

## Viva Wide Pore HPLC Columns: 3µm or 5µm particles; 300Å pore size

- Excellent for separating peptides or proteins.
- Rugged, spherical particles, with 300Å pore size.
- High proportion of pore/surface area available to large molecules.

Viva columns are based on a wide pore material we designed for optimal large molecule separations. In developing Viva silica, we found that although many commercial wide-pore silicas meet the standard 300Å mean pore size, most have very broad distributions about this mean, with a significant portion of their pore volume falling below 150Å. This means a large portion of the surface area is unavailable to larger molecules. Viva columns have a narrow distribution about the mean pore size, permitting a larger portion of the silica surface to play a role in the separation.

## Viva C18 Columns (USP L1)

### Physical Characteristics:

particle size: 3µm or 5µm, spherical	endcap: yes
pore size: 300Å	pH range: 2.5 to 10
carbon load: 9%	temperature limit: 80°C



## restek innovation!

Viva silica has a narrow distribution about the mean pore size, permitting a larger portion of the silica surface to play a role in the separation of large molecules and biomolecules.

Application	Page #
Peptides .....	.524
Proteins .....	.525

### Chromatographic Properties:

Highly base-deactivated wide pore packing that exhibits excellent peak shape for a wide range of compounds. Excellent general-purpose column for analyzing large molecules and biomolecules.

	1.0mm ID	2.1mm ID	3.2mm ID	4.6mm ID
Length	cat.#	cat.#	cat.#	cat.#
<b>3µm Columns</b>				
30mm	9514331	9514332	9514333	9514335
50mm	9514351	9514352	9514353	9514355
100mm	9514311	9514312	9514313	9514315
150mm	9514361	9514362	9514363	9514365
<b>5µm Columns</b>				
30mm	9514531	9514532	9514533	9514535
50mm	9514551	9514552	9514553	9514555
100mm	9514511	9514512	9514513	9514515
150mm	9514561	9514562	9514563	9514565
200mm	9514521	9514522	9514523	9514525
250mm	9514571	9514572	9514573	9514575

## Viva C8 Columns (USP L7)

### Physical Characteristics:

particle size: 5µm, spherical	endcap: yes
pore size: 300Å	pH range: 2.5 to 7.5
carbon load: 5%	temperature limit: 80°C



## ordering note

If you need another column dimension or phase, please call for a quote.

### Chromatographic Properties:

Highly base-deactivated wide pore packing that exhibits excellent peak shape for a wide range of compounds. Less retention in reversed phase assays than Viva C18.

	1.0mm ID	2.1mm ID	3.2mm ID	4.6mm ID
Length	cat.#	cat.#	cat.#	cat.#
<b>5µm Columns</b>				
30mm	9513531	9513532	9513533	9513535
50mm	9513551	9513552	9513553	9513555
100mm	9513511	9513512	9513513	9513515
150mm	9513561	9513562	9513563	9513565
200mm	9513521	9513522	9513523	9513525
250mm	9513571	9513572	9513573	9513575

## also available

3µm particles are available for all Viva phases—please inquire.

## 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 (cat.#25026 or 25062), see page 337.

For guard cartridges for these columns, see page 339.



**Tawnya Childs**  
Customer Service  
Manager

11+ years of service!

# Viva C4, Biphenyl and PFP Propyl Columns

## Viva C4 Columns (USP L26)

### Physical Characteristics:

particle size: 5µm, spherical  
pore size: 300Å  
carbon load: 3.5%

endcap: yes  
pH range: 2.5 to 7.5  
temperature limit: 80°C

### Chromatographic Properties:

Highly base-deactivated wide pore packing that exhibits excellent peak shape for a wide range of compounds. Less retention in reversed phase assays than Viva C18 or Viva C8.



**Tim Herring**  
Technical Service  
Specialist  
4+ years of service!

Length	1.0mm ID		2.1mm ID		3.2mm ID		4.6mm ID	
	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#
<b>5µm Columns</b>								
30mm	9512531		9512532		9512533		9512535	
50mm	9512551		9512552		9512553		9512555	
100mm	9512511		9512512		9512513		9512515	
150mm	9512561		9512562		9512563		9512565	
200mm	9512521		9512522		9512523		9512525	
250mm	9512571		9512572		9512573		9512575	

## Viva Biphenyl Columns (USP L11)

### Physical Characteristics:

particle size: 5µm  
pore size: 300Å  
carbon load: 6.7%

endcap: yes  
pH range: 2.5 to 7.5  
temperature limit: 80°C

### Chromatographic Properties:

Highly base-deactivated wide pore packing that exhibits excellent peak shape for a wide range of compounds; ideal for large molecule and biomolecule assays. Highly retentive and selective phase for aromatic and unsaturated compounds, with increased retention, relative to phenyl phases.

restek  
exclusive!

Length	1.0mm ID		2.1mm ID		3.2mm ID		4.6mm ID	
	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#
<b>5µm Columns</b>								
30mm	9516531		9516532		9516533		9516535	
50mm	9516551		9516552		9516553		9516555	
100mm	9516511		9516512		9516513		9516515	
150mm	9516561		9516562		9516563		9516565	
200mm	9516521		9516522		9516523		9516525	
250mm	9516571		9516572		9516573		9516575	

## Viva PFP Propyl Columns (USP L43)

### Physical Characteristics:

particle size: 5µm, spherical  
pore size: 300Å  
carbon load: 5%

endcap: yes  
pH range: 2.5 to 7.5  
temperature limit: 80°C

### Chromatographic Properties:

A pentafluorophenyl phase with a propyl spacer. Highly retentive for basic analytes. Highly base-deactivated wide pore packing that exhibits excellent peak shape for a wide range of compounds, including nucleosides, nucleotides, and halogenated compounds.



Length	1.0mm ID		2.1mm ID		3.2mm ID		4.6mm ID	
	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#	cat.#
<b>5µm Columns</b>								
30mm	9519531		9519532		9519533		9519535	
50mm	9519551		9519552		9519553		9519555	
100mm	9519511		9519512		9519513		9519515	
150mm	9519561		9519562		9519563		9519565	
200mm	9519521		9519522		9519523		9519525	
250mm	9519571		9519572		9519573		9519575	

## free literature

### Viva Wide Pore HPLC Columns

Download your free copy from [www.restek.com](http://www.restek.com).

Flyer  
lit. cat.# 59939

## also available

3µm particles are available for all Viva phases—please inquire.

**Viva Silica Columns (USP L3)****Physical Characteristics:**

particle size: 5µm, spherical  
pore size: 300Å

pH range: 2.5 to 7.5  
temperature limit: 80°C

**Chromatographic Properties:**

Highly base-deactivated wide pore packing that exhibits excellent peak shape for a wide range of compounds in normal phase separations.

Length	1.0mm ID	2.1mm ID	3.2mm ID	4.6mm ID
	cat.#	cat.#	cat.#	cat.#
<b>5µm Columns</b>				
30mm	9510531	9510532	9510533	9510535
50mm	9510551	9510552	9510553	9510555
100mm	9510511	9510512	9510513	9510515
150mm	9510561	9510562	9510563	9510565
200mm	9510521	9510522	9510523	9510525
250mm	9510571	9510572	9510573	9510575

**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 (cat.#25026 or 25062), see page 337.

For guard cartridges for these columns, see page 339.

**Fast LC Method Development Kits**

Fast, efficient separations in an economical cartridge format. The design allows rapid substitution of one cartridge for another. The holder is available with either standard fittings or with a universal PEEK™ tip fitting. The universal fitting gives the user the option of threading the column directly into the detector inlet, reducing system dwell volume. The cartridges are 30mm long, with either 2.1mm or 4.0mm ID. The 2.1mm and 4.0mm ID cartridges have the same outside diameter, so the holder will accept either.

Each kit includes four 3µm Fast LC Cartridges: Ultra C18 (USP L1), Ultra Aqueous C18 (USP L1), Ultra Cyano (USP L10), Ultra PFP (USP L43), and a Fast LC cartridge holder.

**Fast LC Development Kits**

Description	qty.	cat.#
Fast LC Development Kit, four 30mm x 2.1mm columns	kit	25296
Fast LC Development Kit, four 30mm x 4.0mm columns	kit	25297

**3µm Fast LC Cartridges**

Description	Length	2.1mm ID	4.0mm ID
Ultra C18 Fast LC Cartridge	30mm	91743320	91743340
Ultra Aqueous C18 Fast LC Cartridge	30mm	91783320	91783340
Ultra Cyano Fast LC Cartridge	30mm	91063320	91063340
Ultra PFP Fast LC Cartridge	30mm	91763320	91763340

**Fast LC Cartridge Holders**

Description	qty.	cat.#
Fast LC Cartridge Holder with PEEK™ Tip	ea.	25298
Fast LC Cartridge Holder with Standard Fittings	ea.	25299



Fast LC saves time and conserves solvent.

**also available**

Additional column kits and Fast LC cartridges are available. Please call for more information.