

For HPLC/UHPLC



**Develosil® FlexFire C30**

**NOMURA CHEMICAL CO., LTD.**



## Develosil® FlexFire C30

### A dramatic update to the historic Develosil C30!!

Develosil C30 was introduced in 1998 and is a typical column that has been used by many people to date. And in 2019, Develosil C30 was updated to FlexFire C30 with more suitable columns for current analytical work.

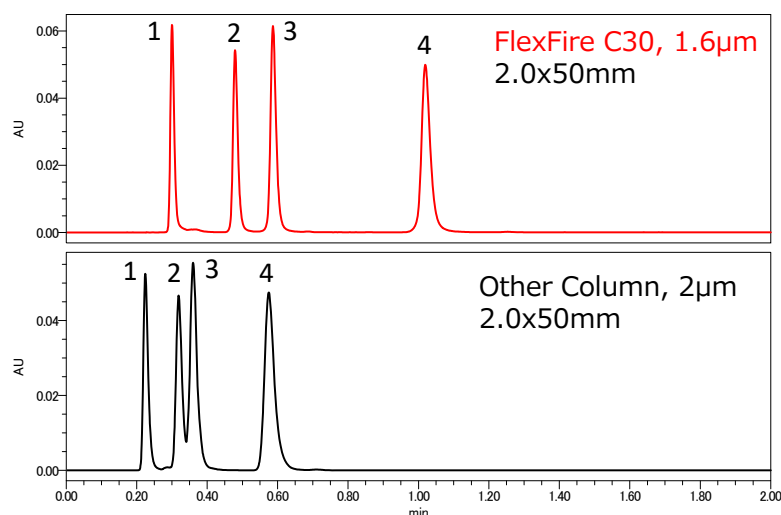
- Extended pH range
- Improved pressure resistance
- Improved retention and separation of highly polar compounds

As before, the fact that 100% aqueous mobile phase can be used for analysis conditions has been inherited.

The FlexFire C30 has the best performance as a first choice.

### Spec of FlexFire C30

	FlexFire C30
Particle size	1.6µm, 2.6µm, 5µm
Chemistry	Triacetyl
Surface area	340m <sup>2</sup> /g
Pore volume	1.0mL/g
Pore diameter	11nm
Carbon	11%
End-cap	○
pH	pH1-10
Temperature	~80°C
Max pressure	1.6µm: 800bar (=80Mpa=11,603psi)
	2.6µm: 600bar (=60Mpa=8,702psi)
	5µm: 300bar (=30Mpa=4,351psi)



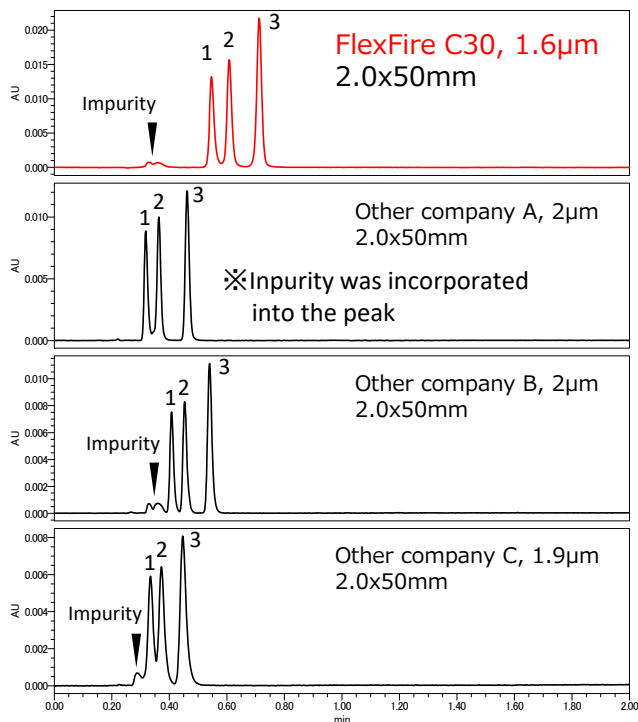
### Retention and separation of dNTP Mixture with 100% aqueous mobile phase

<b>Conditions;</b>	
Column:	Develosil FlexFire C30, 1.6µm (2.0x50mm) Other column, 2µm (2.0x50mm) ※Columns for analysis of highly polar compounds
Mobile phase:	25mM Ammonium phosphate, pH7.0
Flow rate:	0.5mL/min
Temperature:	40°C
Detection:	UV260nm
Sample:	1.dCTP 2.dTTP 3.dGTP 4.dATP
Injection volume:	0.2µL

Even with the same high-polarity compound separation column, the results obtained can vary greatly.

The 100% aqueous mobile phase is the final stage of the condition study. Separation and retention of true highly polar compounds in reversed-phase systems can be achieved with FlexFire C30.

## Separation of impurities with 100% aqueous mobile phase



### Conditions;

Column: Develosil FlexFire C30, 1.6µm (2.0x50mm)  
Other column, 2µm (2.0x50mm)  
※Columns for analysis of highly polar compounds

Mobile phase: 25mM Ammonium phosphate, pH7.0

Flow rate: 0.5mL/min

Temperature: 40°C

Detection: UV260nm

Sample: 1.ATP 2.ADP 3.AMP

Injection volume: 0.2µL

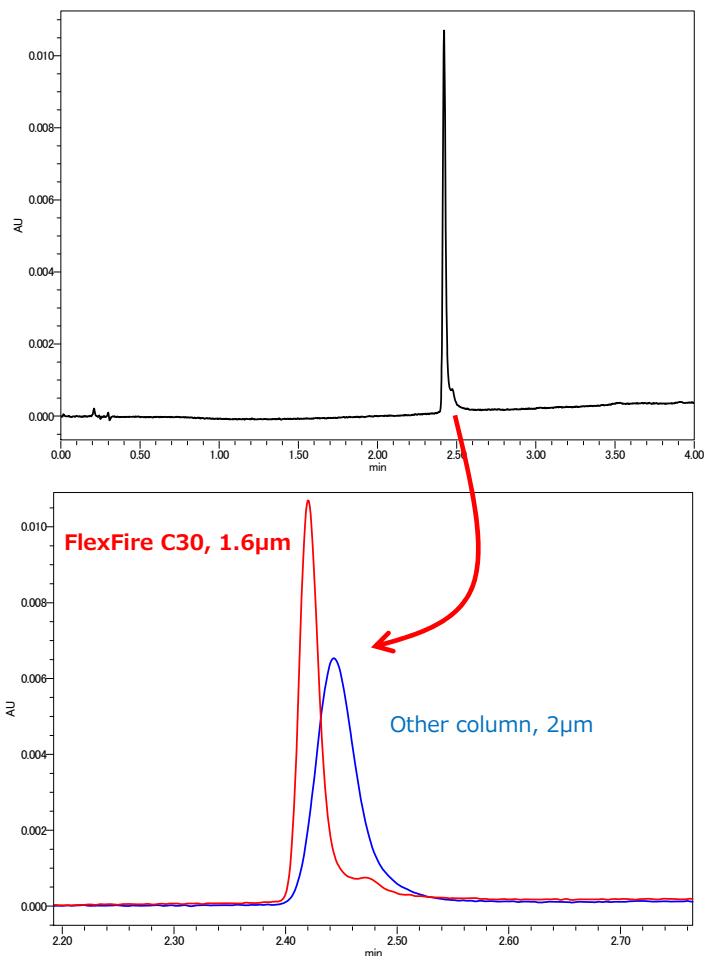
FlexFire C30 is effective for retaining and separating highly polar compounds. Choosing a HILIC column is one solution, but isn't it often the case that you are familiar with reversed-phase columns?

“Now I'm worried about improving the separation of the front part”

FlexFire C30 is best suited for such analysis. Of course, the long-chain alkyl group of C30 is also effective in retaining and separating hydrophobic compounds. It is an all-rounder column that can be the first choice from highly polar to hydrophobic compounds.



## Analysis of medium molecular peptides (without ion pair reagents)



### Conditions,

Column: Develosil FlexFire C30, 1.6µm (2.0x50mm)

Mobile phase: A) 25mM HCOONH<sub>4</sub>, pH3.0  
B) Acetonitrile

Gradient:	min	mL/min	%A	%B	Curve
	0.00	0.5	80	20	6
	5.04	0.5	40	60	6
	5.05	0.5	80	20	6

Temperature: 40°C

Detection: UV280nm

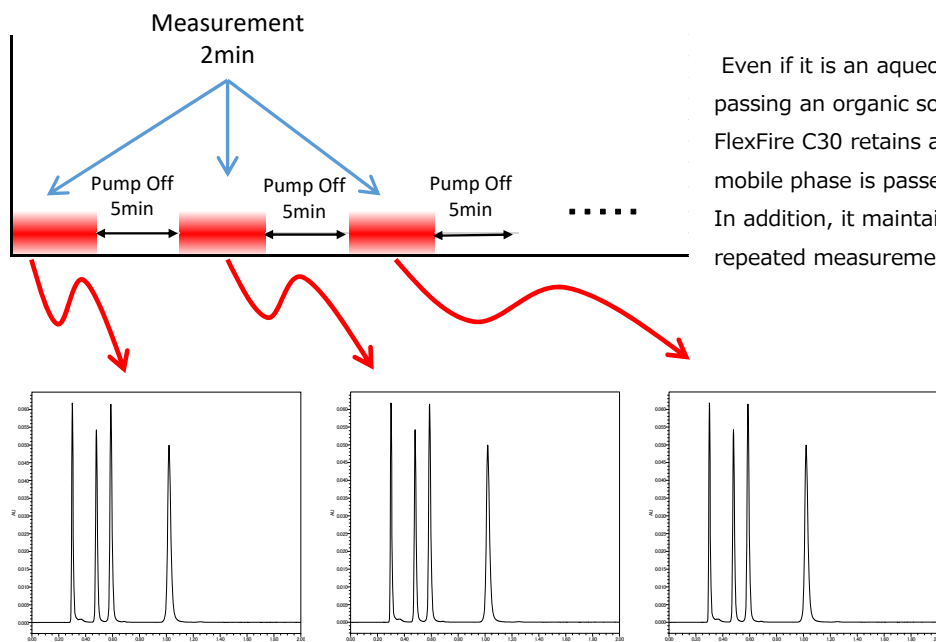
Sample: Insulin, Human, recombinant

Injection volume: 0.2µL

Insulin is a medium-molecular peptide with a molecular weight of about 6,000. Ion pairing reagents such as TFA are often used for analysis. However, with mobile phases such as ammonium formate, some columns affected peak shape and low concentration analysis.

The FlexFire series, including C30, can incorporate formate (ammonium formate) based buffers into the first method for such compounds.

## Reproducibility with 100% aqueous mobile phase



## Order information

Product	Particle	Size (i.d.XL)	Sutainless	Metal-Free
FlexFire C30	1.6µm	2.0x35mm	302-I20035W	302-I20035MFW
		2.0x50mm	302-I20050W	302-I20050MFW
		2.0x75mm	302-I20075W	302-I20075MFW
		2.0x100mm	302-I20100W	302-I20100MFW
		2.0x150mm	302-I20150W	302-I20150MFW
		2.0x250mm	-	-
	2.6µm	2.0x35mm	302-L20035W	302-L20035MFW
		2.0x50mm	302-L20050W	302-L20050MFW
		2.0x75mm	302-L20075W	302-L20075MFW
		2.0x100mm	302-L20100W	302-L20100MFW
		2.0x150mm	302-L20150W	302-L20150MFW
		2.0x250mm	302-L20250W	302-L20250MFW
	5µm	2.0x35mm	302-520035W	302-520035MFW
		2.0x50mm	302-520050W	302-520050MFW
2.0x75mm		302-520075W	302-520075MFW	
2.0x100mm		302-520100W	302-520100MFW	
2.0x150mm		302-520150W	302-520150MFW	
		2.0x250mm	302-520250W	302-520250MFW

### ■ Contact us



**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  
 Web: <https://www.develosil.net>

## Develosil USA

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