

for HPLC/UHPLC



FlexFire 300SEC
FlexFire 120SEC

NOMURA CHEMICAL CO., LTD



FlexFire 300SEC FlexFire 120SEC

Easily analyze high molecular weight compounds with SEC (Size Exclusion Chromatography) columns

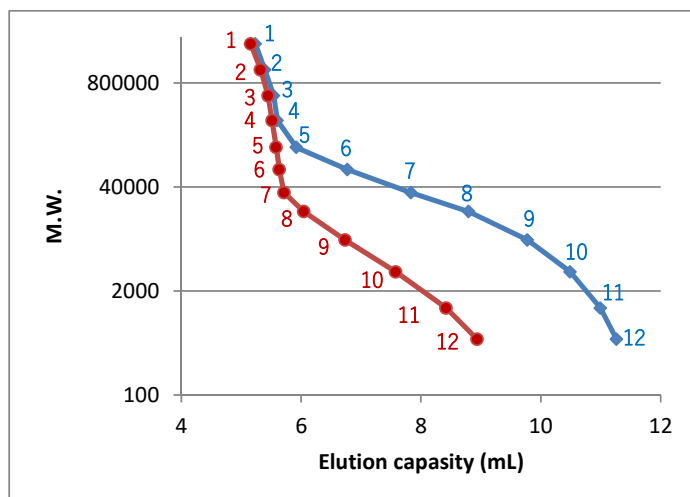
FlexFire 300SEC, 120SEC is a column that separates high molecular compounds such as proteins and antibodies and low molecular compounds by "size" in solution. This SEC column is mainly isocratic elution, and the method can be easily constructed. In addition, the results obtained are simple, making it ideal for the analysis of biopolymers such as intact proteins and antibodies.

Spec

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

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

The base material, which has achieved lower impurities and improved strength than before, has specifications that meet current needs, such as producing sharp peaks, improving sensitivity, and improving alkali resistance.



■ Polystyrene calibration curve

Conditions:

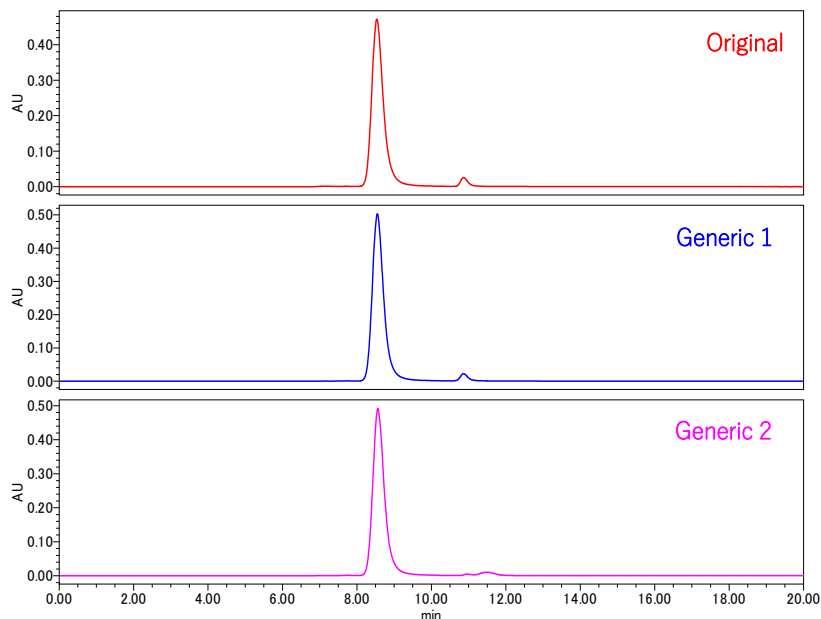
Column: FlexFire 300SEC, 5µm
FlexFire 120SEC, 5µm
Size: 7.8x300
Mobile phase: THF
Flow rate: 1.0mL/min
Temperature: 30°C
Detection: UV254nm

System: Waters alliance e2695

Sample: Polystyrene

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 300SEC, 5 μ m (4.6x250mm)

Mobile phase: 100mM HCOONH₄

Flow rate: 0.3mL/min

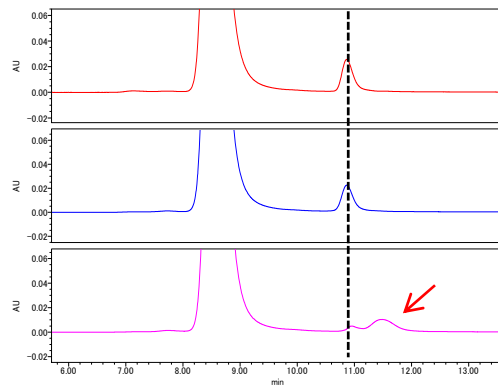
Temperature: 30°C

Detection: UV280nm

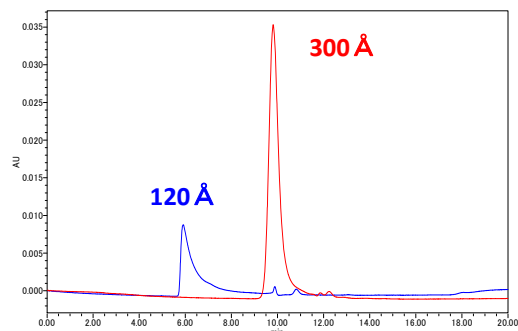
Sample: Anti-CD20 monoclonal antibody

Injection volume: 10 μ L

System: Waters alliance e2695



Detected a peak in Generic 2 that is not found in other formulations.



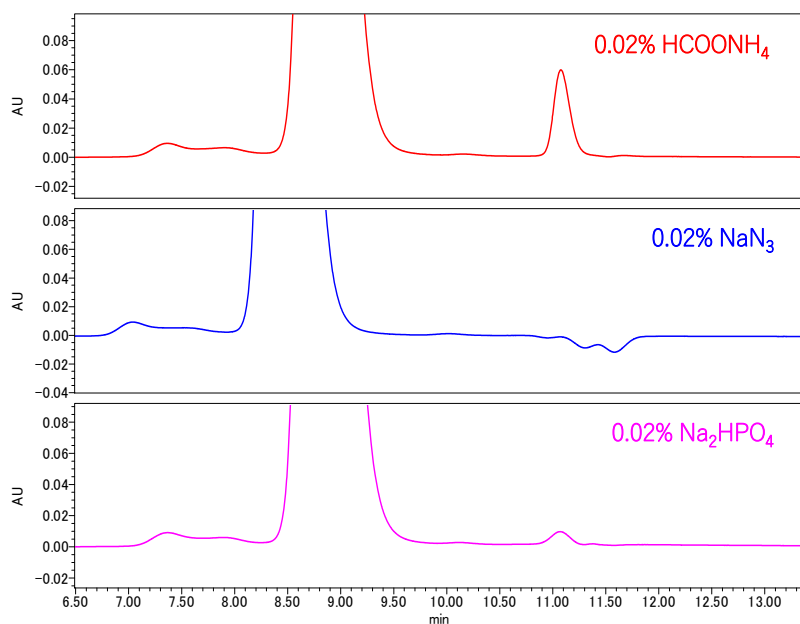
The choice of pore size should be selected according to the molecular weight of the compound.

FlexFire 300SEC/Protein, mAb · Subunit etc

FlexFire 120SEC/Nucleic acid, Peptide etc

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

Effect of mobile phase type on peak



Conditions;

Column: FlexFire 300SEC, 5 μ m (4.6x250mm)

Mobile phase: 0.02% HCOONH₄

0.02% NaN₃

0.02% Na₂HPO₄, pH7.0

Flow rate: 0.3mL/min

Temperature: 30°C

Detection: UV280nm

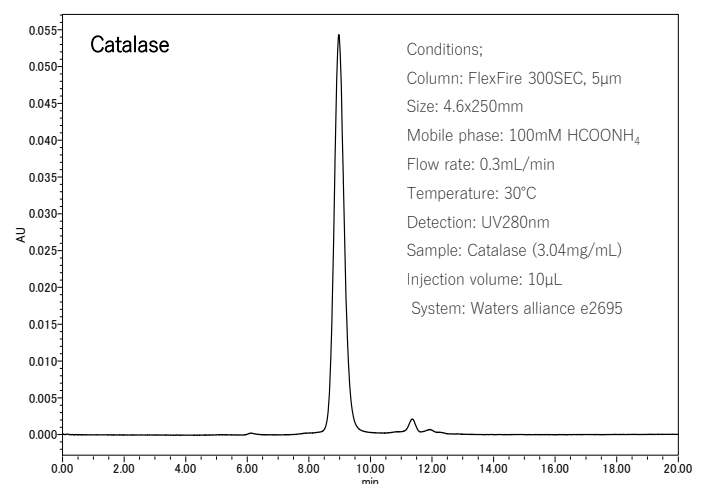
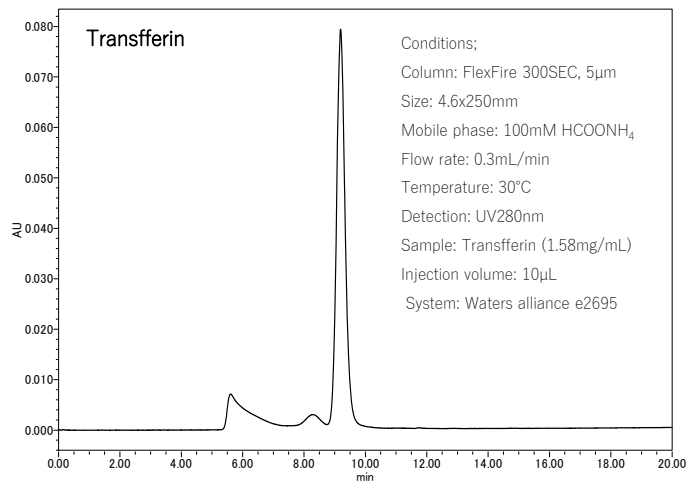
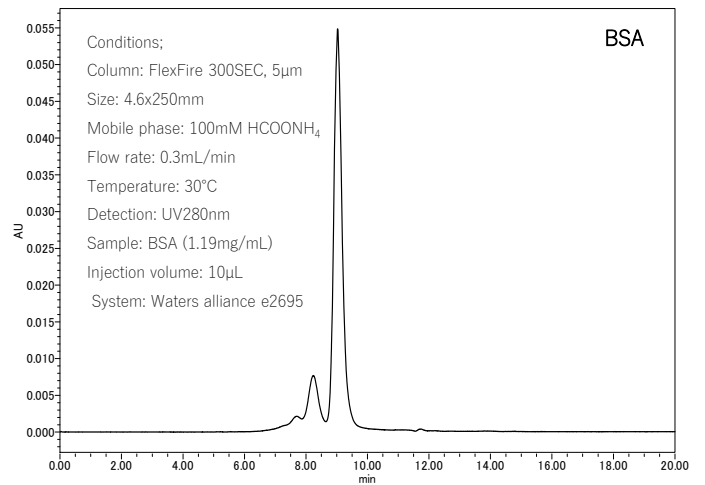
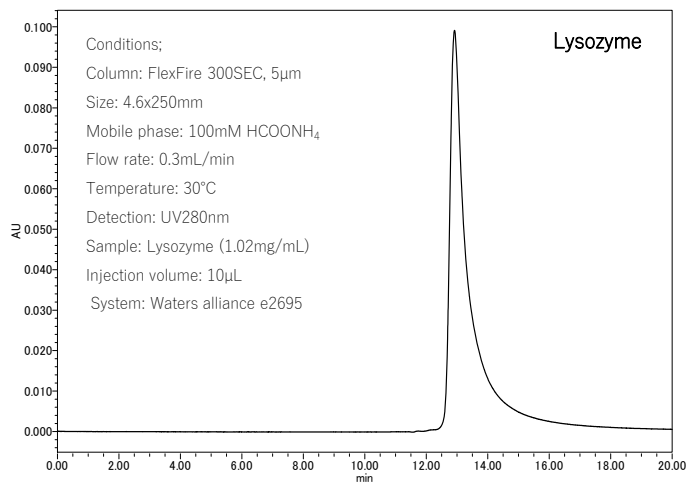
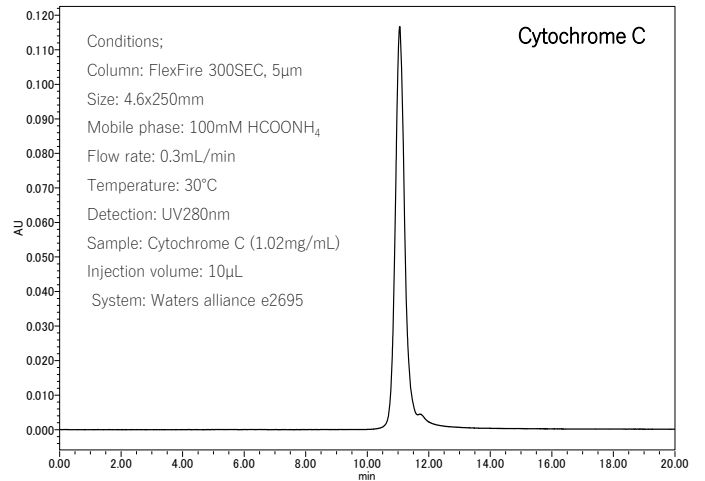
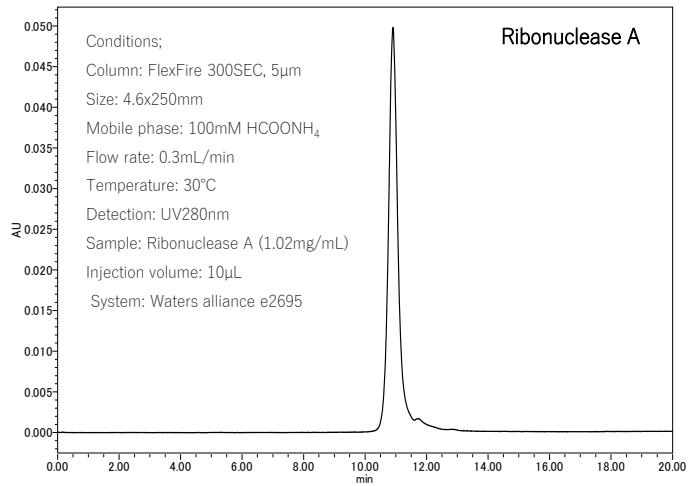
Sample: Anti-CD20 monoclonal antibody

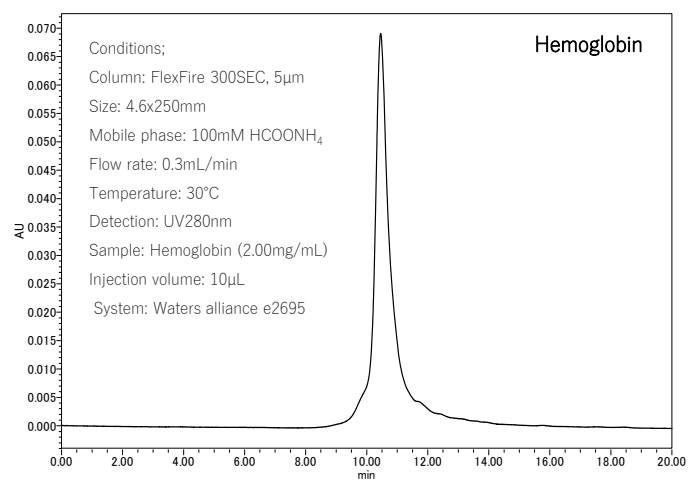
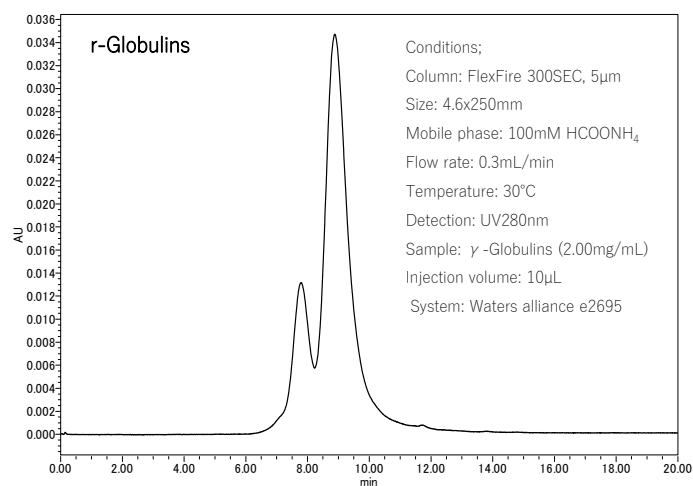
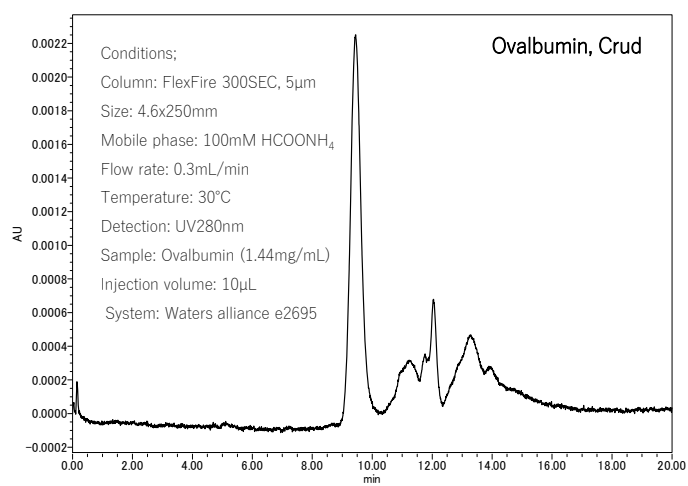
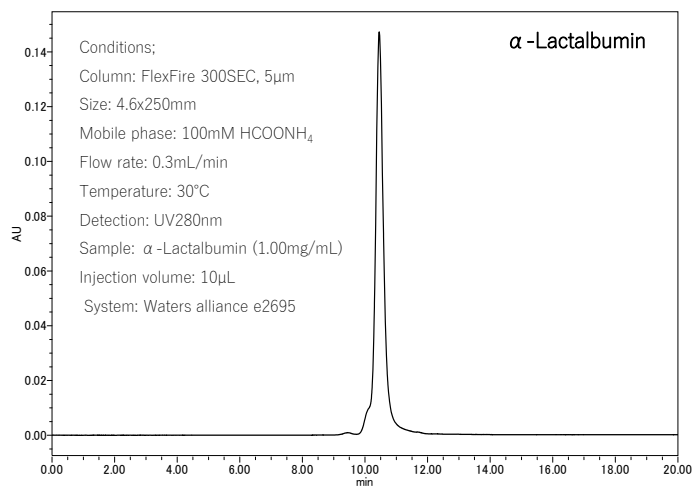
Injection volume: 10 μ L

System: Waters alliance e2695

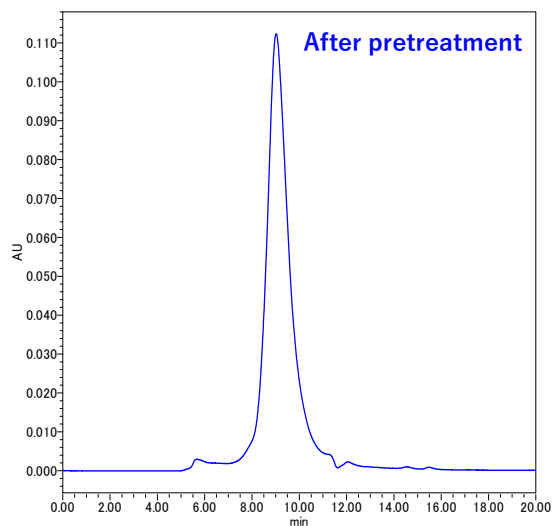
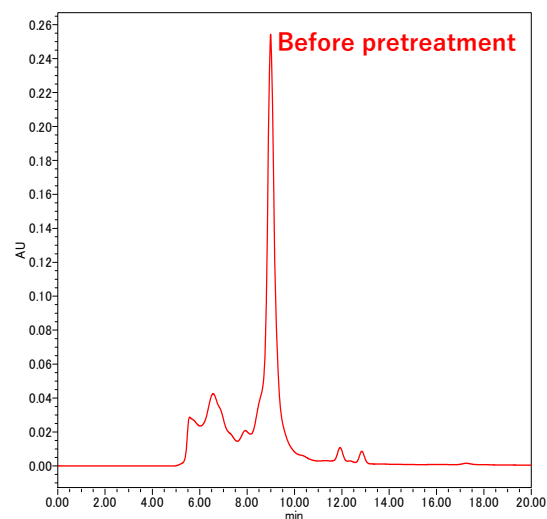
SEC columns that make heavy use of phosphate buffers can also give good results with ammonium formate. The risk of precipitation when the detector is LC / MS or CAD can also be avoided.

Application Data



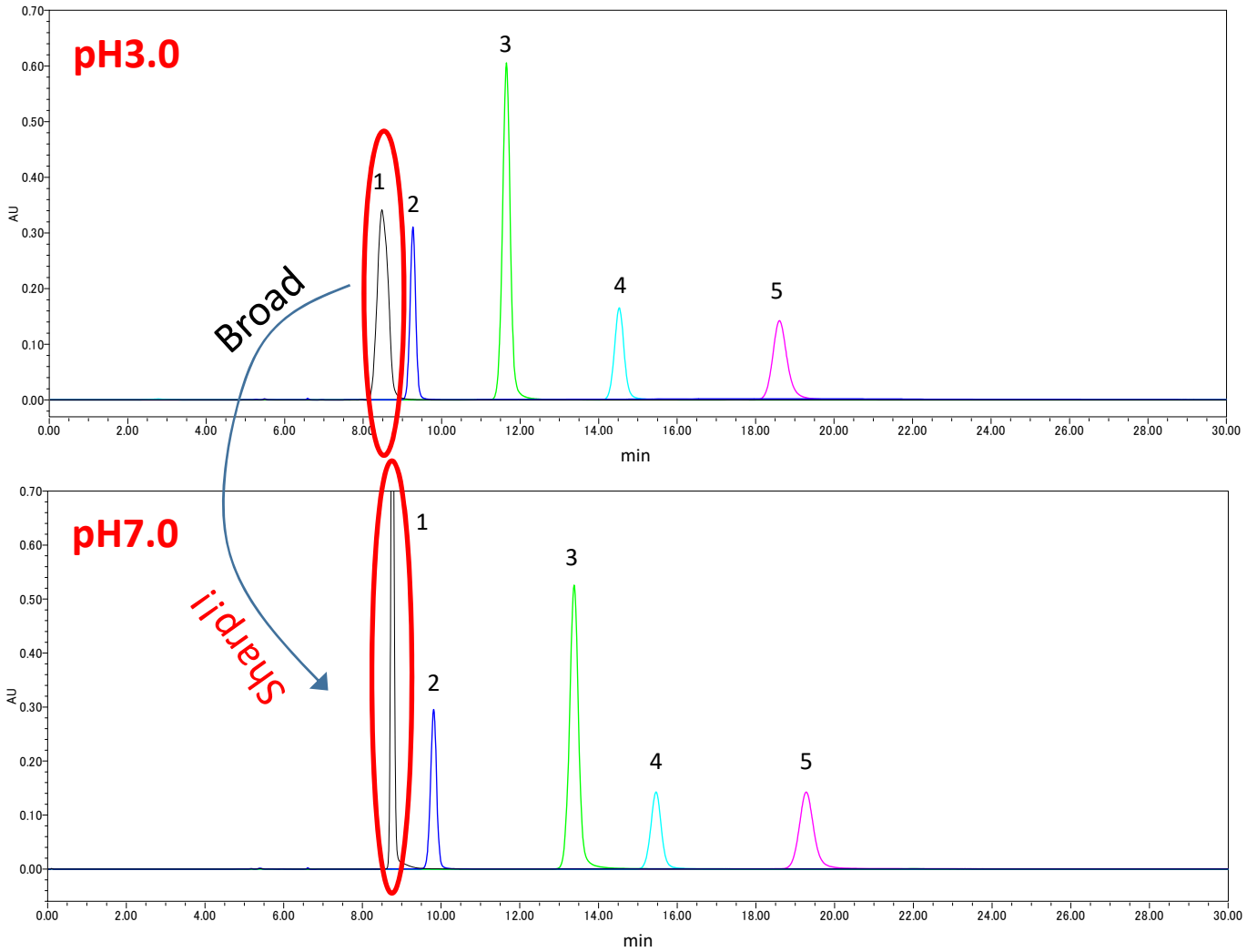


Analysis of IgG antibody contained in human serum



Conditions;
 Column: FlexFire 300SEC, 5μm Size: 4.6x250mm
 Mobile phase: 100mM HCOONH₄ Flow rate: 0.3mL/min
 Temperature: 30°C Detection: UV280nm
 Sample: Serum "COVID-19" positive patient
 Injection volume: 10μL System: Waters alliance e2695

Function as HILIC



Conditions;

Column: FlexFire 120SEC, 5 μ m 4.6x250mm

Mobile phase: Acetonitrile/HCOONH₄, pH3.0 or 7.0

Flow rate: 0.5mL/min

Temperature: 30°C

Detection: UV260nm

Sample: 1. Thymine (0.53mg/mL)

2. Uracil (0.22mg/mL)

3. Uridine (1.06mg/mL)

4. 5-FluoroCytosine (0.47mg/mL)

5. Adenine (0.16mg/mL)

Injection volume: 2.0 μ L

System: Waters alliance

The FlexFire SEC series can also be used as a HILIC column, and the peak shape can be improved by changing the pH.

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

■お問い合わせ/Contact us



野村化学株式会社
〒489-0004 愛知県瀬戸市日の出町15
Tel: 0561-48-1853 Fax: 0561-48-1434
e-mail: info@develosil.net

Nomura Chemical Co., Ltd.
15, Hinode-cho, Seto, 489-0004, Japan
Tel: +81-561-48-1853 Fax: +81-561-48-1434
e-mail: info@develosil.net

Develosil USA

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