

## Pinnacle® DB C8 Columns (USP L7)

### Chromatographic Properties:

Highly base-deactivated spherical silica manufactured by Restek. Monomeric C8 bonding. Similar to Pinnacle® DB C18, but the shorter alkyl chain provides less hydrophobic retention. Less retention can be useful for reducing analysis time, if resolution is adequate. Replaces Hypersil® BDS C8 and Pinnacle® C8 Amine.



### Physical Characteristics:

particle size: 1.9µm, 3µm, or 5µm, spherical  
pore size: 140Å  
carbon load: 6%  
endcap: yes  
pH range: 2.5 to 8  
temperature limit: 80°C

Length	1.0mm ID cat.#	2.1mm ID cat.#	3.2mm ID cat.#	4.6mm ID cat.#
<b>1.9µm Columns</b>				
30mm		9413232		
50mm		9413252		
100mm		9413212		
<b>3µm Columns</b>				
30mm	9413331	9413332	9413333	9413335
50mm	9413351	9413352	9413353	9413355
100mm	9413311	9413312	9413313	9413315
<b>5µm Columns</b>				
30mm	9413531	9413532	9413533	9413535
50mm	9413551	9413552	9413553	9413555
100mm	9413511	9413512	9413513	9413515
150mm	9413561	9413562	9413563	9413565
200mm	9413521	9413522	9413523	9413525
250mm	9413571	9413572	9413573	9413575

3.0mm ID available on request for 3µm particle applications above 4,000 psi (275 Bar).

### Pinnacle® DB C8 Guard Cartridges

Guard Cartridges	3-pk. (10 x 2.1mm)	3-pk. (10 x 4.0mm)	2-pk. (20 x 2.1mm)	2-pk. (20 x 4.0mm)
Pinnacle DB C8 Guard Cartridge	941350212	941350210	941350222	941350220

### Pinnacle® DB C8 HPLC Prep Columns

Length	10mm ID cat.#	21.2mm ID cat.#	30mm ID cat.#	50mm ID cat.#
<b>5µm Columns</b>				
50mm	9413557	9413558	9413559	9413550
100mm	9413517	9413518	9413519	9413510
150mm	9413567	9413568	9413569	9413560
250mm	9413577	9413578	9413579	9413570

## ChromaBLOGraphy

Topical and timely insights from top chromatographers.

Visit us at [blog.restek.com](http://blog.restek.com)



Anthony Hahn, Customer Service

## Restek Customer Service

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Monday–Friday 8:00 a.m.–6:00 p.m. ET

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### Outside the U.S.

Contact your Restek representative:  
Refer to our list on pages 4-5 or visit our website at [www.restek.com](http://www.restek.com)



**Physical Characteristics:**

particle size: 1.9µm or 5µm, spherical  
pore size: 140Å  
carbon load: 4%  
endcap: yes  
pH range: 2.5 to 8  
temperature limit: 80°C



also  
available

**Bulk Packing  
Materials**  
See page 194.



**Physical Characteristics:**

particle range: 5µm, spherical  
pore size: 140Å  
carbon load: 5.3%  
endcap: yes  
pH range: 2.5 to 8  
temperature limit: 80°C

**Pinnacle® DB Cyano Columns (USP L10)**

**Chromatographic Properties:**

Highly base-deactivated spherical silica manufactured by Restek. Cyano bonding. Suitable for analyses of a wide range of compounds, from acidic through slightly basic. Also useful for confirmation of analyses on a C18 or C8 column. Can be used in normal phase or reversed phase mode of separation. Replaces Hypersil® BDS Cyano and Pinnacle® Cyano Amine.

Length	1.0mm ID cat.#	2.1mm ID cat.#	3.2mm ID cat.#	4.6mm ID cat.#
<b>1.9µm Columns</b>				
30mm		9416232		
50mm		9416252		
100mm		9416212		
<b>5µm Columns</b>				
30mm	9416531	9416532	9416533	9416535
50mm	9416551	9416552	9416553	9416555
100mm	9416511	9416512	9416513	9416515
150mm	9416561	9416562	9416563	9416565
200mm	9416521	9416522	9416523	9416525
250mm	9416571	9416572	9416573	9416575

**Pinnacle® DB Cyano Guard Cartridges**

Guard Cartridges	3-pk. (10 x 2.1mm)	3-pk. (10 x 4.0mm)	2-pk. (20 x 2.1mm)	2-pk. (20 x 4.0mm)
Pinnacle DB Cyano Guard Cartridge	941650212	941650210	941650222	941650220

**Pinnacle® DB Cyano HPLC Prep Columns**

Length	10mm ID cat.#	21.2mm ID cat.#	30mm ID cat.#	50mm ID cat.#
<b>5µm Columns</b>				
50mm	9416557	9416558	9416559	9416550
100mm	9416517	9416518	9416519	9416510
150mm	9416567	9416568	9416569	9416560
250mm	9416577	9416578	9416579	9416570

**Pinnacle® DB Phenyl Columns (USP L11)**

**Chromatographic Properties:**

Highly base-deactivated spherical silica manufactured by Restek. Pinnacle® DB Phenyl columns offer alternate selectivity to straight chain hydrocarbon phases, especially for aromatic analytes. Replaces Hypersil® BDS Phenyl and Pinnacle® Phenyl Amine.

Length	1.0mm ID cat.#	2.1mm ID cat.#	3.2mm ID cat.#	4.6mm ID cat.#
<b>5µm Columns</b>				
30mm	9415531	9415532	9415533	9415535
50mm	9415551	9415552	9415553	9415555
100mm	9415511	9415512	9415513	9415515
150mm	9415561	9415562	9415563	9415565
200mm	9415521	9415522	9415523	9415525
250mm	9415571	9415572	9415573	9415575

**Pinnacle® DB Phenyl Guard Cartridges**

Guard Cartridges	3-pk. (10 x 2.1mm)	3-pk. (10 x 4.0mm)	2-pk. (20 x 2.1mm)	2-pk. (20 x 4.0mm)
Pinnacle DB Phenyl Guard Cartridge	941550212	941550210	941550222	941550220

## Pinnacle® DB PFP Propyl Columns (USP L43)

### Chromatographic Properties:

Pinnacle® DB PFP Propyl, a unique pentafluorophenyl phase with a propyl spacer, uses a highly base-deactivated spherical silica manufactured by Restek. This highly base-deactivated packing exhibits excellent peak shapes for a wide range of compounds, including nucleosides, nucleotides, and halogenated compounds.



### Physical Characteristics:

particle size: 1.9µm, 3µm, or 5µm, spherical  
pore size: 140Å  
carbon load: 6%  
endcap: yes  
pH range: 2.5 to 8  
temperature limit: 80°C

Length	1.0mm ID cat.#	2.1mm ID cat.#	3.2mm ID cat.#	4.6mm ID cat.#
<b>1.9µm Columns</b>				
30mm		9419232		
50mm		9419252		
100mm		9419212		
<b>3µm Columns</b>				
30mm	9419331	9419332	9419333	9419335
50mm	9419351	9419352	9419353	9419355
100mm	9419311	9419312	9419313	9419315
150mm	9419361	9419362	9419363	9419365
<b>5µm Columns</b>				
30mm	9419531	9419532	9419533	9419535
50mm	9419551	9419552	9419553	9419555
100mm	9419511	9419512	9419513	9419515
150mm	9419561	9419562	9419563	9419565
200mm	9419521	9419522	9419523	9419525
250mm	9419571	9419572	9419573	9419575

3.0mm ID available on request for 3µm particle applications above 4,000 psi (275 Bar).

## Pinnacle® DB PFP Propyl Guard Cartridges

Guard Cartridges	3-pk. (10 x 2.1mm)	3-pk. (10 x 4.0mm)	2-pk. (20 x 2.1mm)	2-pk. (20 x 4.0mm)
Pinnacle DB PFP Propyl Guard Cartridge	941950212	941950210	941950222	941950220

## Pinnacle® DB PFP Propyl HPLC Prep Columns

Length	10mm ID cat.#	21.2mm ID cat.#	30mm ID cat.#	50mm ID cat.#
<b>5µm Columns</b>				
50mm	9419557	9419558	9419559	9419550
100mm	9419517	9419518	9419519	9419510
150mm	9419567	9419568	9419569	9419560
250mm	9419577	9419578	9419579	9419570

## Chromatogram Search Tool

Search by compound name, synonym,  
CAS # or keyword

[www.restek.com/chromatograms](http://www.restek.com/chromatograms)





**Physical Characteristics:**

particle size: 1.9µm, 3µm, or 5µm, spherical  
pore size: 140Å  
carbon load: 8%  
endcap: yes  
pH range: 2.5 to 8  
temperature limit: 80°C



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drug residues .....	.725
steroids .....	.742

**Pinnacle® DB Biphenyl Columns (USP L11)**

**Chromatographic Properties:**

Pinnacle® DB Biphenyl is a unique reversed phase material that displays both increased retention and selectivity for aromatic and/or unsaturated compounds when compared to conventional alkyl and phenyl phases. Highly base-deactivated spherical silica manufactured by Restek. An excellent choice for the analysis of steroids, tetracyclines, drug metabolites, and other compounds that contain some degree of unsaturation.

Length	1.0mm ID cat.#	2.1mm ID cat.#	3.2mm ID cat.#	4.6mm ID cat.#
<b>1.9µm Columns</b>				
30mm		9409232		
50mm		9409252		
100mm		9409212		
<b>3µm Columns</b>				
30mm	9409331	9409332	9409333	9409335
50mm	9409351	9409352	9409353	9409355
100mm	9409311	9409312	9409313	9409315
150mm	9409361	9409362	9409363	9409365
<b>5µm Columns</b>				
30mm	9409531	9409532	9409533	9409535
50mm	9409551	9409552	9409553	9409555
100mm	9409511	9409512	9409513	9409515
150mm	9409561	9409562	9409563	9409565
200mm	9409521	9409522	9409523	9409525
250mm	9409571	9409572	9409573	9409575

3.0mm ID available on request for 3µm particle applications above 4,000 psi (275 Bar).

**Pinnacle® DB Biphenyl Guard Cartridges**

Guard Cartridges	3-pk. (10 x 2.1mm)	3-pk. (10 x 4.0mm)	2-pk. (20 x 2.1mm)	2-pk. (20 x 4.0mm)
Pinnacle DB Biphenyl Guard Cartridge	940950212	940950210	940950222	940950220

**Pinnacle® DB Biphenyl HPLC Prep Columns**

Length	10mm ID cat.#	21.2mm ID cat.#	30mm ID cat.#	50mm ID cat.#
<b>5µm Columns</b>				
50mm	9409557	9409558	9409559	9409550
100mm	9409517	9409518	9409519	9409510
150mm	9409567	9409568	9409569	9409560
250mm	9409577	9409578	9409579	9409570

**ordering note**

To order a 2.1mm, 3.2mm, or 4.6mm ID column with a Trident Integral Inlet Fitting, add "-700" to the catalog number for the column.

Nominal additional charge

Example: 100mm x 4.6mm ID Ultra C18 column with Trident Integral Inlet Fitting: 9174315-700

Also order an XG-XF fitting (10mm: cat.#25026 or 20mm: 25062), see page 196.



## Pinnacle® DB Aqueous C18 Columns (USP L1)

### Chromatographic Properties:

Highly selective phase for polar analytes. Compatible with highly aqueous (up to 100%) mobile phases. Silica manufactured by Restek.

Length	1.0mm ID		2.1mm ID		3.2mm ID		4.6mm ID	
	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#
<b>1.9µm Columns</b>								
30mm			9418232					
50mm			9418252					
100mm			9418212					
<b>3µm Columns</b>								
30mm	9418331		9418332		9418333		9418335	
50mm	9418351		9418352		9418353		9418355	
100mm	9418311		9418312		9418313		9418315	
150mm	9418361		9418362		9418363		9418365	
<b>5µm Columns</b>								
30mm	9418531		9418532		9418533		9418535	
50mm	9418551		9418552		9418553		9418555	
100mm	9418511		9418512		9418513		9418515	
150mm	9418561		9418562		9418563		9418565	
200mm	9418521		9418522		9418523		9418525	
250mm	9418571		9418572		9418573		9418575	

3.0mm ID available on request for 3µm particle applications above 4,000 psi (275 Bar).

## Pinnacle® DB Aqueous C18 Guard Cartridges

Guard Cartridges	3-pk.		2-pk.	
	(10 x 2.1mm)	(10 x 4.0mm)	(20 x 2.1mm)	(20 x 4.0mm)
Pinnacle DB Aqueous C18 Guard Cartridge	941850212	941850210	941850222	941850220

## Pinnacle® DB Aqueous C18 HPLC Prep Columns

Length	10mm ID		21.2mm ID		30mm ID		50mm ID	
	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#
<b>5µm Columns</b>								
50mm	9418557		9418558		9418559		9418550	
100mm	9418517		9418518		9418519		9418510	
150mm	9418567		9418568		9418569		9418560	
250mm	9418577		9418578		9418579		9418570	

## Pinnacle® DB IBD UHPLC Columns

### Chromatographic Properties:

An intrinsically base-deactivated (IBD) phase, containing a polar group within, or intrinsic to, the hydrocarbon bonded phase. Unique selectivity and a high level of base deactivation, while reducing or eliminating the need for mobile phase additives.

Length	2.1mm ID	
	cat.#	cat.#
<b>1.9µm Columns</b>		
30mm		9425232
50mm		9425252
100mm		9425212

## Pinnacle® DB IBD HPLC Prep Columns

Length	10mm ID		21.2mm ID		30mm ID		50mm ID	
	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#
<b>5µm Columns</b>								
50mm	9425557		9425558		9425559		9425550	
100mm	9425517		9425518		9425519		9425510	
150mm	9425567		9425568		9425569		9425560	
250mm	9425577		9425578		9425579		9425570	



### Physical Characteristics:

particle size: 1.9µm, 3µm, or 5µm, spherical  
pore size: 140Å  
carbon load: 6%  
pH range: 2.5 to 8  
temperature limit: 80°C



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food contaminants	720, 722
pesticides	720, 722





**Physical Characteristics:**

particle size: 1.9µm, 3µm, or 5µm, spherical  
pore size: 140Å  
endcap: no  
pH range: 2.5 to 8  
temperature limit: 80°C



also available

**HPLC Syringes**

See pages 285-289.



**Pinnacle® DB Silica Columns (USP L3)**

**Chromatographic Properties:**

Highly base-deactivated spherical silica manufactured by Restek. Useful for normal phase separations. Replaces Hypersil® BDS and Pinnacle® Amine.

Length	1.0mm ID cat.#	2.1mm ID cat.#	3.2mm ID cat.#	4.6mm ID cat.#
<b>1.9µm Columns</b>				
30mm		9410232		
50mm		9410252		
100mm		9410212		
<b>3µm Columns</b>				
30mm	9410331	9410332	9410333	9410335
50mm	9410351	9410352	9410353	9410355
100mm	9410311	9410312	9410313	9410315
150mm	9410361	9410362	9410363	9410365
<b>5µm Columns</b>				
30mm	9410531	9410532	9410533	9410535
50mm	9410551	9410552	9410553	9410555
100mm	9410511	9410512	9410513	9410515
150mm	9410561	9410562	9410563	9410565
200mm	9410521	9410522	9410523	9410525
250mm	9410571	9410572	9410573	9410575

3.0mm ID available on request for 3µm particle applications above 4,000 psi (275 Bar).

**Pinnacle® DB Silica Guard Cartridges**

Guard Cartridges	3-pk. (10 x 2.1mm)	3-pk. (10 x 4.0mm)	2-pk. (20 x 2.1mm)	2-pk. (20 x 4.0mm)
Pinnacle DB Silica Guard Cartridge	941050212	941050210	941050222	941050220

**Pinnacle® DB Silica HPLC Prep Columns**

Length	10mm ID cat.#	21.2mm ID cat.#	30mm ID cat.#	50mm ID cat.#
<b>5µm Columns</b>				
50mm	9410557	9410558	9410559	9410550
100mm	9410517	9410518	9410519	9410510
150mm	9410567	9410568	9410569	9410560
250mm	9410577	9410578	9410579	9410570

**Pinnacle® DB PAH UHPLC Columns**

- Complete resolution of EPA 610 PAHs in less than 4 minutes.
- Greatly reduces run times, increasing sample throughput.

**Chromatographic Properties:**

Specifically designed to resolve complex mixtures of polycyclic aromatic hydrocarbons.

Length	2.1mm ID cat.#
<b>1.9µm Columns</b>	
30mm	9470232
50mm	9470252
100mm	9470212



**Physical Characteristics:**

particle size: 1.9µm  
pore size: 140Å  
endcap: yes  
pH range: 2.5 to 8  
temperature limit: 80°C



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polycyclic aromatic hydrocarbons .....718