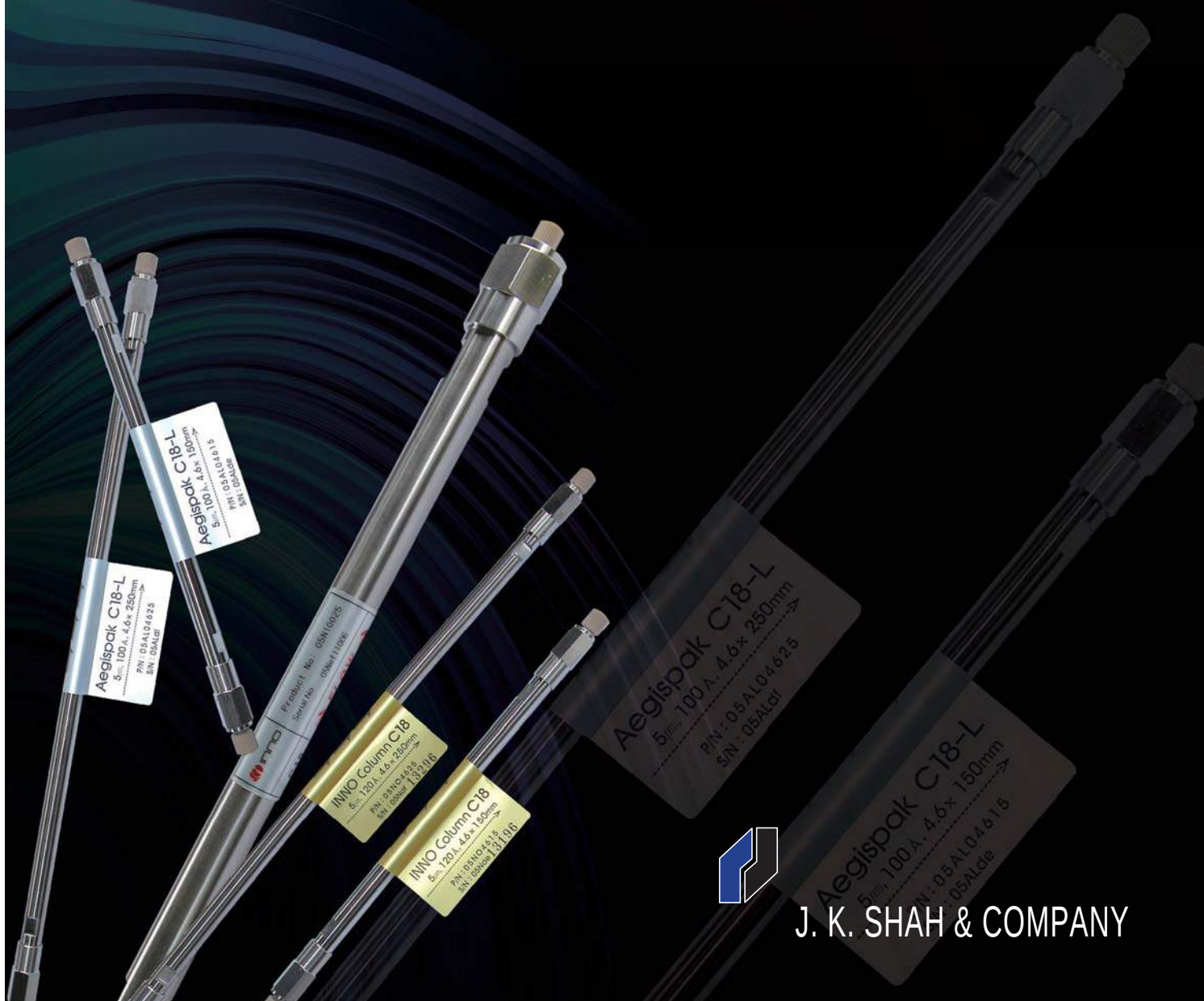


J. K. SHAH & COMPANY

Aegispak INNO Column

High Performance Liquid Chromatography Column



J. K. SHAH & COMPANY

Introduction

Young Jin Biochrom Co., Ltd., the leading HPLC Company in Korea, & our distributor in India is **J. K. SHAH & COMPANY** only can produce HPLC Columns and has both experience and technology.

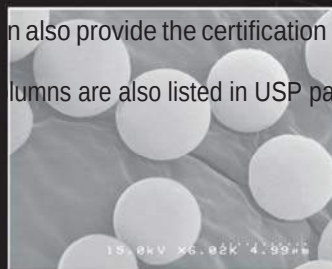
We can meet any customers' needs from producing packing material to filling the columns.

We use ultra high purity silica with maximum reduced metal contaminants and volatile

material

Purifying once more with our state of art technology.

We choose the silica that the surface area and pore volume are almost uniformed and narrow particle size distribution.



Surface Area	300m ² /g
Pore Size	120A
Pore Volume	1.0ml/g
Particle Size	1.25
Distribution(D40/D90)	

금속불순물

Al < 1.0ppm	Fe < 1.0ppm
Ti < 1.0ppm	Zr < 1.0ppm

Metal contaminant

Aegispak Column

We use high purity silica developed by our own purifying technology.

Surface are coted with silicon polymer using CVD(Chemical Vapor Deposition) and get functional groups.

Reducing the effect of residual silanol groups end cap once more using CVD in high temperature.

Products are

Aegispak C18 -F, Aegispak C18-L and, Aegispak C8



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INNO Column C18

We use high purity silica developed by our own purifying technology.

We use C18 by solution reaction and reduce the effect of residual silanol groups end capping 3 times in high temperature.

We can produce bulk media for prep HPLC.



Product

Aegispak C18 - L

High Hydrophobicity and low surface polarity
Basic compound applicable to wide range of compound
Optimal retention and Complex analysis
USP Category L1

Aegispak C18 - F

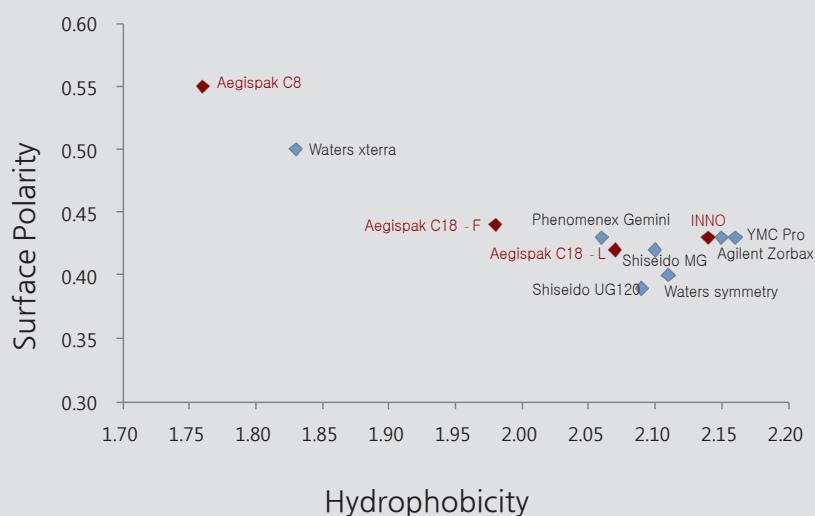
Low Hydrophobicity and high surface polarity
Quick analysis for high hydrophobicity compounds
Optimal retention and Complex analysis
USP Category L1

Aegispak C8

C8 solid phase surface hydrophobicity is lower than that of C 18
making Aegispack C8 useful for quick any products
USP Category L7

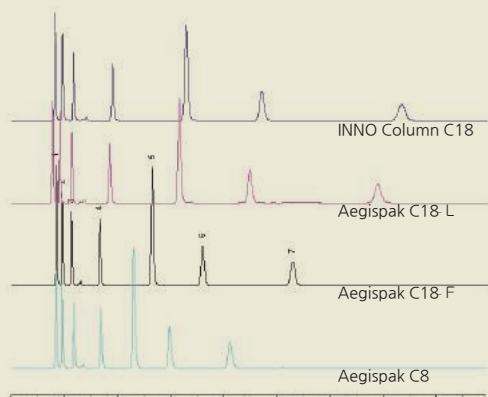
INNO Column C18

Hydrophobicity is higher than other columns and has strong retention time
Mobile phase can be in water solution
USP Category L1



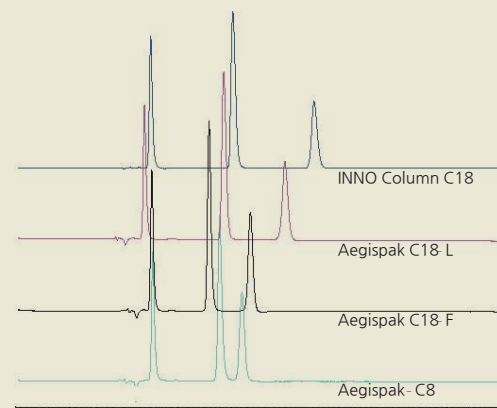


Retention Time Property



(HPLC Condition)

Column Size : 4.6mm i.d x 150mm
 Flow Rate : 1.0mL/min
 Detection : PDA 254nm
 Temperature : 35°C
 Mobile Phase : Methanol 70%
 Samples : 1) Uracyl
 2) Caffeine
 3) Phenol
 4) Methyl Banzoate
 5) Toluene
 6) Ethylbenzene
 7) Propylbenzene



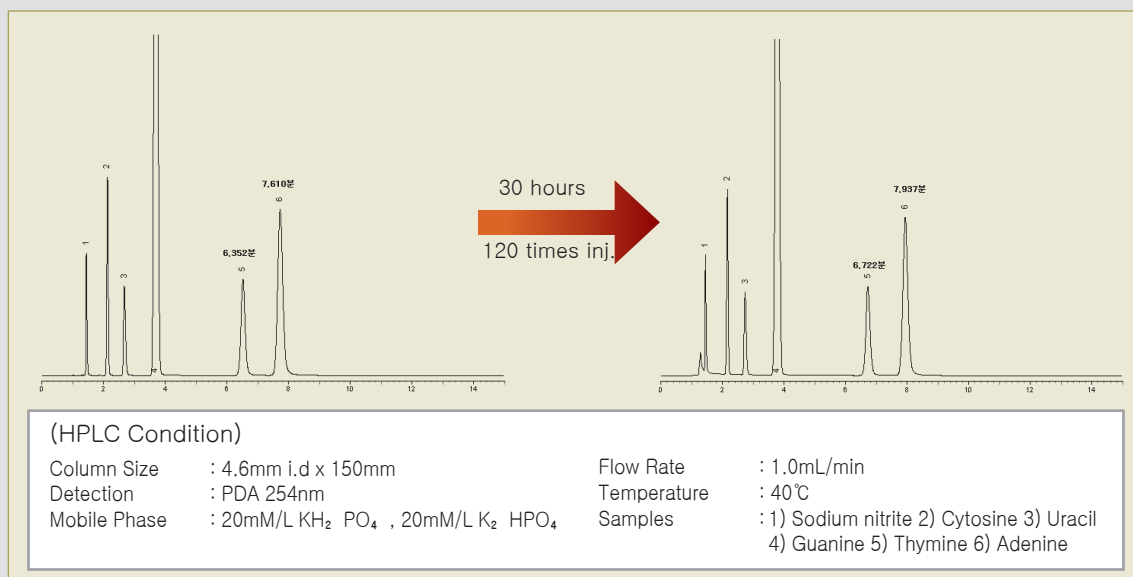
(HPLC Condition)

Column Size : 4.6mm i.d x 150mm
 Flow Rate : 0.8mL/min
 Detection : PDA 220nm
 Temperature : 30°C
 Mobile Phase : 10mM Sodium Phosphate Monobasic (pH 2.5, H_3PO_4) / Methanol = 98 / 2
 Samples : 1) Tartaric acid
 2) Lactic acid
 3) Citric acid

Characteristics and parameter

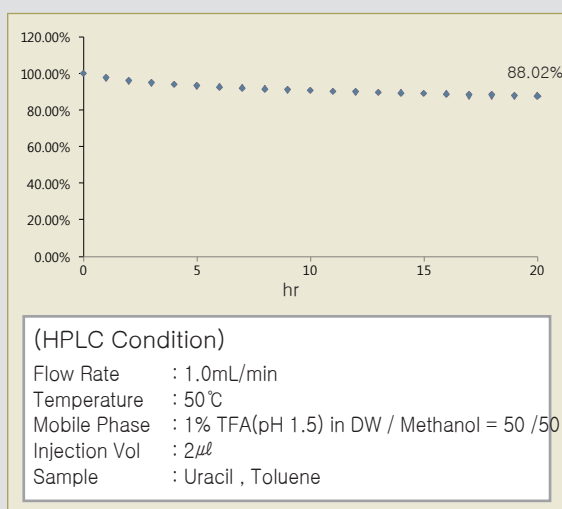
	Functional Group	Particle Size	Pore Size	Surface Area	C(%)	USP
Aegispak C18- L	C18	5(μ m)	100($\text{\AA}$)	300(m^2/g)	14	L1
Aegispak C18- F	C18	5(μ m)	120($\text{\AA}$)	300(m^2/g)	13	L1
Aegispak C8	C8	5(μ m)	100($\text{\AA}$)	300(m^2/g)	8	L7

Reproducibility of retention time when used with 100% DW as Mobile phase

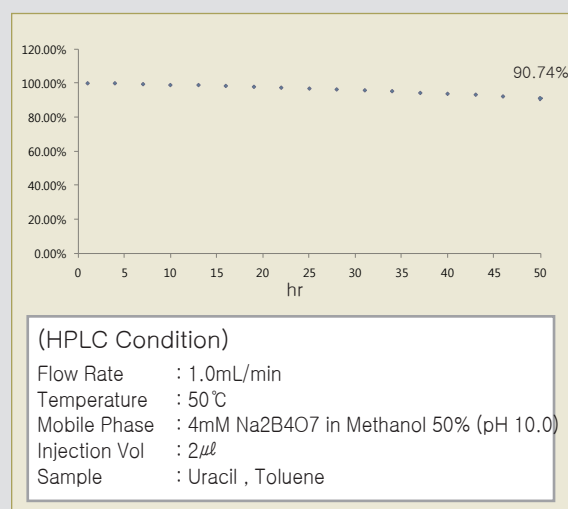


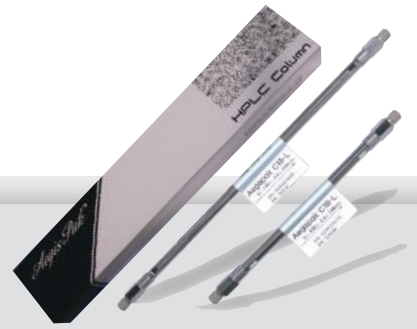
6

Acidic Condition (Toluene K%)



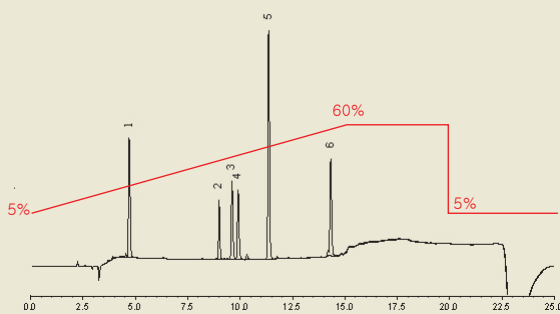
Alkaline Condition(Toluene K%)





Aegispak Column analysis

Concurrent 4 Peptides analysis

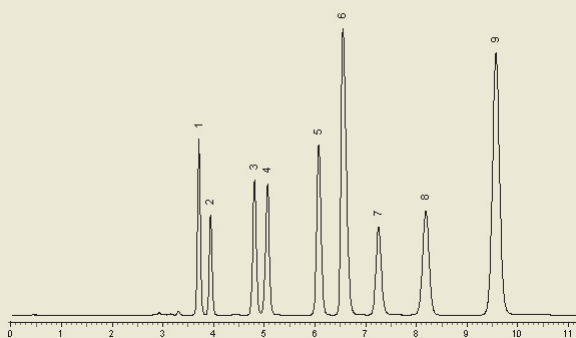


(HPLC Condition)

Column : Aegispak C18 L 4.6mm i.d x 250mm
 Flow Rate : 1.0mL/min
 Detection : PDA 220nm
 Temperature : 40°C
 Mobile Phase : A) 0.1% TFA in DW
 B) 0.1% TFA in (Acetonitrile / Methanol = 50 / 50)

Samples : 1) Pentapeptide
 2) Caffein
 3) 15n-labeled amino acid
 4) 10n-labeled amino acid
 5) Coumaric Acid
 6) 15n-labeled amino acid + Coumaric Acid

Concurrent 9 Organic acids analysis



(HPLC Condition)

Column : Aegispak C18 L 4.6mm i.d x 250mm
 Flow Rate : 0.8mL/min
 Detection : PDA 220nm
 Temperature : 30°C
 Mobile Phase : 10mM Potassium Phosphate
 Monobasic (pH 2.5, H₃PO₄) /
 Methanol = 98 / 2

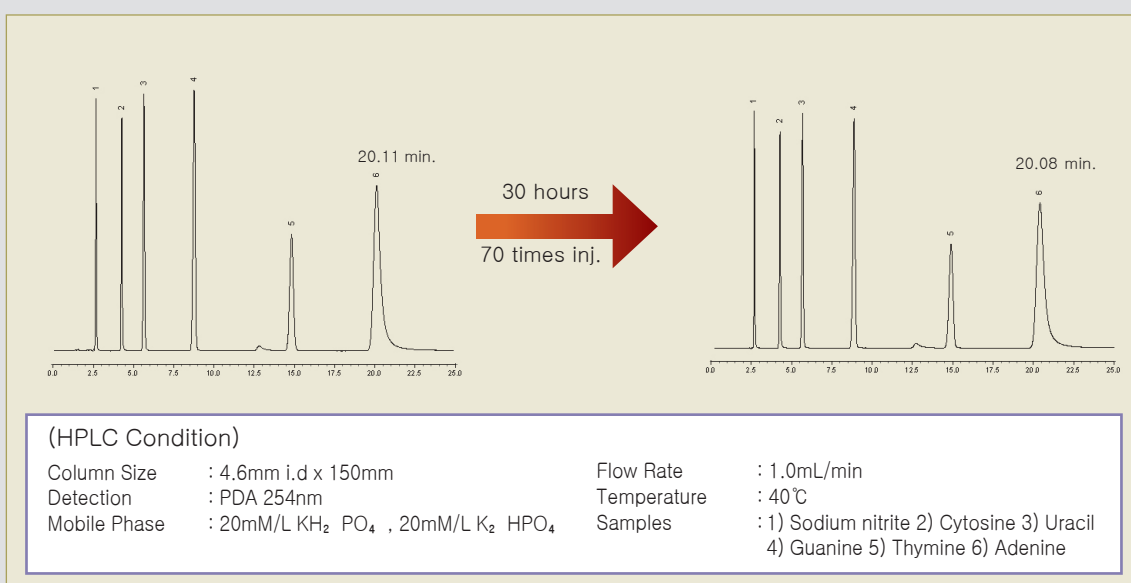
Samples : 1) Tartaric Acid
 2) Glycolic Acid
 3) Malic Acid
 4) Malonic acid
 5) Lactic Acid
 6) Acetic Acid
 7) Maleic Acid
 8) Citric Acid
 9) Fumaric Acid

INNO Column C18

Characteristics and parameter

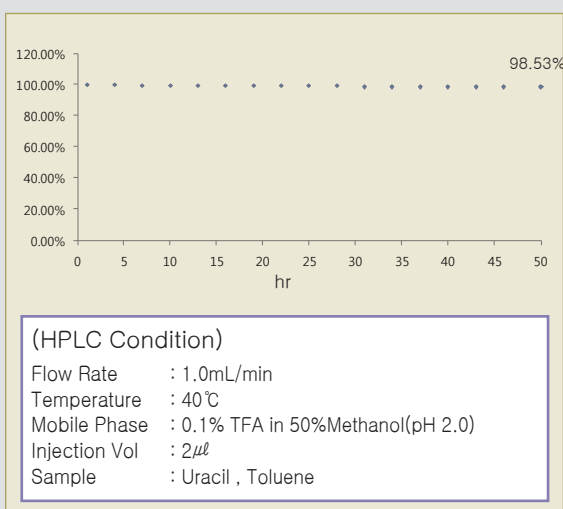
Functional Group	Particle Size(μm)	Pore Size	Surface Area	C(%)	USP
C18	5	120($\text{\AA}$)	300(m^2/g)	18	L1

Reproducibility of retention time when used with 100% DW as mobile phase

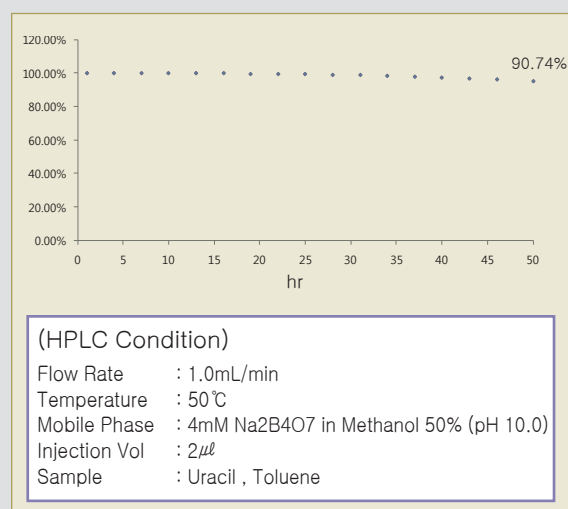


8

Acidic Condition (Toluene K%)



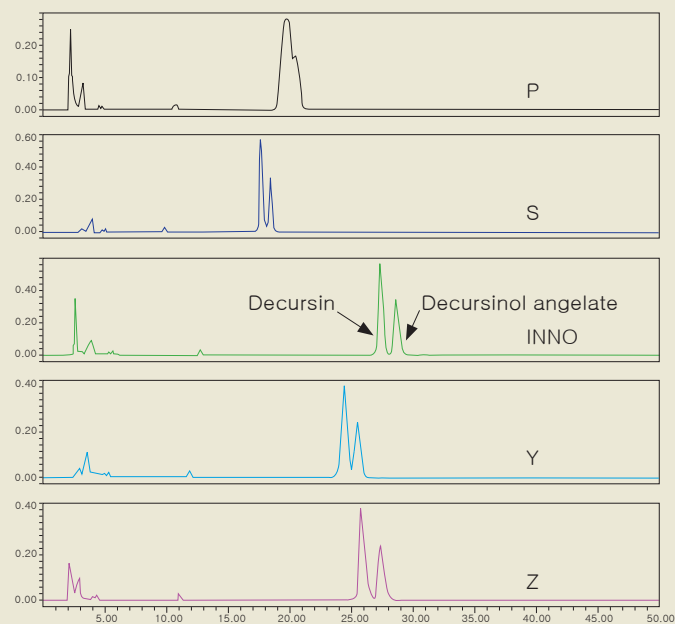
Alkaline Condition(Toluene K%)





INNO Column Analysis

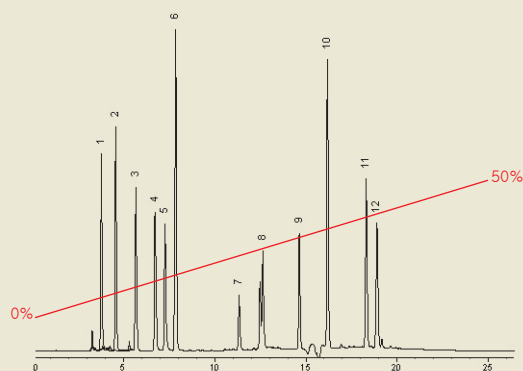
Other brand Comparison of Natural Extract



(HPLC Condition)

Column Size : INNO C18,
4.6mm i.d x 250mm
Flow Rate : 1.0mL/min,
Detection : UV 330nm
Temperature : Room Temp
Mobile Phase : Acetonitrile 50%
Sample : Natural Extract

Water Soluble Vitamin

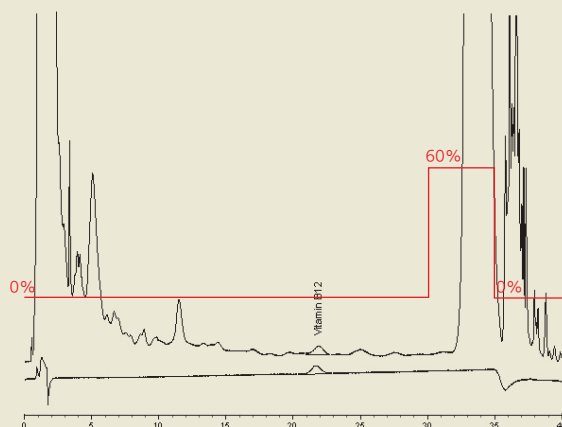


(HPLC Condition)

Column Size : INNO C18 4.6mm i.d x 250mm
Flow Rate : 0.8mL/min
Detection : PDA 220nm
Temperature : 35°C
Mobile Phase: A) Potassium Phosphate
(pH 3.0, H₃PO₄) /
Acetonitrile = 98 / 2
B) Potassium Phosphate
(pH 3.0, H₃PO₄) /
Acetonitrile = 40 / 60

Samples : 1) Thiamine
2) Ascorbic acid,
3) Nicotinic acid
4) Pyridoxine
5) Pyridoxal
6) Nicotinamide
7) Pantothenic acid
8) Hydroxocobalamin
9) Cyanocobalamin
10) Folic acid
11) Riboflavin
12) Biotin

Vit. B12 Microanalysis

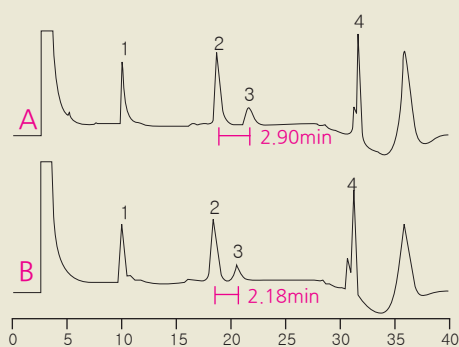


(HPLC Condition)

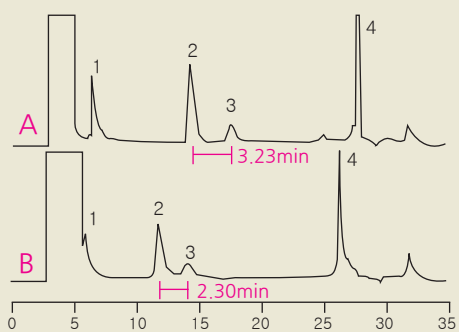
Column Size : INNO C18 2.0mm i.d x 100mm
 Flow Rate : 0.2mL/min
 Detection : PDA 360nm
 Temperature : 35°C
 Mobile Phase: A) DW / Methanol = 85 / 15
 B) Methanol
 Samples : Vitamin Capsule
 (Cyanocobalamin 40ppb)

From Analytical Column to Semi Prep Column

10



Semi Prep Scale UP



(HPLC Condition)

Flow Rate : 1.0mL/min / 4.0mL/min
 Temperature : Room Temp.
 Mobile Phase: DW/ Acetonitrile
 (Linear Gradient, 0.1% TFA)
 Injection Vol : 30 μ l / 1000 μ l
 Sample : 1) Peptid
 2) Peptide conjugate-1
 3) Peptide conjugate-2
 4) Peptide conjugate-3

HPLC Column

A) INNO C18, 4.6mm i.d x250mm
 B) S brand C18, 4.6mm i.d x250mm

Semi Prep Column

A) INNO C18, 10.0mm i.d x250mm
 B) S brand C18, 10.0mm i.d x250mm

Product List

Aegispak C18 – L series

Part No.	Column Size (mm) ID×L	Particle Size (μm)
05AL 02005	2.0 x 50	5
05AL 02010	2.0 x 100	5
05AL 02015	2.0 x 150	5
05AL 03015	3.0 x 150	5
05AL 03025	3.0 x 250	5
05AL 04012	4.0 x 125	5
05AL 04605	4.6 x 50	5
05AL 04610	4.6 x 100	5
05AL 04615	4.6 x 150	5
05AL 04625	4.6 x 250	5
05AL 06015	6.0 x 150	5
05AL 06025	6.0 x 250	5
05AL 10025	10.0 x 250	5
05AL 20025	20.0 x 250	5

Aegispak C18 – F series

Part No.	Column Size (mm) ID×L	Particle Size (μm)
05AF 02005	2.0 x 50	5
05AF 02010	2.0 x 100	5
05AF 02015	2.0 x 150	5
05AF 03015	3.0 x 150	5
05AF 03025	3.0 x 250	5
05AF 04012	4.0 x 125	5
05AF 04605	4.6 x 50	5
05AF 04610	4.6 x 100	5
05AF 04615	4.6 x 150	5
05AF 04625	4.6 x 250	5
05AF 06015	6.0 x 150	5
05AF 06025	6.0 x 250	5
05AF 10025	10.0 x 250	5
05AF 20025	20.0 x 250	5

Aegispak C8 series

Part No.	Column Size (mm) ID×L	Particle Size (μm)
05A8 02005	2.0 x 50	5
05A8 02010	2.0 x 100	5
05A8 02015	2.0 x 150	5
05A8 03015	3.0 x 150	5
05A8 03025	3.0 x 250	5
05A8 04012	4.0 x 125	5
05A8 04605	4.6 x 50	5
05A8 04610	4.6 x 100	5
05A8 04615	4.6 x 150	5
05A8 04625	4.6 x 250	5
05A8 06015	6.0 x 150	5
05A8 06025	6.0 x 250	5
05A8 10025	10.0 x 250	5
05A8 20025	20.0 x 250	5

INNO ColumnC18 series

Part No.	Column Size (mm) ID×L	Particle Size (μm)
05N 02005	2.0 x 50	5
05N 02010	2.0 x 100	5
05N 02015	2.0 x 150	5
05N 03015	3.0 x 150	5
05N 03025	3.0 x 250	5
05N 04012	4.0 x 125	5
05N 04605	4.6 x 50	5
05N 04610	4.6 x 100	5
05N 04615	4.6 x 150	5
05N 04625	4.6 x 250	5
05N 06015	6.0 x 150	5
05N 06025	6.0 x 250	5
05N 10025	10.0 x 250	5
05N 20025	20.0 x 250	5

EXCLUSIVE STOCKISTS



J. K. SHAH & COMPANY

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