

# Jones Genesis® Columns

Genesis® columns use a new generation adsorbent based on high-purity metal-free 120Å spherical silica. Particle size offering includes 3, 4, 7, and 15µm. Genesis® columns exhibit excellent peak symmetry and exceptional pH stability from 1 to 10.

**JONES**



hplc columns | small molecule

### Genesis® Phase Specifications

Phase	Base Material	Particle Shape	Particle Size	Pore Size	Surface Area	Carbon Load	Phase Type	Endcapped?	USP L-code
C18	Silica	Spherical	3, 4, 7, 15µm	120Å	300m <sup>2</sup> /g	18%	Monomeric	Yes	L1
AQ	Silica	Spherical	4, 7µm	120Å	300m <sup>2</sup> /g	15%	Monomeric	Yes	L1
C8	Silica	Spherical	3, 4, 7, 15µm	120Å	300m <sup>2</sup> /g	11%	Monomeric	No	L7
C8e/c	Silica	Spherical	3, 4, 7, 15µm	120Å	300m <sup>2</sup> /g	11%	Monomeric	Yes	L7
C4	Silica	Spherical	4µm	120Å	300m <sup>2</sup> /g	6.3%	Monomeric	Yes	L26
Phe	Silica	Spherical	4µm	120Å	300m <sup>2</sup> /g	9.4%	Monomeric	Yes	L11
CN	Silica	Spherical	3, 4µm	120Å	300m <sup>2</sup> /g	7%	Monomeric	Yes	L10
Amino (NH <sub>2</sub> )	Silica	Spherical	3, 4µm	120Å	300m <sup>2</sup> /g	3.5%	Polymeric	No	L8
Carbohydrate	Silica	Spherical	4µm	120Å	300m <sup>2</sup> /g	—	Monomeric	—	—
CN-TCA	Silica	Spherical	4µm	120Å	300m <sup>2</sup> /g	7%	Monomeric	Yes	—
Petro-XP	Silica	Spherical	4µm	120Å	300m <sup>2</sup> /g	—	Monomeric	—	—
Silica	Silica	Spherical	3, 4, 7, 15µm	120Å	300m <sup>2</sup> /g	n/a	n/a	n/a	L3

### Genesis® C18 Reversed Phase

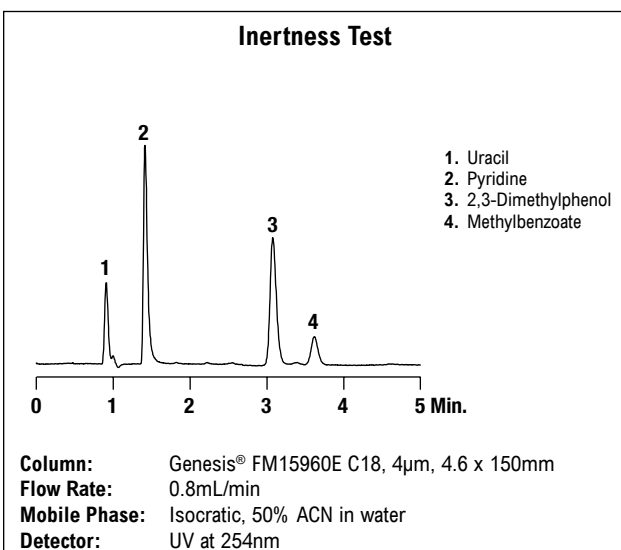
- Excellent peak symmetry
- Exceptional stability from pH 1 to 10
- Reduced need for mobile-phase modifiers
- Long column life

Genesis® C18 bonding is monomeric. A unique proprietary end-capping reagent, which is less prone to acid hydrolysis than trimethylsilane, provides freedom from residual silanols and enhanced stability under low-pH operating conditions. Genesis® C18 columns also exhibit superior stability at alkaline pH. The permissible operating range is pH 1–10.

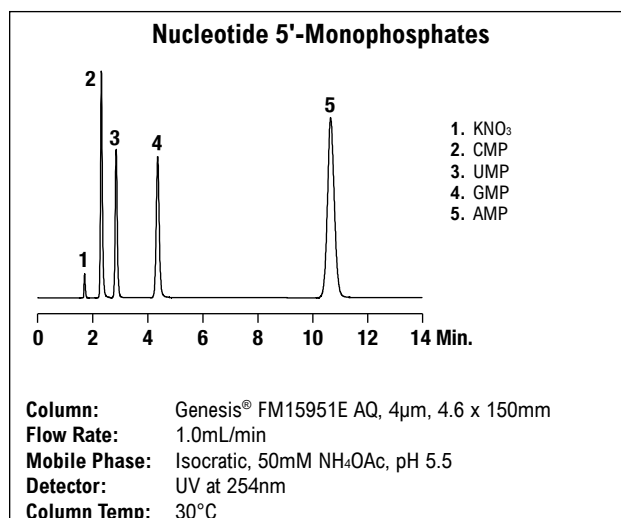
### Genesis® AQ Reversed Phase

- Designed for separating hydrophilic and polar compounds
- Stable retention times in 100% aqueous mobile phases
- Rapid equilibration
- Unique reversed-phase selectivity

The Genesis® AQ adsorbent employs an optimum ratio of C18, short (non-TMS) chains, and polar surface groups bonded to high-purity 120Å silica to allow rapid equilibration and provide consistent, reproducible chromatography with stable retention times in 100% aqueous eluents.



Retention on Genesis® AQ is greater for polar analytes but lower for non-polar compounds compared to Genesis® C18. Uracil, which is typically an unretained peak on C18 columns, is well retained on the Genesis® AQ adsorbent. Acids and bases exhibit good peak shapes. Although Genesis® AQ excels with water-rich mobile phases, it can also be used in gradient and isocratic modes with a full spectrum of mobile phases.



# Jones Genesis® Columns

## Genesis® C8(EC) Reversed Phase

- Excellent peak symmetry
- Exceptional stability from pH 1 to 10
- Reduced need for mobile-phase modifiers
- Long column life

C8(EC) is double-bonded before fully endcapped using a unique proprietary end-capping reagent. It is less prone to acid hydrolysis than trimethylsilane, which provides freedom from residual silanols and enhanced stability under low-pH operating conditions. The bonding is monomeric. Genesis® C8(EC) columns exhibit superior stability at alkaline pH.

## Genesis® C8 Reversed Phase

- Non-endcapped
- Suitable for lower pH separations

Genesis® C8 bonding is monomeric. They are suitable for separations under lower pH conditions and may offer selectivity advantages for some samples.

## Genesis® Phenyl

- Unique reversed-phase chemistry
- Improve the chromatography of polar aromatic, fatty acids, and basic pharmaceuticals

Genesis® Phenyl columns provide impressive peak symmetry for both acidic and basic compounds.

Genesis® Columns							Genesis® Guards <sup>1</sup>	
Length:	30mm	50mm	100mm	150mm	200mm	250mm	10mm	20mm
<b>Genesis® AQ</b>								
4µm	1.0mm i.d.	—	—	FJ10951E	FJ15951E	—	FJ25951E	—
	2.1mm i.d.	FK3951E	—	—	FK15951E	FK20951E	—	—
	3.0mm i.d.	FL3951E	—	—	—	—	—	—
	4.0mm i.d.	FH3951E	FH5951E	FH10951E	FH15951E	—	—	FH1951-2
	4.6mm i.d.	—	—	FM10951E	—	FM20951E	—	—
<b>Genesis® C18</b>								
3µm	1.0mm i.d.	—	—	FJ10963E	FJ15963E	—	FJ25963E	FJ1963-2
	2.1mm i.d.	—	—	—	FK15963E	FK20963E	FK25963E	—
	3.0mm i.d.	—	FL5963E	FL10963E	—	—	FL25963E	—
	4.0mm i.d.	—	—	FH10963E	—	—	—	—
	4.6mm i.d.	—	—	—	—	FM20963E	—	—
4µm	1.0mm i.d.	—	—	FJ10960E	—	—	FJ25960E	—
	2.1mm i.d.	—	FK5960E	FK10960E	—	FK20960E	—	FK1960-2
	3.0mm i.d.	—	FL5960E	FL10960E	—	—	FL25960E	FL1960-2
	4.0mm i.d.	—	—	—	FH15960E	—	FH25960E	FH1960-2
	4.6mm i.d.	—	FM5960E	FM10960E	FM15960E	FM20960E	FM25960E	—
<b>Genesis® C8</b>								
3µm	1.0mm i.d.	—	FJ5968E	FJ10968E	FJ15968E	—	FJ25968E	FJ1968-2
	2.1mm i.d.	—	—	FK10968E	—	FL20968E	FK25968E	FK1968-2
	3.0mm i.d.	FL3968E	—	—	FL15968E	—	FL25968E	FL2968-2
	4.0mm i.d.	FH3968E	FH5968E	FH10968E	—	—	FH25968E	FH1968-2
4µm	1.0mm i.d.	—	FJ5962E	FJ10962E	FJ15962E	—	FJ25962E	FJ1962-2
	2.1mm i.d.	—	FK5962E	—	—	FK20962E	FK25962E	FK2962-2
	4.0mm i.d.	—	—	—	FH15962E	—	FH25962E	FH1962-2
	4.6mm i.d.	—	—	FM10962E	FM15962E	—	FM25962E	—
<b>Genesis® C8(EC)</b>								
3µm	1.0mm i.d.	—	FJ5969E	FJ10969E	FJ15969E	—	FJ25969E	FJ1969-2
	2.1mm i.d.	—	—	—	—	—	FK25969E	—
	3.0mm i.d.	—	—	—	FL15969E	—	FL25969E	FL1969-2
	4.0mm i.d.	FH3969E	FH5969E	FH10969E	FH15969E	—	FH25969E	FH1969-2
	4.6mm i.d.	FM3969E	—	—	—	FM20969E	—	—
4µm	1.0mm i.d.	—	FJ5964E	FJ10964E	FJ15964E	—	FJ25964E	—
	2.1mm i.d.	—	—	—	—	FK20964E	—	FK2964-2
	3.0mm i.d.	—	—	—	FL15964E	—	—	FL2964-2
	4.0mm i.d.	FH3964E	FH5964E	FH10964E	—	—	—	FH1964-2
	4.6mm i.d.	FM3964E	FM5964E	FM10964E	FM15964E	FM20964E	FM25964E	—
<b>Genesis® Phenyl</b>								
4µm	1.0mm i.d.	—	FJ5980E	FJ10980E	FJ15980E	—	FJ25980E	FJ1980-2
	2.1mm i.d.	—	FK5980E	—	FK15980E	FK20980E	FK25980E	—
	4.0mm i.d.	FH3980E	FH5980E	—	FH15980E	—	FH25980E	—
	4.6mm i.d.	FM3980E	—	FM10980E	FM15980E	FM20980E	—	FH1980-2

NOTE: Genesis® line is completed by additional phases such as Silica, Phenyl, Cyano, and Amino, for details please check online at [www.discoverysciences.com](http://www.discoverysciences.com).

<sup>1</sup>All Genesis® guards listed are cartridges and require either a stand-alone holder or direct-connect holder for use. Guard cartridges are 2/pkg.

### Guard Cartridge Holders for Genesis® and Apex™ Guards

	10 mm Stand-Alone	20 mm Stand-Alone	10 mm Direct-Connect	20 mm Direct-Connect
1.0 mm i.d.	F91GPH	—	—	—
2.1 mm i.d.	F9111P	F9112P	F9141P	—
3.0, 4.0, 4.6 mm i.d.	F9111P	F9112P	F9151P	F9152P

# Jones Apex™ Reversed-Phase Columns



Economical Column Line with Maximum Reproducibility and Efficiency

- Conventional 100Å pore size spherical silica
- Uniform-sized particle
- Narrow particle distribution
- Controlled surface area



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### Apex™ Phase Specifications

Phase	Base Material	Particle Shape	Particle Size	Pore Size	Surface Area	Carbon Load	Phase Type	Endcapped?	USP L-code
ODS	Silica	Spherical	5µm	100Å	170m <sup>2</sup> /g	10%	Polymeric	Yes	L1
ODS II	Silica	Spherical	3, 5µm	100Å	170m <sup>2</sup> /g	10.5%	Monomeric	Yes	L1
C8	Silica	Spherical	5µm	100Å	170m <sup>2</sup> /g	7%	Monomeric	No	L7
C8(EC)	Silica	Spherical	5µm	100Å	170m <sup>2</sup> /g	7%	Monomeric	Yes	L7
Phe	Silica	Spherical	5µm	100Å	170m <sup>2</sup> /g	3%	Monomeric	Yes	L11
Amino II (NH <sub>2</sub> )	Silica	Spherical	3µm	100Å	170m <sup>2</sup> /g	2%	Monomeric	No	L8
Carbohydrate	Silica	Spherical	5µm	100Å	170m <sup>2</sup> /g	—	Monomeric	Proprietary	—
Silica	Silica	Spherical	3, 5µm	100Å	170m <sup>2</sup> /g	n/a%	n/a	No	L3

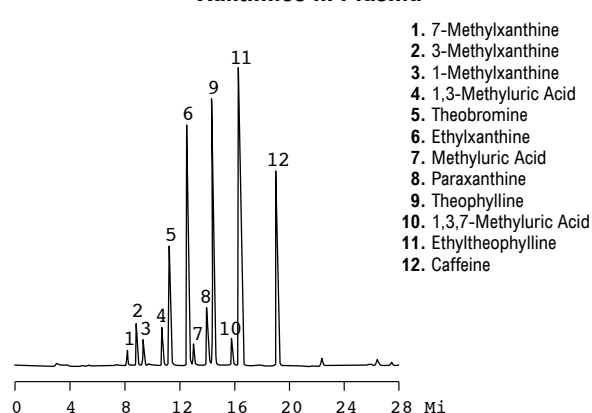
### Apex™ HPLC Columns

Packing	Format	i.d. x Length	Part No.
ODS, 5µm	Analytical	4.6 x 30mm	<b>5109740</b>
	Analytical	4.6 x 50mm	<b>5140902</b>
	Analytical	4.6 x 150mm	<b>5140900</b>
	Analytical	4.6 x 250mm	<b>5140901</b>
ODS II, 3µm	Analytical	4.6 x 100mm	<b>5110994</b>
	Analytical	4.6 x 250mm	<b>5111025</b>
ODS II, 5µm	Analytical	4.6 x 150mm	<b>5109730</b>
	Analytical	4.6 x 250mm	<b>5109733</b>
C8, 5µm	Analytical	4.6 x 150mm	<b>5109921</b>
	Analytical	4.6 x 250mm	<b>5109734</b>
C8(EC), 5µm	Analytical	4.6 x 250mm	<b>5109735</b>
	Phenyl, 5µm	Analytical	4.6 x 100mm
Analytical		4.6 x 150mm	<b>5110650</b>
Analytical		4.6 x 250mm	<b>5109934</b>
Amino II, 3µm	Analytical	4.6 x 150mm	<b>5111004</b>
Silica, 3µm	Analytical	4.6 x 150mm	<b>5109698</b>
Silica, 5µm	Analytical	4.6 x 250mm	<b>5111024</b>

### Apex™ Guard Columns

Packings	i.d. x Length	Part No.
ODS, 5µm	4 x 10mm	<b>5110703</b>
ODS II, 5µm	4 x 20mm	<b>5110705</b>
Guard Cartridge Holder	10mm	<b>F9111P</b>
	20mm	<b>F9112P</b>

### Xanthines in Plasma

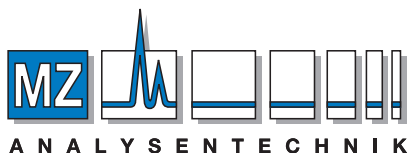


1. 7-Methylxanthine
2. 3-Methylxanthine
3. 1-Methylxanthine
4. 1,3-Methyluric Acid
5. Theobromine
6. Ethylxanthine
7. Methyluric Acid
8. Paraxanthine
9. Theophylline
10. 1,3,7-Methyluric Acid
11. Ethyltheophylline
12. Caffeine

**Column:** Apex™ ODS II, C18, 5µm, 4.6 x 250mm  
**Flow Rate:** 0.8mL/min  
**Mobile Phase:** A: 10 mM NaOAc, 0.02% THF  
 B: 10 mM NaOAc, 2.7% THF, 25% ACN  
**Gradient:** Time: 0 | 35 |  
 %B: 0 | 70 |  
**Column Temp:** 50°C  
**Detector:** UV at 273nm

### more applications

To view our complete searchable chromatogram database visit [www.discoverysciences.com/chromdb/](http://www.discoverysciences.com/chromdb/)



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