Develosil XG-C30

It is new series release from Develosil. Evolution of our product C30.
Please realize it.

1. Specifications

Silica base
This product uses a Silicagel with a few impurities

The column which it is easy to use
As for this column, equilibrium is early and the pressure is low, too.

Stability
Develosil keeps high stability to undertake all processes in own company.

To anther one step ahead
As for this product, a pH range is wider than the conventional product.

Characteristic of Develosil XG-C18

Surface area	300m^2/g
Pore diameter	14nm
Pore volume	1.10mL/g
Ligand	Triacontyl (Mono)
Carbon content	19.50%
Endcapping	○
pH range	pH1.5-8

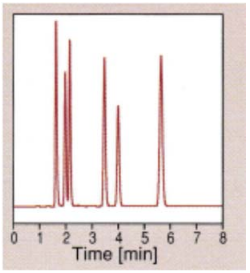
2. Product inspection of Develosil XG-C30

Develosil XG-C30 performs product inspection of five items.
I check the performance evaluation of each item and the unevenness of the gel lot.

1. Hydrogen bonding capacity・Hydrophobicity・Surface polarity

Conditions

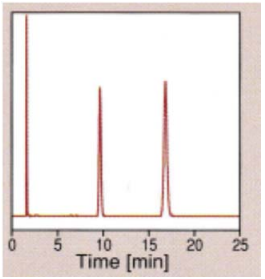
Column	Develosil XG-C30M (5um)
Size	4.6x150mm
Mobile Phase	MeOH / Water = 70/ 30
Flow rate	1.0 ml / min
Temperature	40℃
Sample	1. Uracil 2. Caffeine 3. Phenol
	4. Methyl benzoate
	5. Benzene 6. Toluene



2. Steric selectivity

Conditions

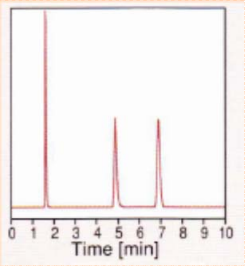
Column	Develosil XG-C30M (5um)
Size	4.6x150mm
Mobile Phase	MeOH / Water = 80/ 20
Flow rate	1.0 ml / min
Temperature	40℃
Sample	1. Uracil 2. o-Terphenyl
	3. Triphenylene



3. Basic compounds

Conditions

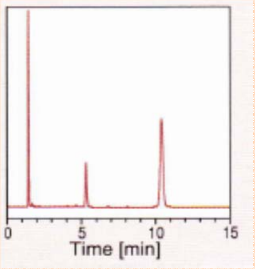
Column	Develosil XG-C30M (5um)
Size	4.6x150mm
Mobile Phase	ACN/50mM
	Ammonium Acetate (pH7) =20/80
Flow rate	1.0 ml / min
Temperature	40℃
Sample	1. Uracil 2. Pyridine 3. Phenol



4. Coordinate compounds

Conditions

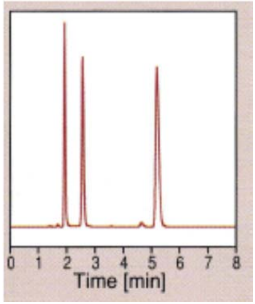
Column	Develosil XG-C30M (5um)
Size	4.6x150mm
Mobile Phase	ACN / 0.2% Phosphoric acid=60 /40
Flow rate	1.0 ml / min
Temperature	40℃
Sample	1. Uracil 2. Toluene 3. Quinizarine



5. Acidic compounds

Conditions

Column	Develosil XG-C30M (5um)
Size	4.6x150mm
Mobile Phase	ACN / 0.2% Phosphoric acid=2/98
Flow rate	1.0 ml / min
Temperature	40℃
Sample	1. Formic acid 2. Acetic acid
	3. Propionic acid



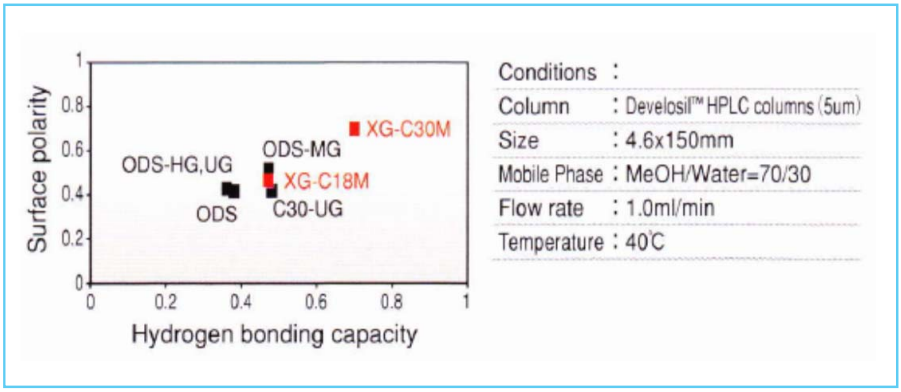
Each properties of matter are calculated by the following methods.

Hydrogen bonding capacity α=k' (Caffeine) / k' (Phenol)	Basic compunds α= k' (Pyridine) / k' (Phenol)
Hydrophobicity α=k' (Toluene) / k' (Benzene)	Coordinate compounds α= k' (Quinizarine) / k' (Toluene)
Surface polarity α=k' (Methyl Benzoate) / k' (Toluene)	Acidic compounds α= k' (Formic acid) / k' (Acetic acid)
Steric selectivity α=K' (Triphenylene) / k' (o-Terphenyl)	

We ship only the filler which cleared severe inspection of above five items as a product.

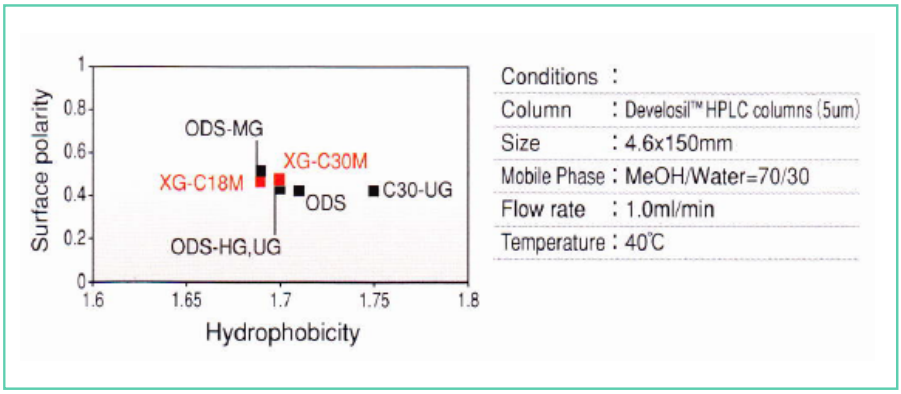
3. Positioning of Develosil XG-C30

■ **Fig.1 Hydrogen bonding capacity – Surface polarity**

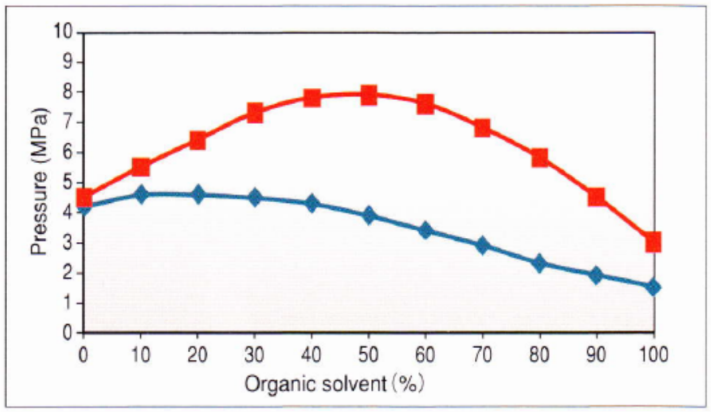


Develosil XG-C30M has a strong hydrogen bonding capacity.
And show Develosl ODS-HG and UG equal hydrophobicity.

■ **Fig.2 Hydrophobicity – Surface polarity**



4. Column pressure of Develosil XG-C30

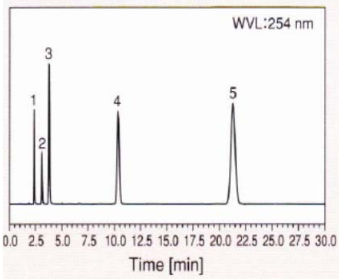


Conditions:
Column : XG-C30M (5um)
Size : 4.6x150mm
Mobile Phase : Acetonitrile/Water (—)
MeOH/Water (—)
Flow rate : 1.0ml/min
Temperature : 40℃

A shows low pressure in the series.
Because column pressure is low, this column can change mobile phase widely.

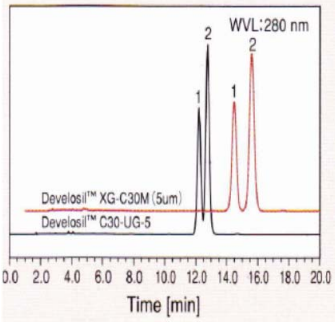
5. Analysis example

1. Analysis of Pyridine



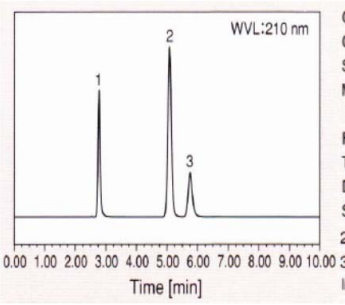
Conditions :
Column : Develosil™ XG-C30M (5um)
Size : 4.6x150mm
Mobile Phase : Acetonitrile/0.1% Triethylamine=20/80
Flow rate : 1.0ml/min
Temperature : 40℃
Detection : UV254nm
Sample : 1.3-Aminopyridine (0.28mg/ml)
2.2-Aminopyridine (1.0mg/ml)
3.Pyridine (0.5ul/ml) / 4.2-Ethylpyridine (1.0ul/ml)
5.2-Propylpyridine (2.5ul/ml)
Injection volume : 2.0uL

2. Analysis of Vitamin D2 and D3



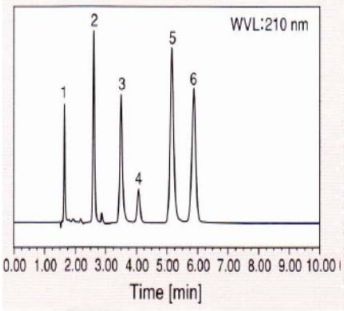
Conditions :
Column : Develosil™ XG-C30M (5um)
Develosil™ C30-UG-5
Size : 4.6x150mm
Mobile Phase : Acetonitrile
Flow rate : 1.0ml/min
Temperature : 40℃
Detection : UV280nm
Sample : 1.Vitamin D2 (1.34mg/ml)
2.Vitamin D3 (1.33ml/ml)
Injection volume : 2.0uL

3. Analysis of Acylamide, Acrylic acid and Methacrylamide



Conditions :
Column : Develosil™ XG-C30M (5um)
Size : 4.6x150mm
Mobile Phase : Acetonitrile/0.2% Phosphoric acid=1/99
Flow rate : 1.0ml/min
Temperature : 40℃
Detection : UV210nm
Sample : 1 Acrylamide (0.34mg/ml)
2.Acrylic acid (3.33ul/ml)
3.Methacrylamide (0.34mg/ml)
Injection volume : 2.0uL

4. Analysis of Acidic compounds



Conditions :
Column : Develosil™ XG-C30M (5um)
Size : 4.6x150mm
Mobile Phase : 50mM Ammonium phosphate (pH2.0)
Flow rate : 1.0ml/min
Temperature : 40℃
Detection : UV210nm
Sample : 1.Oxalic acid (0.16mg/ml)
2.Ascorbic acid (0.80mg/ml)
3.Maleic acid (0.08mg/ml) / 4.Citric acid (1.46mg/ml)
5.Fumaric acid (0.13mg/ml) / 6.Uric acid (0.40mg/ml)
Injection volume : 2.0uL

Price List

Conventional columns

I.D. 2.0mm, 3.0mm, 4.0mm same price

Packing name	Column size (I.D. x Length)	Particle size	P/N
XG-C30M	4.6x35mm	3	XG30M346035W
	4.6x50mm		XG30M346050W
	4.6x75mm		XG30M346075W
	4.6x100mm		XG30M346100W
	4.6x150mm		XG30M346150W
	4.6x250mm		XG30M346250W
	4.6x35mm	5	XG30M546035W
	4.6x50mm		XG30M546050W
	4.6x75mm		XG30M546075W
	4.6x100mm		XG30M546100W
	4.6x150mm		XG30M546150W
	4.6x250mm		XG30M546250W

■ Guard column for conventional

product name	P/N
Guarad cartreige (4pieces) 4.0x10mm	XG30540010C
Guard cartridge Holder 4.0x10mm	HO00040010C
Guard cartridge Set 4.0x10mm ※	XG30540010W

※ Guard cartridge set = Holder (1piece) + cartridge 4.0x10mm (1piece)

Semi-micro columns

Packing name	Column size (I.D. x Length)	Particle size	P/N
XG-C30M	2.0x35mm	3	XG30M320035W
	2.0x50mm		XG30M320050W
	2.0x75mm		XG30M320075W
	2.0x100mm		XG30M320100W
	2.0x150mm		XG30M320150W
	2.0x250mm		XG30M320250W
	2.0x35mm	5	XG30M520035W
	2.0x50mm		XG30M520050W
	2.0x75mm		XG30M520075W
	2.0x100mm		XG30M520100W
	2.0x150mm		XG30M520150W
	2.0x250mm		XG30M520250W

■ Guard column for Semi-micro

product name	P/N
Guarad cartreige (4pieces) 1.5x10mm	XG30515010C
Guard cartridge Holder 1.5x10mm	HO00015010C
Guard cartridge Set 1.5x10mm ※	XG30515010W

※ Guard cartridge set = Holder (1piece) + cartridge 1.5x10mm (1piece)

Prep columns

Packing name	Column size (I.D. x Length)	Particle size	P/N
XG-C30M	10x150mm	5	XG30M5P1150W
	10x250mm		XG30M5P1250W
	20x150mm		XG30M5P2150W
	20x250mm		XG30M5P2250W

■ Prep guard column

Packing name	Column size (I.D. x Length)	Particle size	P/N
XG-C30M	8.0x10mm (for I.D. 10mm)	5	XG30M580010W
	20x50mm		XG30M5P2050W