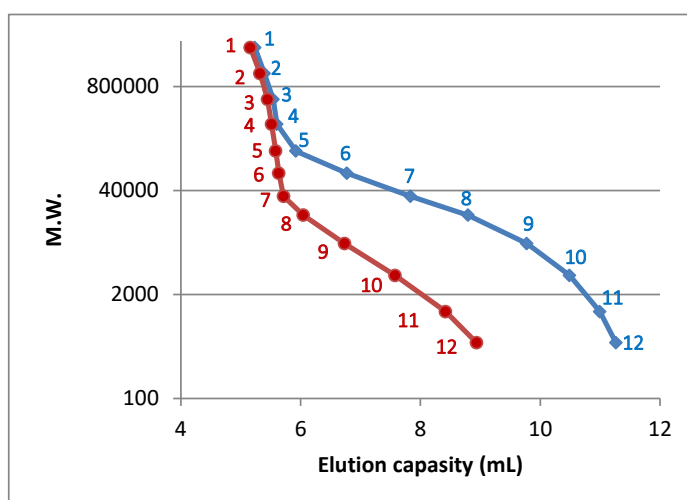
The FlexFire 300 SEC and 120 SEC columns are designed to separate high molecular weight compounds such as proteins and antibodies, as well as low-molecular weight compounds, based on their "size" in solution. These SEC columns are mainly used for isocratic elution and the methods are easy to construct. The results obtained are simple and ideal for the analysis of biological macromolecules such as intact proteins and antibodies.

Specifications

	Flex Fire 300 SEC	Flex Fire 120 SEC
Particle Size	5 µm	5 µm
Chemistry	Diol	Diol
Surface Area	170 m ² /g	340 m ² /g
Pore Volume	1.4 mL/g	1.0 mL/g
Pore Diameter	30 nm	12 nm
Carbon	6 %	9 %
End-cap	No	No
pH Range	pH2-10	pH2-10
Temperature	< 80 °C	< 80 °C
Pressure	< 300 bar (4,351 psi)	< 300 bar (4,351 psi)

The FlexFire series uses a newly developed silica gel based material.

With its higher purity and higher strength than conventional materials, the FlexFire series provides sharp peaks, improved sensitivity, and better alkali resistance, all of which are currently required.



■ Polystyrene calibration curve

Conditions:

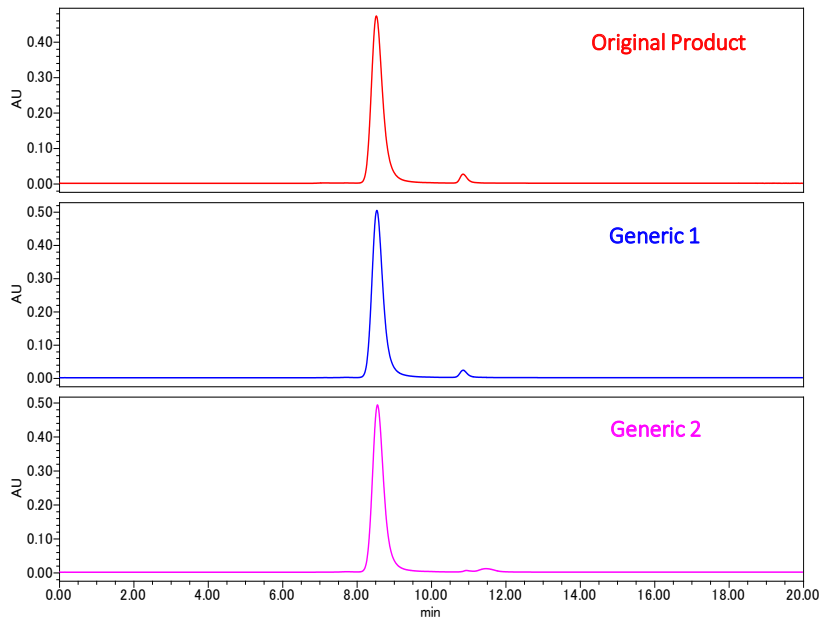
Column: FlexFire 300 SEC, 5 µm
FlexFire 120 SEC, 5 µm
Size: 7.8 x 300 mm
Mobile phase: THF
Flow rate: 1.0 mL/min
Temperature: 30 °C
Detection: UV254 nm

System: Waters alliance e2695

Sample: Polystyrene (M.W.)

1. 2,460,000
2. 1,170,000
3. 554,000
4. 271,000
5. 125,000
6. 66,000
7. 34,000
8. 19,700
9. 8,670
10. 3,460
11. 1,220
12. 498

Analysis of anti-CD20 monoclonal antibody (Rituximab)



Conditions;

Column: FlexFire 300 SEC, 5 μ m (4.6x250 mm)

Mobile phase: 100 mM HCOONH₄

Flow rate: 0.3 mL/min

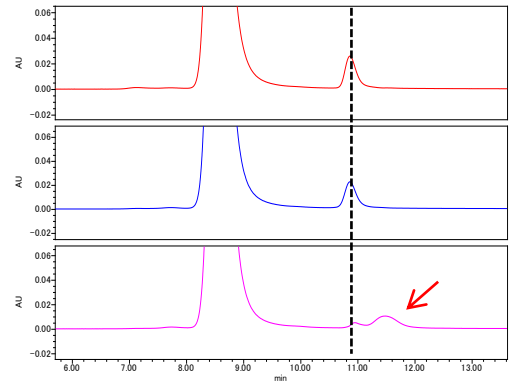
Temperature: 30 °C

Detection: UV280 nm

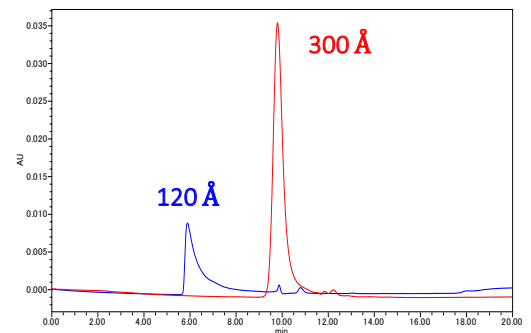
Sample: Anti-CD20 monoclonal antibody

Injection volume: 10 μ L

System: Waters alliance e2695



A peak was detected in Generic 2 that was not present in the other formulations.

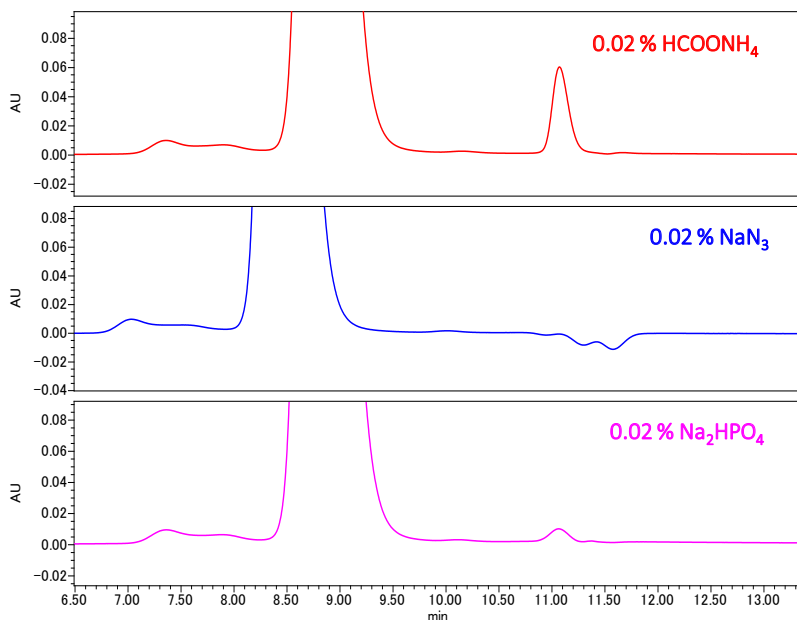


The choice of pore size should be based on the molecular weight of the compound.

The FlexFire 300 SEC is best for proteins, antibodies and subunits. The FlexFire 120 SEC is best for nucleic acids and peptides.

The data above is a comparison of NISTmAb (250 μ g/mL) at 300 Å and 120 Å.

Effect of mobile phase type on peak



Conditions;

Column: FlexFire 300 SEC, 5 μ m (4.6x250 mm)

Mobile phase: 0.02 % HCOONH₄

0.02 % NaN₃

0.02 % Na₂HPO₄, pH7.0

Flow rate: 0.3 mL/min

Temperature: 30 °C

Detection: UV280 nm

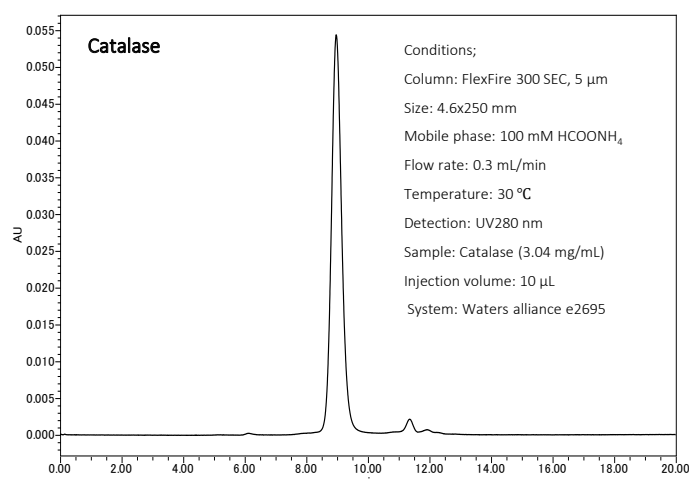
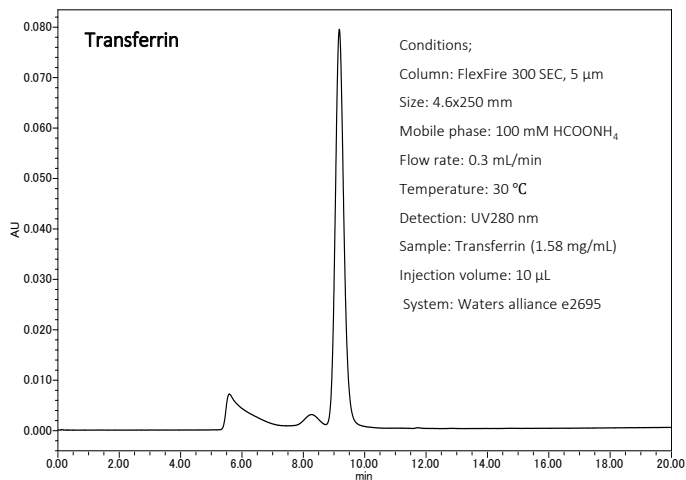
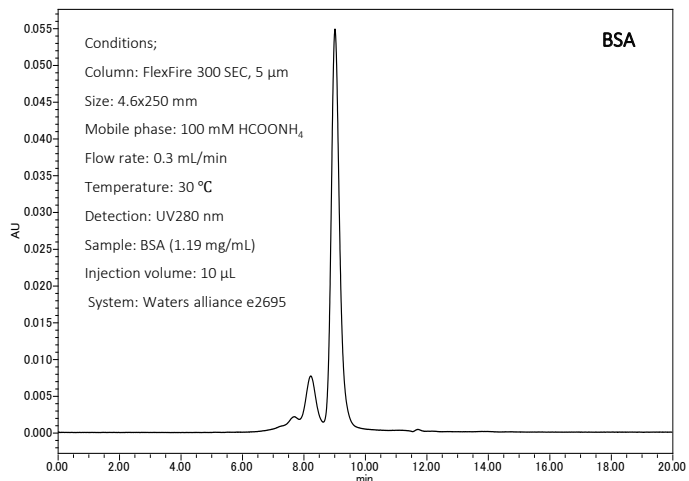
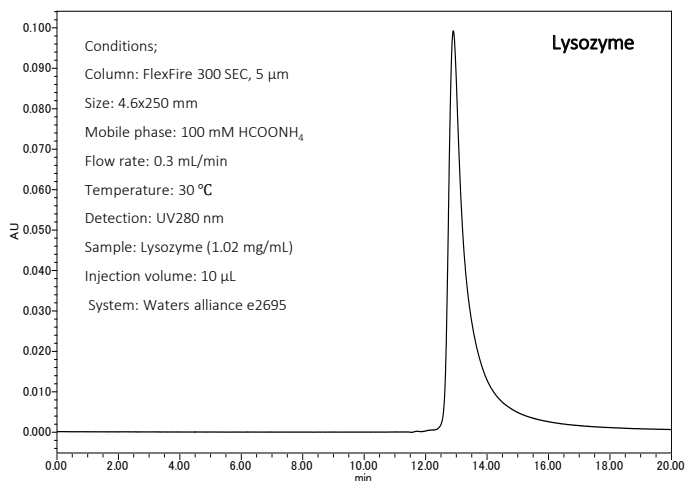
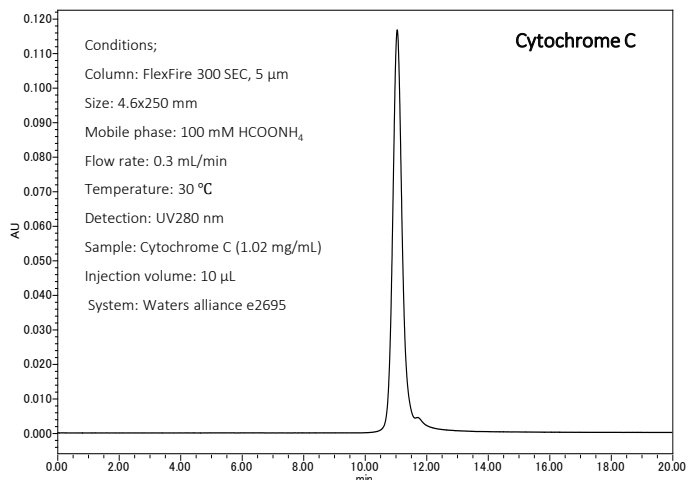
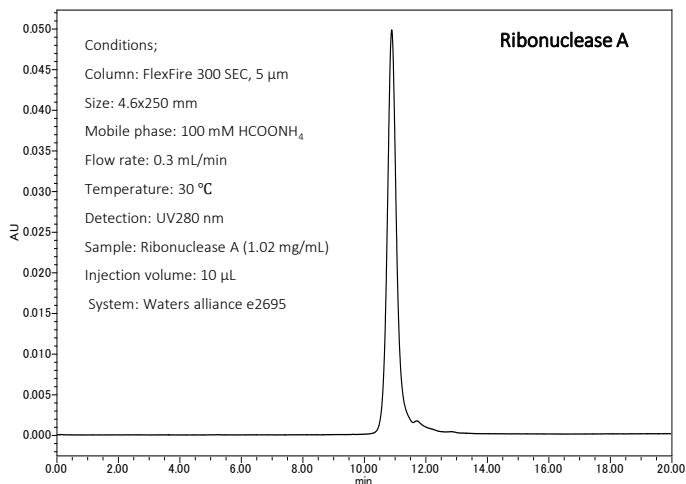
Sample: Anti-CD20 monoclonal antibody

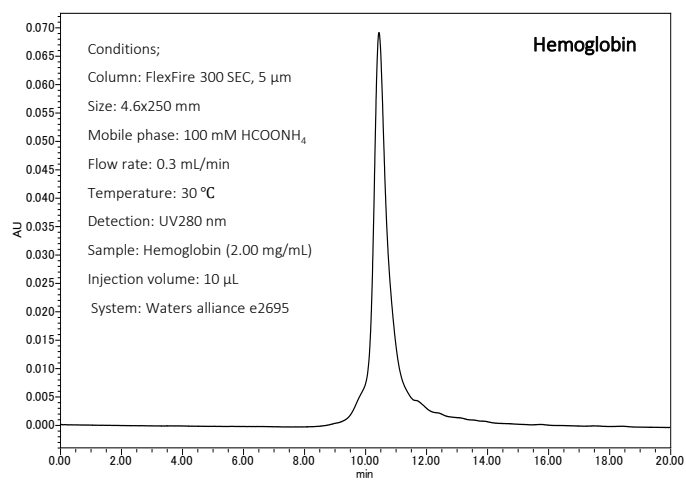
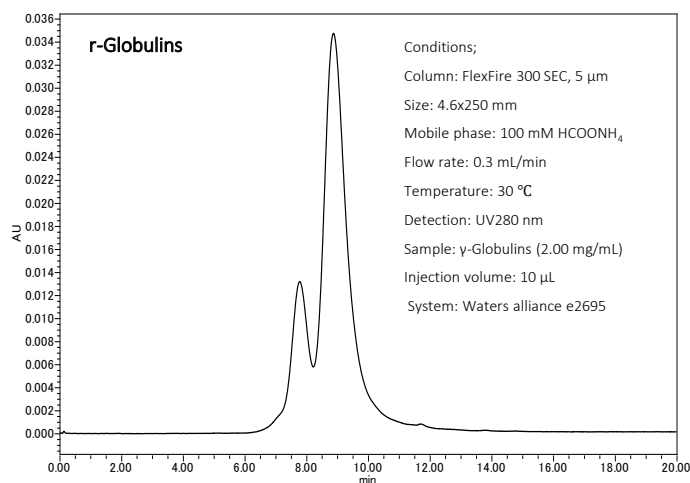
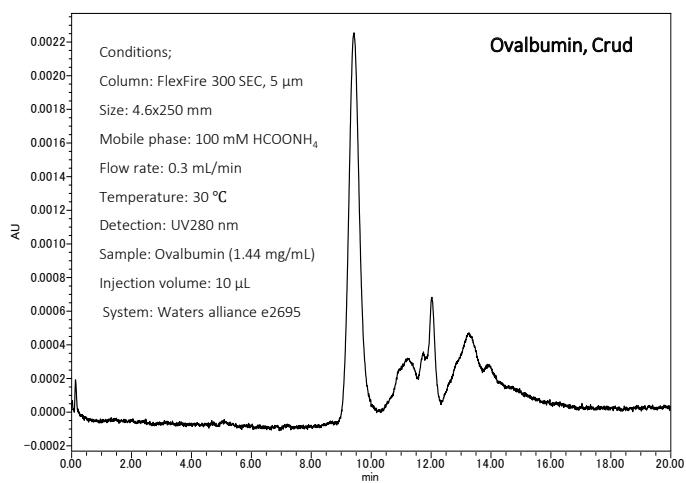
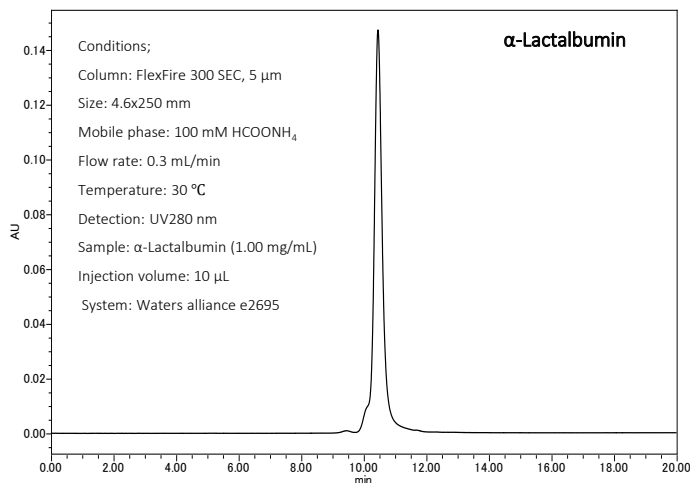
Injection volume: 10 μ L

System: Waters alliance e2695

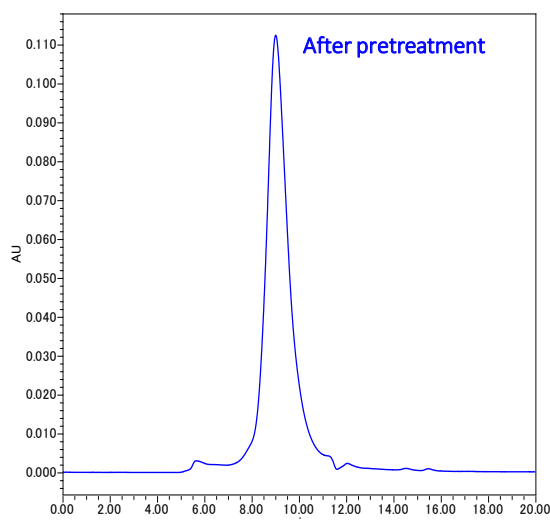
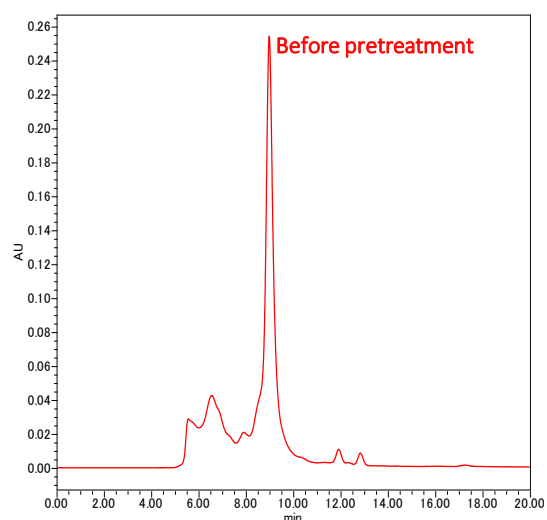
SEC columns, which are often used with phosphate buffer, can give good results with ammonium formate. It also avoids the risk of precipitation when the detector is LC/MS or CAD.

Applications





Analysis of IgG antibodies in human serum

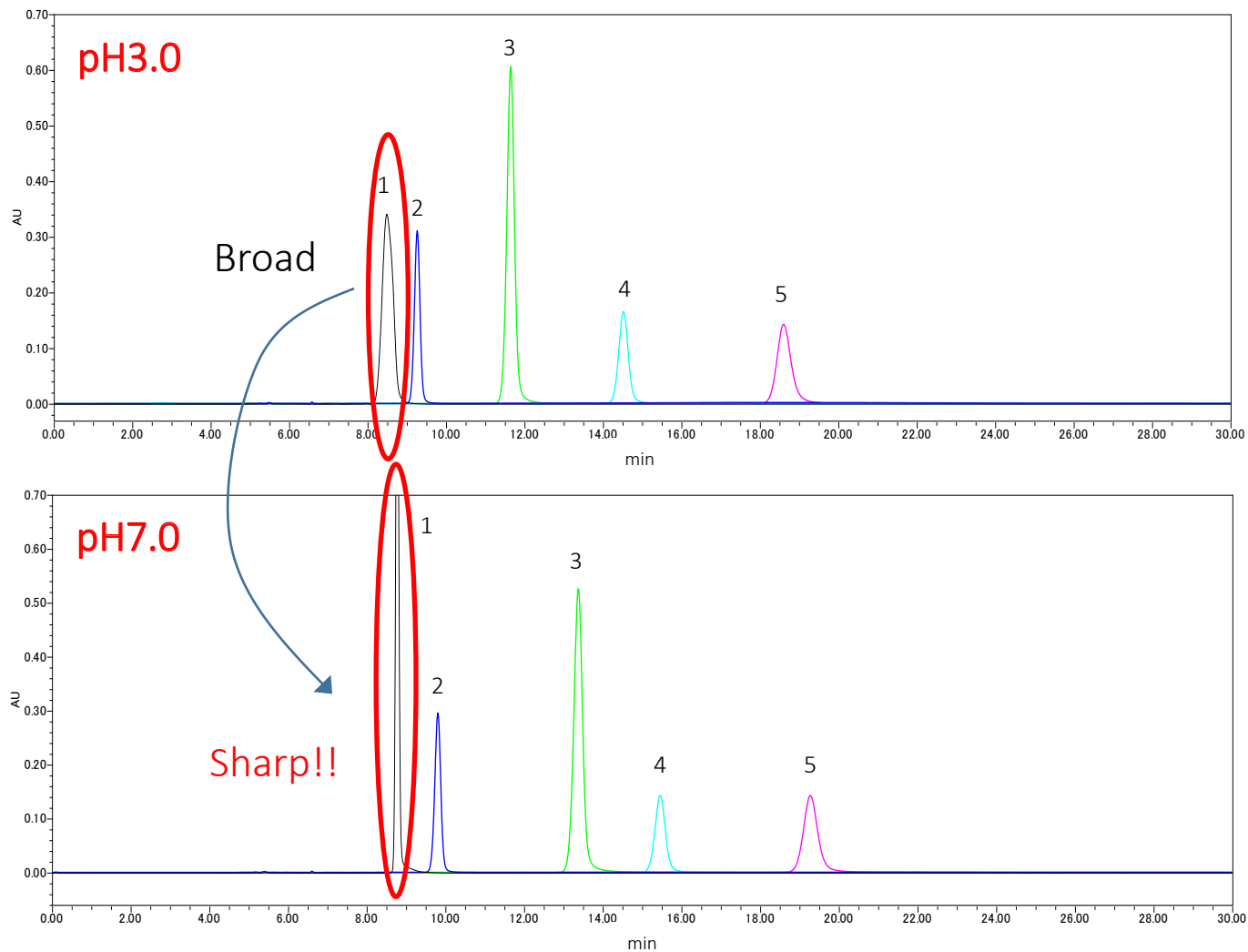


If you know your target, you can use a purification kit before analysis by SEC column.

Conditions;
 Column: FlexFire 300 SEC, 5 μm Size: 4.6x250 mm
 Mobile phase: 100 mM HCOONH₄ Flow rate: 0.3 mL/min
 Temperature: 30 °C Detection: UV280 nm
 Sample: Serum "COVID-19" positive patient
 Injection volume: 10 μL System: Waters alliance e2695

Pretreatment: MonoSpin ProA from G.L. Science Co. was used to purify the antibodies.
 *MonoSpin is a registered trademark of G.L. Science Corporation.

FlexFire 120 SEC for HILIC separations



Conditions;

Column: FlexFire 120 SEC, 5 μ m 4.6x250 mm

Mobile phase: Acetonitrile/ HCOONH_4 , pH3.0 or 7.0

Flow rate: 0.5 mL/min

Temperature: 30 $^{\circ}$ C

Detection: UV260 nm

Sample: 1. Thymine (0.53 mg/mL)

2. Uracil (0.22 mg/mL)

3. Uridine (1.06 mg/mL)

4. 5-FluoroCytosine (0.47 mg/mL)

5. Adenine (0.16 mg/mL)

Injection volume: 2.0 μ L

System: Waters alliance

The FlexFire SEC series can also be used as HILIC columns, and peak shapes can be improved by changing pH.

In addition to baseline stability under a wide range of conditions from acidic to alkaline, it is suitable for HILIC mode analysis of both neutral and basic compounds.

Develosil USA

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