

第五十三期 电子期刊  
DEVELO SIL 液相色谱柱

2013年5月

HIGH  
QUALITY  
EXPERIENCE



## Develosil 液相色谱柱

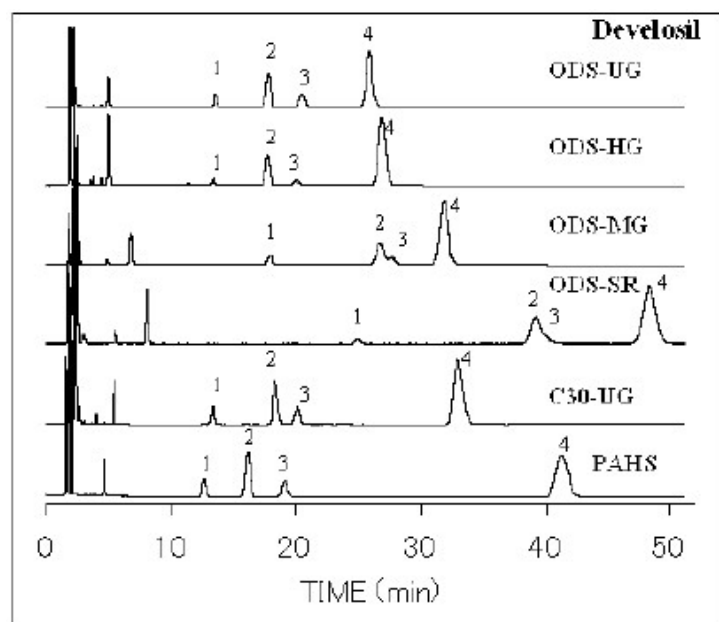
Nomura Chemical 野村化学创始于 1979 年，掌握了从硅胶到色谱全部生产过程的独特的技术和工艺，确保了 Develosil 品牌色谱柱的卓越品质，是世界上领先的色谱柱生产商之一。尤其是它的专利产品 C30 色谱柱，具有独特的性能，广受制药等企业的欢迎。

MODE	Ligand	PACKING MATERIAL	PARTICLE SIZE
Reversed phase	C30	Develosil C30-UG	3 um, 5 um
		Develosil PRPAQUEOUS	3 um, 5 um
		Develosil Combi-RP	3 um, 5 um
		Develosil RPFULLERENE	3 um, 5 um
		Develosil RPAQUEOUS-AR	3 um, 5 um
		Develosil ERP20	15/30 um
	C18	Develosil ODS-UG	3 um, 5 um and 15/30 um
		Develosil ODS-HG	3 um, 5 um and 15/30 um
		Develosil ODS-MG	3 um, 5 um and 15/30 um
		Develosil ODS-SR	3 um, 5 um and 15/30 um
		Develosil PAHS	3 um, 5 um
		Develosil 300ODS-HG	5 um
	C8	Develosil C8-UG	3 um, 5 um
		Develosil 300C8-HG	5 um
	C4	Develosil 300C4-HG	5 um
C1	Develosil TMS-UG	3 um, 5 um	
Phenyl	Develosil Ph-UG	3 um, 5 um	
Cyano	Develosil CN-UG	5 um	
Gel filtration phase	Diol	Develosil 300Diol	5 um
		Develosil 100Diol	5 um
Normal phase	Cyano	Develosil CN-UG	5 um
	Amino	Develosil NH2	5 um
	None (Silica)	Develosil 30	3 um, 5 um and 15/30 um
		Develosil 60	3 um, 5 um and 15/30 um
		Develosil 100	3 um, 5 um and 15/30 um
		Develosil SILICA-HILIC(I) and (II)	3 um, 5 um



## Develosil ODS Columns 对比

	ODS-UG	ODS-HG	ODS-MG	ODS-SR	PAHS
Functionality of C18	Monofunctional	Trifunctional	Difunctional	Difunctional	Trifunctional and polymeric
Ligand density (umol/g)	3.2	3.4	1.6	---	4.5
Carbon content (%)	18	18	15	18	23
Endcapping (TMS)	Yes	Yes	Yes	Yes	No
Pore diameter of silica (nm)	14	14	10	8	12
Surface area of silica (m <sup>2</sup> /g)	300	300	450	---	350
Hydrogen bonding capacity k(caffeine)/k'(phenol)	0.38	0.38	0.48	0.48	0.40
Hydrophobic consistency k'(amylbenzene)/k'(butyl benzene)	1.59	1.58	1.60	1.66	1.58
Steric selectivity k(triphenylene)/k'(o-terphenyl)	1.50	1.58	1.20	1.21	2.72
Stability	Very good (pH2-10)	Very good (pH1-9)	Good (pH2-7.5)	Good (pH2-7.5)	Good (pH2-7.5)
Retention	Moderate	Moderate	Long (1.3 folds)	Very long (2 folds)	Moderate



**Analytical Conditions:**

Column dimension: 150 x 4.6 mm i.d.  
 Mobile phase: Methanol / water = 75 / 25  
 Temperature: 30°C  
 Detection: UV at 254 nm  
 Sample: 1 = Butylbenzene  
 2 = o - Terphenyl  
 3 = Amylbenzene  
 4 = Triphenylene

## Develosil ODS-HG-5, ODS-UG-5 系列色谱柱

Develosil ODS-HG-5 和 ODS-UG-5 系列的色谱柱是最通用的 C18 色谱柱，具有低压高效、性价比优越的特点。

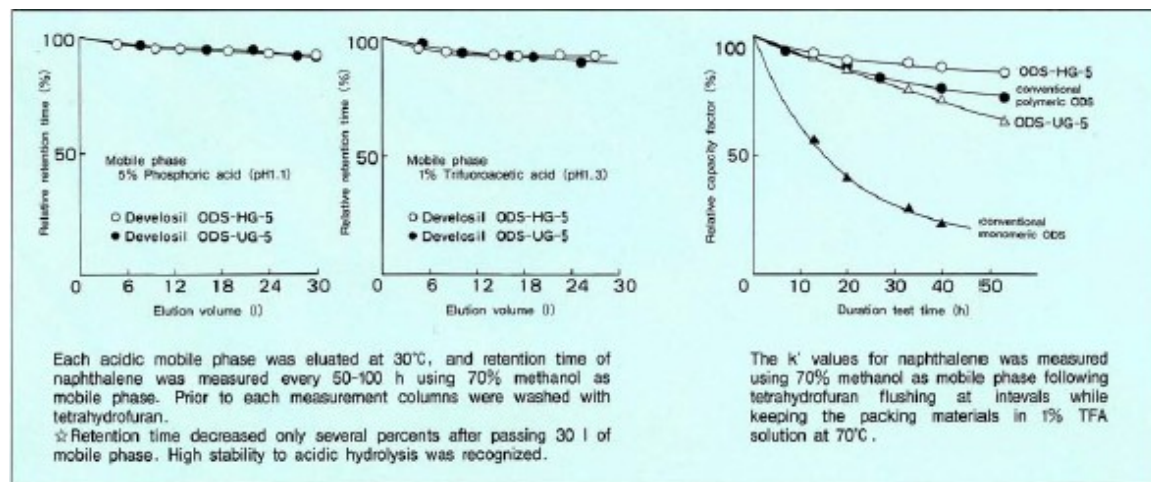
特点：

1. 完全封端（参照吡啶和苯酚的分离因子）。
2. 极端 pH 条件下稳定。
3. 对酸性、碱性及螯合化合物分离峰型良好。

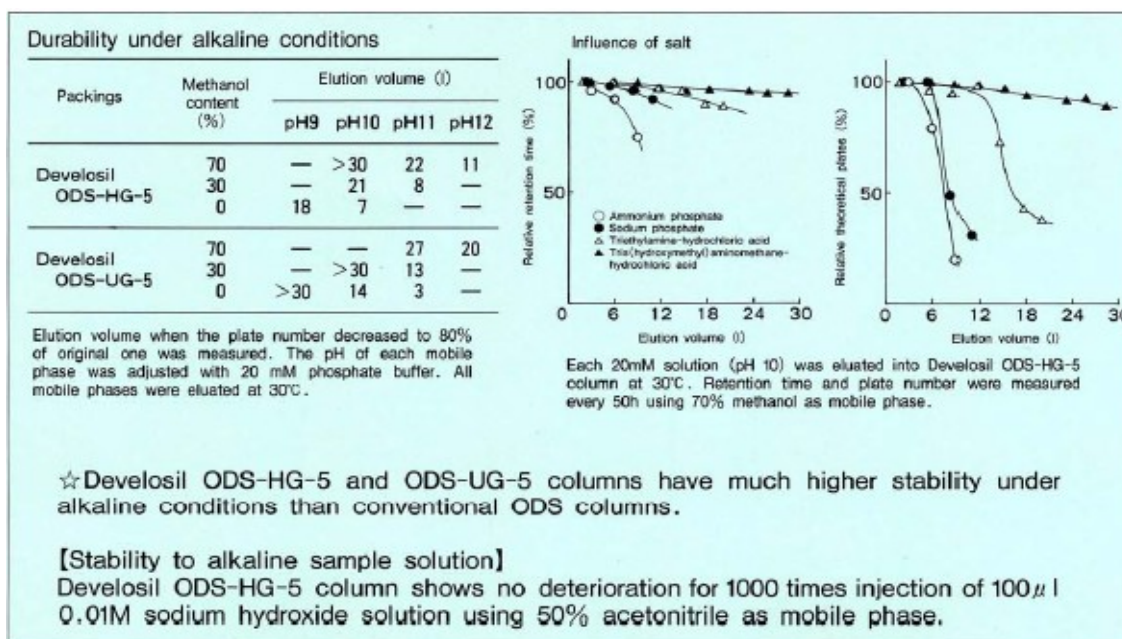
填料性质：

	C18 官能团	粒径	孔径	表面积	孔容积	碳含量	柱尺寸
ODS-HG-5	三官能团	5 $\mu$ m	130 Å	300 m <sup>2</sup> /g	1.0 ml/g	18%	0.3~20mm i.d.
ODS-UG-5	单官能团	5 $\mu$ m	130 Å	300 m <sup>2</sup> /g	1.0 ml/g	18%	

## Develosil ODS-HG 系列最适合在酸性条件下使用

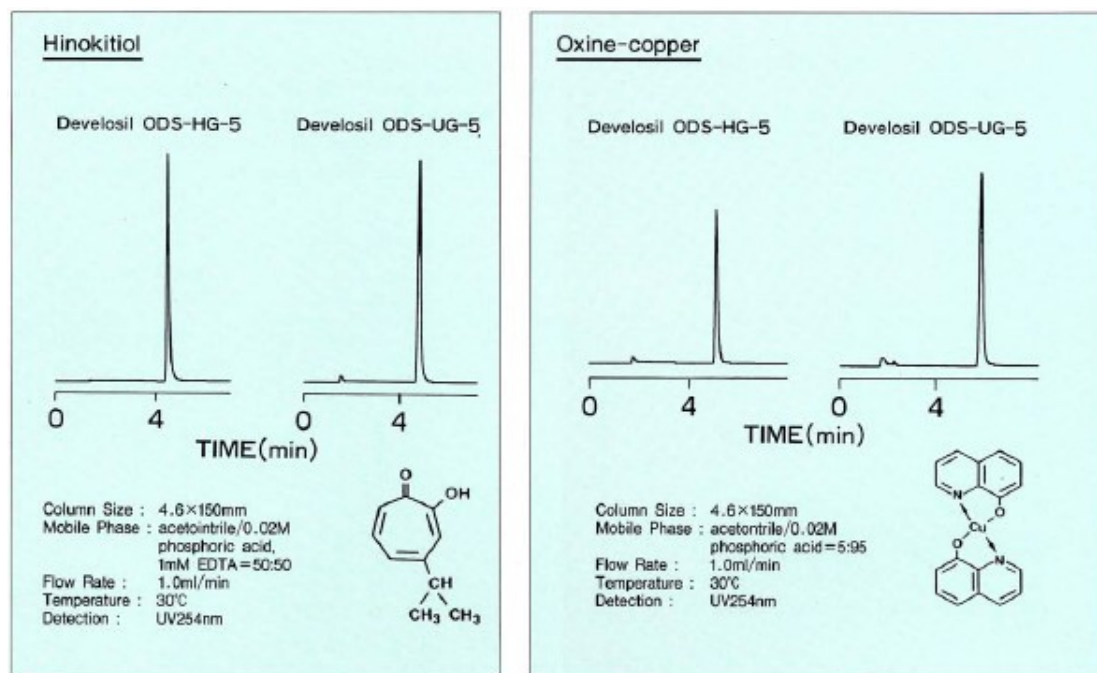


## Develosil ODS-UG 系列最适合在碱性条件下使用



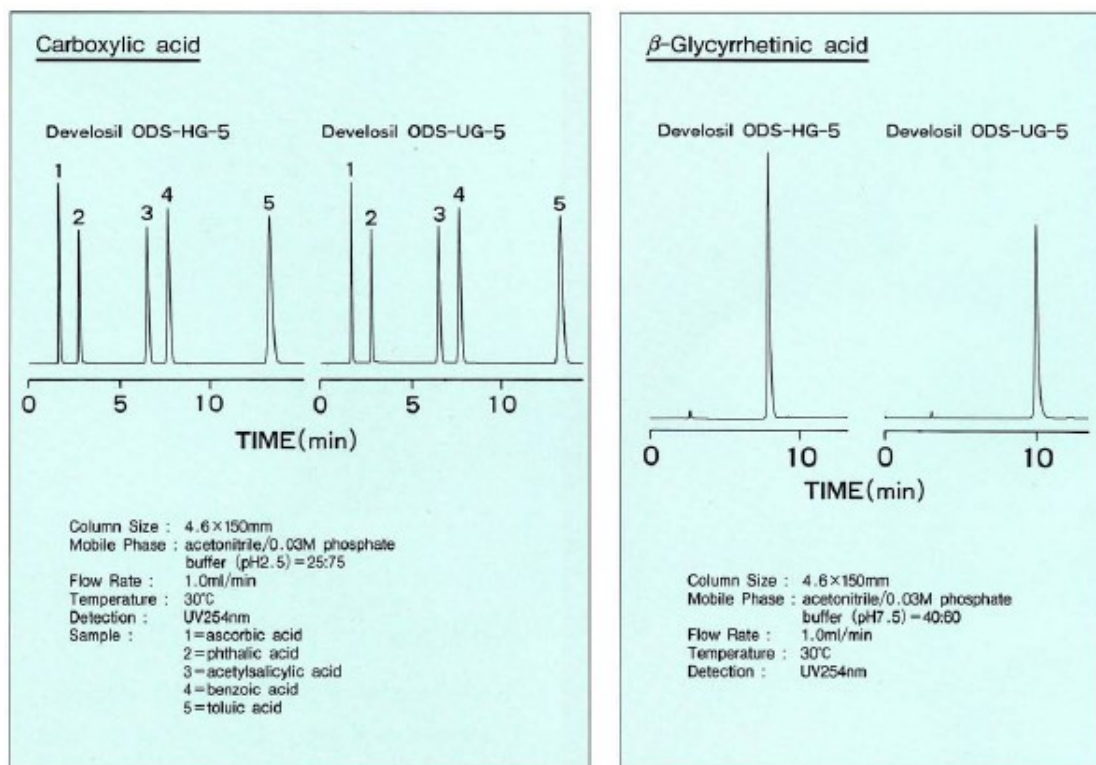
## 应用

### 整合化合物的分离

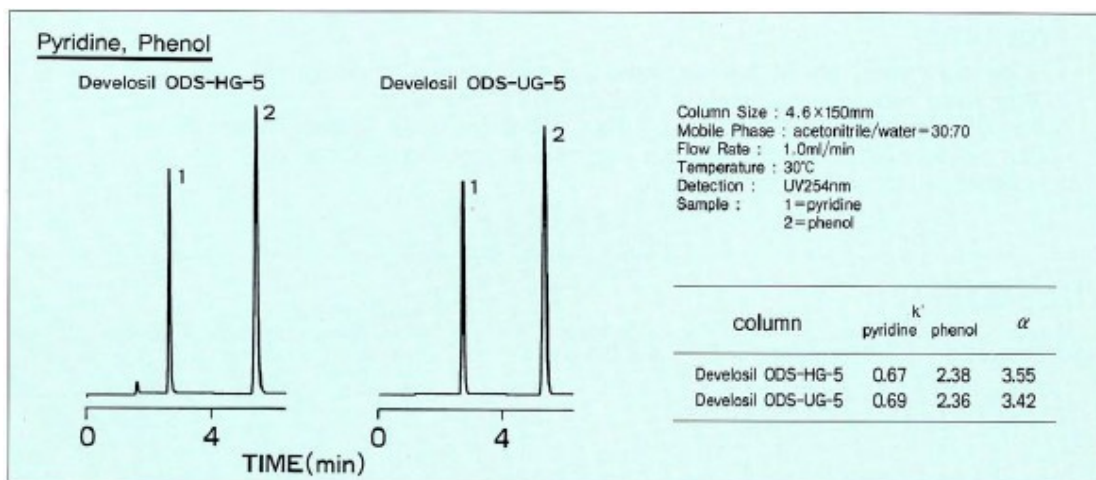


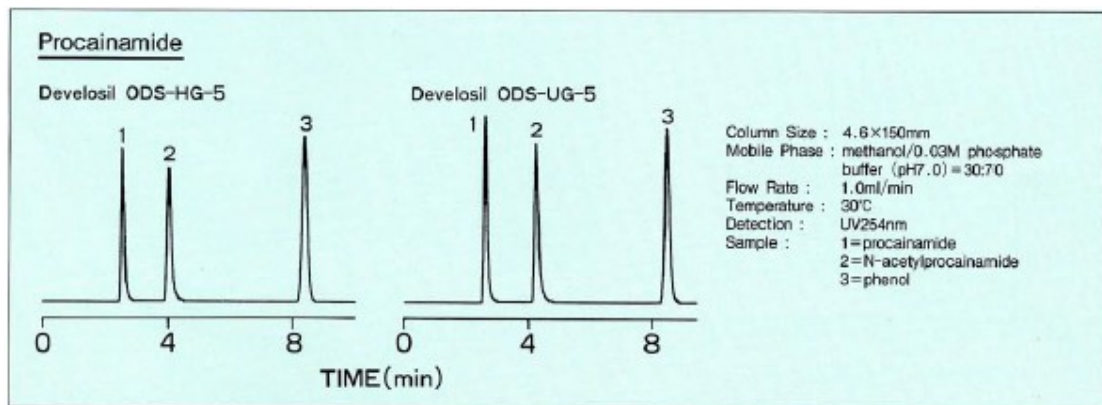
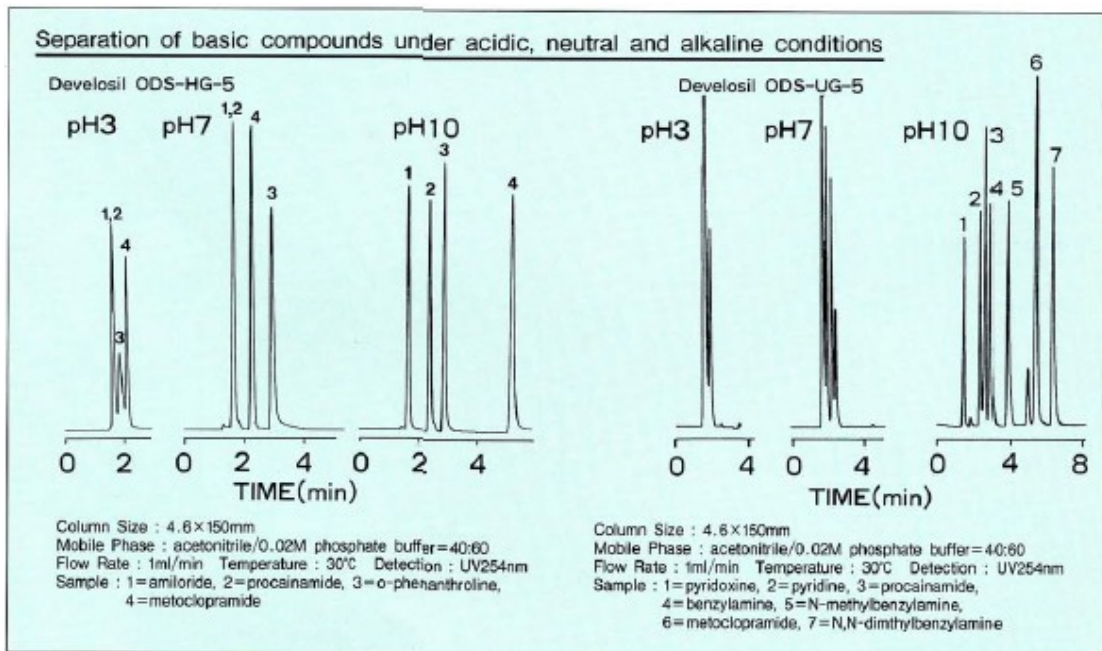


酸性化合物的分离



碱性化合物的分离





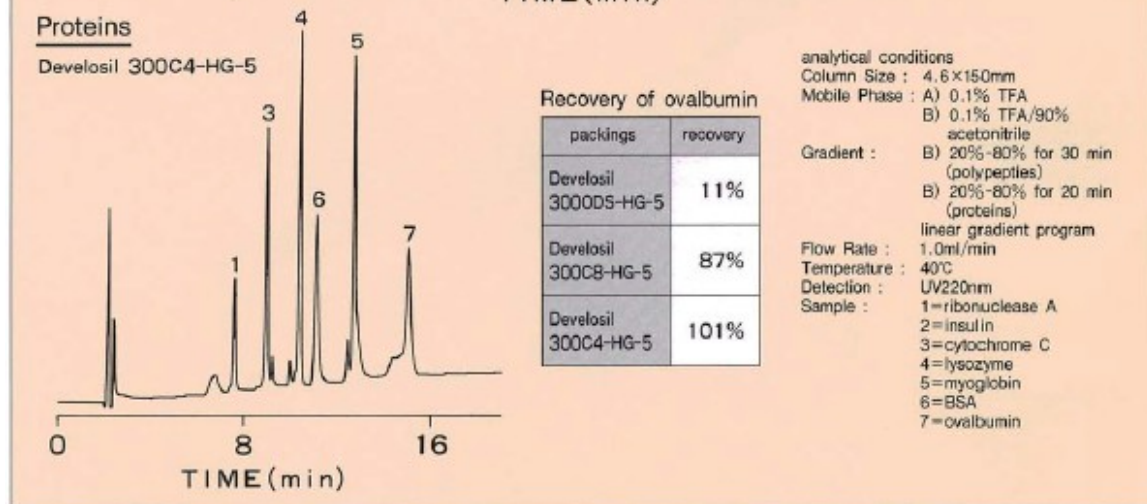
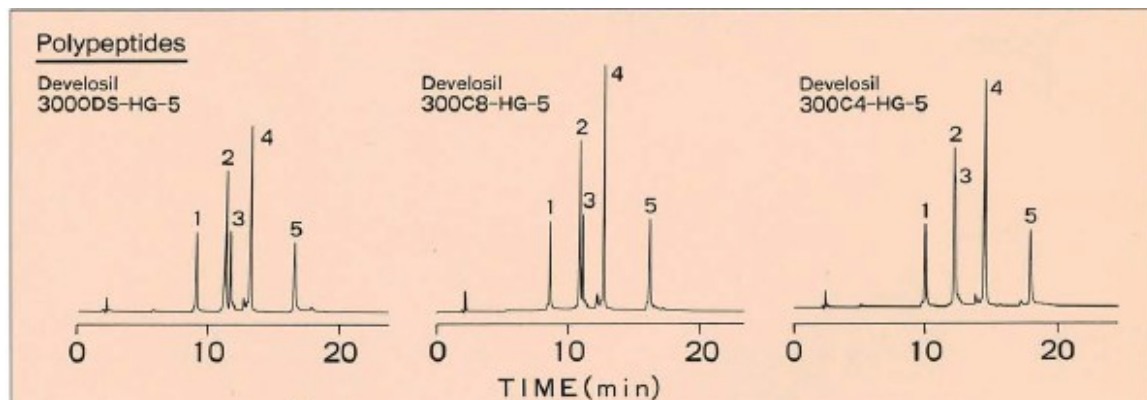
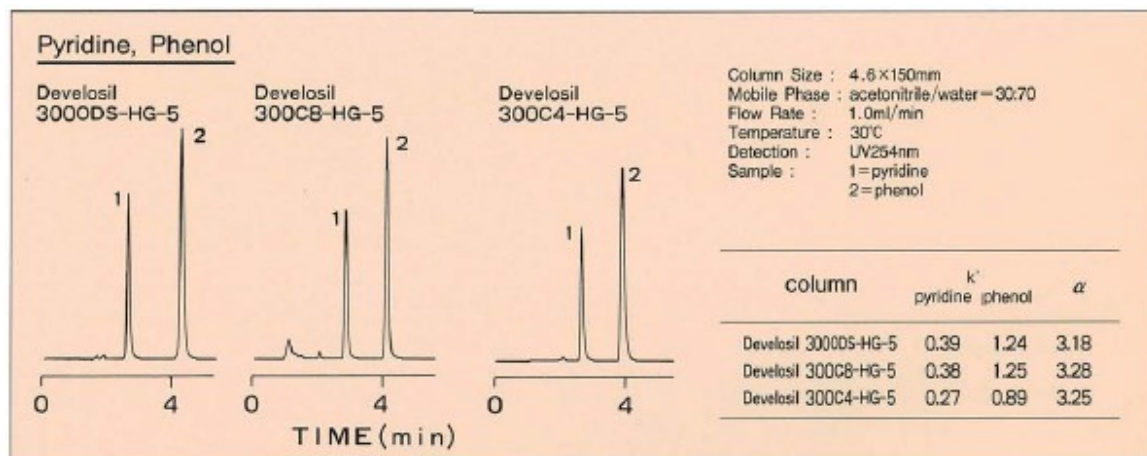
## Develosil 300-HG-5 系列

( 300ODS-HG-5 , 300C8-HG-5 , 300C4-HG-5 , 300TMS-HG-5 )

特点：

1. 硅胶孔径大，适合大分子化合物的分离。
2. 与 Develosil ODS-HG-5 性能相似。
3. 可使用碱性溶液进行清洗(使用 20% 的乙腈为流动相，连续进样 100 针 100 $\mu$ l 0.1M 的氢氧化钠，柱效不会降低)。

应用：





## Develosil 液相色谱柱订货信息

Dimension	Part Number						
	ODS-UG		ODS-HG		300 ODS-HG	300 C8-HG	300 C4-HG
	3um	5um	3um	5um	5um	5um	5um
150 x 1.0 mm	UG11310150W	UG11510150W	HG11310150W	HG11510150W	HG31510150W	HG32510150W	HG33510150W
150 x 1.5 mm	UG11315150W	UG11515150W	HG11315150W	HG11515150W	HG31515150W	HG32515150W	HG33515150W
10 x 1.5 mm (guard)				HG11515010W	HG31515010W	HG32515010W	HG33515010W
35 x 2.0 mm	UG11320035W	UG11520035W	HG11320035W	HG11520035W	HG31520035W	HG32520035W	HG33520035W
50 x 2.0 mm	UG11320050W	UG11520050W	HG11320050W	HG11520050W	HG31520050W	HG32520050W	HG33520050W
100 x 2.0 mm	UG11320100W	UG11520100W	HG11320100W	HG11520100W	HG31520100W	HG32520100W	HG33520100W
150 x 2.0 mm	UG11320150W	UG11520150W	HG11320150W	HG11520150W	HG31520150W	HG32520150W	HG33520150W
250 x 2.0 mm	UG11320250W	UG11520250W	HG11320250W	HG11520250W	HG31520250W	HG32520250W	HG33520250W
10 x 4.0 mm (guard)				HG11540010W	HG31540010W	HG32540010W	HG33540010W
35 x 4.6 mm	UG11346035W	UG11546035W	HG11346035W	HG11546035W	HG31546035W	HG32546035W	HG33546035W
50 x 4.6 mm	UG11346050W	UG11546050W	HG11346050W	HG11546050W	HG31546050W	HG32546050W	HG33546050W
100 x 4.6 mm	UG11346100W	UG11546100W	HG11346100W	HG11546100W	HG31546100W	HG32546100W	HG33546100W
150 x 4.6 mm	UG11346150W	UG11546150W	HG11346150W	HG11546150W	HG31546150W	HG32546150W	HG33546150W
250 x 4.6 mm		UG11546250W	HG11346250W	HG11546250W	HG31546250W	HG32546250W	HG33546250W
100 x 6.0 mm	UG11360100W	UG11560100W	HG11360100W	HG11560100W	HG31560100W	HG32560100W	HG33560100W
150 x 6.0 mm	UG11360150W	UG11560150W	HG11360150W	HG11560150W	HG31560150W	HG32560150W	HG33560150W
250 x 6.0 mm		UG11560250W		HG11560250W	HG31560250W	HG32560250W	HG33560250W
10 x 8.0 mm (guard)		UG11580010W		HG11580010W	HG31580010W	HG32580010W	HG33580010W
250 x 8.0 mm		UG11580250W		HG11580250W	HG31580250W	HG32580250W	HG33580250W
250 x 10.0 mm		UG115P1250W		HG115P1250W	HG315P1250W	HG325P1250W	HG335P1250W
50 x 20 mm		UG115P2050W		HG115P2050W	HG315P2050W	HG325P2050W	HG335P2050W
100 x 20 mm		UG115P2100W		HG115P2100W	HG315P2100W	HG325P2100W	HG335P2100W
150 x 20 mm		UG115P2150W		HG115P2150W	HG315P2150W	HG325P2150W	HG335P2150W
250 x 20 mm		UG115P2250W		HG115P2250W	HG315P2250W	HG325P2250W	HG335P2250W
250 x 28 mm		UG115P3250W		HG115P3250W	HG315P3250W	HG325P3250W	HG335P3250W

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