

# Vydac® TP Columns

VYDAC



## Industry Standard for Polypeptide Separations

- Referred in over 9000 patents, Vydac® 300Å TP is the industry-standard, for peptide, protein, and large molecule separations
- Polymeric bonded phases have exceptionally long column lifetime and negligible phase leaching
- Extensive applications library based on over two decade's experience

Vydac® TP reversed-phase material consists of aliphatic groups bonded to the surface of 300Å pore diameter silica. The large pores of the 300Å TP silica give polypeptide molecules complete access to the interior of the silica pores. The unique process by which we manufacture Vydac® TP silica results in high-purity, synthetic silica with carefully controlled characteristics. Vydac® TP silica is the standard that has defined large pore HPLC silica for polypeptide separations for nearly two decades.

| Vydac® TP Columns |               |                |                             |           |                         |             |            |            |            |  |
|-------------------|---------------|----------------|-----------------------------|-----------|-------------------------|-------------|------------|------------|------------|--|
| Phase             | Base Material | Particle Shape | Particle Size               | Pore Size | Surface Area            | Carbon Load | Phase Type | Endcapped? | USP L-code |  |
| 101TP Sil         | Silica        | Spheroidal     | 5, 10, 10–15, 15–20µm       | 300Å      | 70–110m <sup>2</sup> /g | —           | unbonded   | —          | L3         |  |
| 201TP C18         | Silica        | Spheroidal     | 5, 7, 10, 10–15, 15–20µm    | 300Å      | 70–90m <sup>2</sup> /g  | 8%          | Polymeric  | No         | L1         |  |
| 202TP C18         | Silica        | Spheroidal     | 3, 5, 10µm                  | 300Å      | 60–90m <sup>2</sup> /g  | 9%          | Polymeric  | No         | L1         |  |
| 208TP C8          | Silica        | Spheroidal     | 3, 5, 7, 10, 10–15, 15–20µm | 300Å      | 60–110m <sup>2</sup> /g | 5%          | Polymeric  | Yes        | L7         |  |
| 214TP C4          | Silica        | Spheroidal     | 3, 5, 7, 10, 10–15, 15–20µm | 300Å      | 60–110m <sup>2</sup> /g | 3%          | Polymeric  | Yes        | L26        |  |
| 218TP C18         | Silica        | Spheroidal     | 3, 5, 7, 10, 10–15, 15–20µm | 300Å      | 60–110m <sup>2</sup> /g | 8%          | Polymeric  | Yes        | L1         |  |
| 219TP Di-Phe      | Silica        | Spheroidal     | 3, 5, 7, 10, 10–15, 15–20µm | 300Å      | 60–110m <sup>2</sup> /g | 4%          | Polymeric  | Yes        | —          |  |
| 238TP C18         | Silica        | Spheroidal     | 3, 5, 7, 10, 10–15, 15–20µm | 300Å      | 60–110m <sup>2</sup> /g | 4%          | Monomeric  | Yes        | L1         |  |

## Vydac® 218TP C18 Columns

Vydac® 218TP is a polymerically bonded endcapped n-octadecyl reversed-phase based on 300Å TP silica.

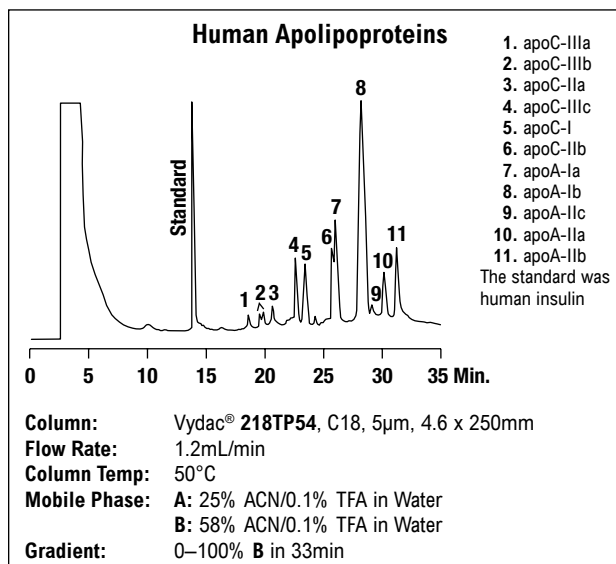
### Applications

Vydac® 218TP reversed-phase columns are recommended for the separation of:

- Small polypeptides less than 4000–5000 MW
- Enzymatic digest fragments
- Natural and synthetic peptides
- Multi-ring compounds

Specific examples include:

- Tryptic digests
- *S. aureus* V8 digests
- Synthetic peptides
- Natural peptides
- Peptide studies



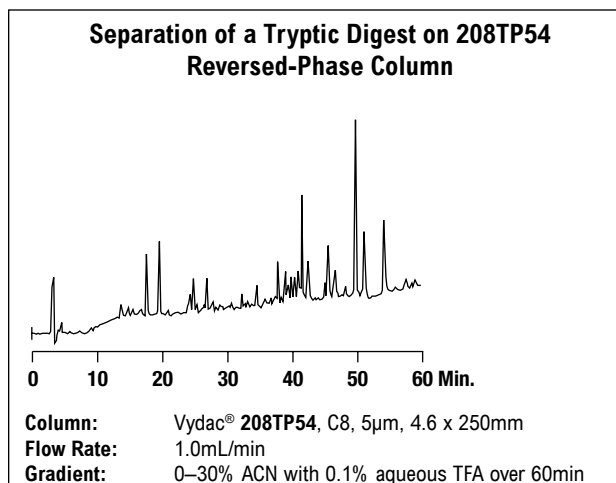
## Vydac® 208TP C8 Reversed-Phase

Vydac® 208TP is a polymerically bonded endcapped n-octyl reversed-phase based on 300Å TP silica.

### Applications

Vydac® 208TP reversed-phase columns are recommended for the separation of:

- Polypeptides up to 10,000–20,000 MW
- Enzymatic digest fragments
- Natural and synthetic peptides

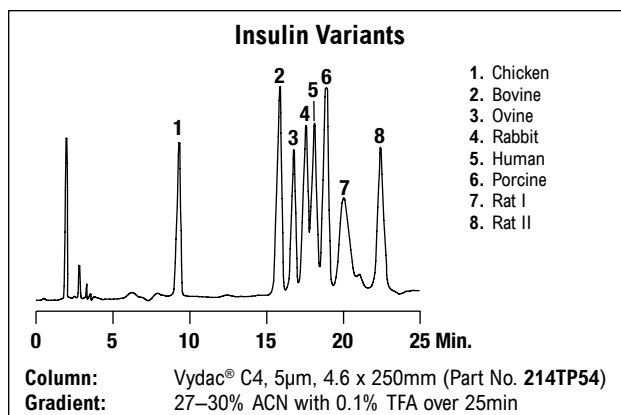


### Vydac® 214TP C4

Vydac® 214TP is a polymerically bonded endcapped n-butyl reversed-phase based on 300Å TP silica. 214ATP is a less extensively endcapped C4 that has been found more suitable for resolution of degradation products in analysis of biosynthetic human growth hormone.

#### Applications

- Glycoproteins
- Hemoglobin variants
- Histones
- Human growth hormone
- Insulin variants
- Membrane proteins



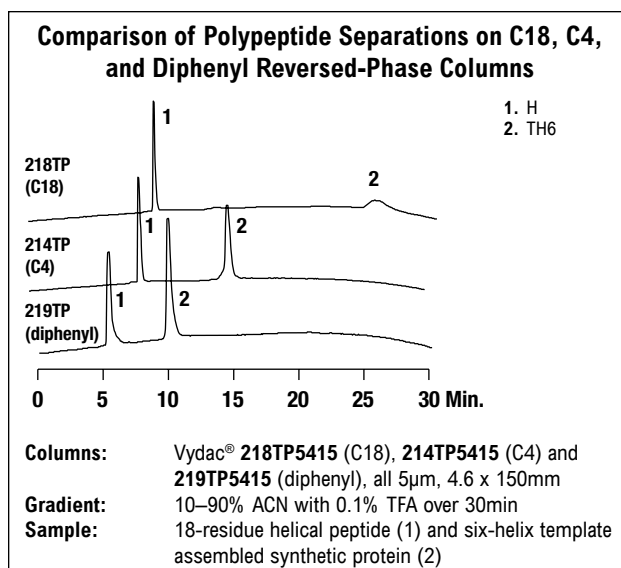
From J. Rivier and R. McClintock, *J. Chrom.* 268, 112-119 (1983).

### Vydac® 219TP Diphenyl Reversed-Phase

Vydac® 219TP is a polymerically bonded endcapped diphenyl reversed-phase based on 300Å TP silica. It combines moderate retentivity with unique selectivity.

#### Applications

- Polypeptides with aromatic side chains
- Large, hydrophobic proteins
- Membrane-spanning peptides
- Lipid peptides
- Fusion proteins from inclusion bodies



### Vydac® 238TP C18 Reversed-Phase

Vydac® 238TP is a monomerically bonded endcapped n-octadecyl reversed-phase based on 300Å TP silica.

#### Applications

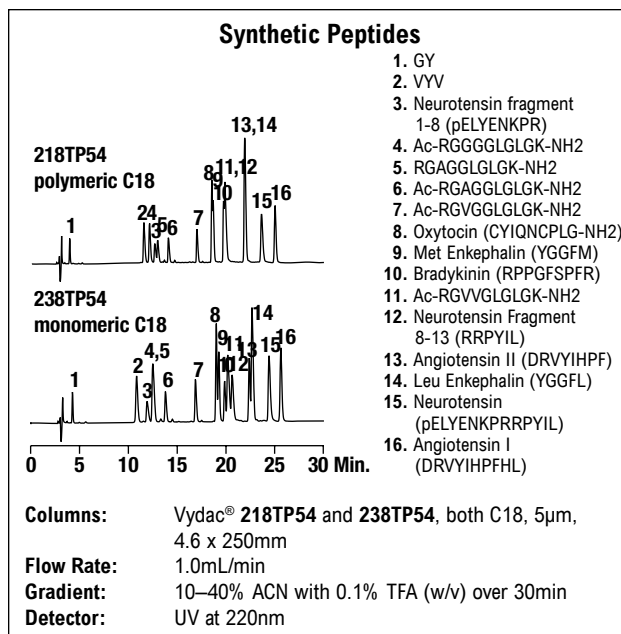
Monomerically bonded C18 provides an alternative to 218TP polymeric C18 with subtle differences in selectivity. The combination of these adsorbents can reveal analytes that may be hidden on a single C18 column.

#### more info

For more protein and peptide applications, see the application section pages 429–441.

#### more applications

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



# Vydac® TP Columns

## Vydac® TP Analytical Columns

| Particle Size            | Columns |           |           |           |          | Recommended Guards     |                              |
|--------------------------|---------|-----------|-----------|-----------|----------|------------------------|------------------------------|
|                          | i.d.    | 50mm      | 100mm     | 150mm     | 250mm    | Guard Kit <sup>1</sup> | Guard Cartridge <sup>2</sup> |
| <b>218TP C18</b>         |         |           |           |           |          |                        |                              |
| 3µm                      | 4.6mm   | 218TP3405 | 218TP3410 | —         | —        | 218GK34                | 218GD34                      |
| 5µm                      | 1.0mm   | 218TP5105 | 218TP5110 | 218TP5115 | 218TP51  | —                      | —                            |
|                          | 2.1mm   | 218TP5205 | 218TP5210 | 218TP5215 | 218TP52  | 218GK52                | 218GD52                      |
|                          | 3.2mm   | 218TP5305 | 218TP5310 | 218TP5315 | 218TP53  | 218GK54                | 218GD54                      |
|                          | 4.6mm   | 218TP5405 | 218TP5410 | 218TP5415 | 218TP54  | 218GK54                | 218GD54                      |
| <b>208TP C8</b>          |         |           |           |           |          |                        |                              |
| 3µm                      | 4.6mm   | 208TP3405 | 208TP3410 | —         | —        | 208GK34                | 208GD34                      |
| 5µm                      | 1.0mm   | 208TP5105 | 208TP5110 | 208TP5115 | 208TP51  | 208GK51                | 208GD51                      |
|                          | 2.1mm   | 208TP5205 | 208TP5210 | 208TP5215 | 208TP52  | 208GK52                | 208GD52                      |
|                          | 3.2mm   | 208TP5305 | 208TP5310 | 208TP5315 | 208TP53  | 208GK54                | 208GD54                      |
|                          | 4.6mm   | 208TP5405 | 208TP5410 | 208TP5415 | 208TP54  | 208GK54                | 208GD54                      |
| <b>214TP C4</b>          |         |           |           |           |          |                        |                              |
| 3µm                      | 4.6mm   | 214TP3405 | 214TP3410 | —         | —        | 214GK34                | 214GD34                      |
| 5µm                      | 1.0mm   | 214TP5105 | 214TP5110 | 214TP5115 | 214TP51  | 214GK51                | —                            |
|                          | 2.1mm   | 214TP5205 | 214TP5210 | 214TP5215 | 214TP52  | 214GK52                | 214GD52                      |
|                          | 3.2mm   | 214TP5305 | 214TP5310 | 214TP5315 | 214TP53  | 214GK54                | 214GD54                      |
|                          | 4.6mm   | 214TP5405 | 214TP5410 | 214TP5415 | 214TP54  | 214GK54                | 214GD54                      |
| <b>214ATP C4 Columns</b> |         |           |           |           |          |                        |                              |
| 5µm                      | 2.1mm   | —         | —         | —         | 214ATP52 | —                      | —                            |
|                          | 4.6mm   | —         | —         | —         | 214ATP54 | —                      | —                            |
| <b>219TP Diphenyl</b>    |         |           |           |           |          |                        |                              |
| 5µm                      | 1.0mm   | 219TP5105 | 219TP5110 | 219TP5115 | 219TP51  | —                      | —                            |
|                          | 2.1mm   | 219TP5205 | 219TP5210 | 219TP5215 | 219TP52  | 219GK52                | 219GD52                      |
|                          | 3.2mm   | 219TP5305 | 219TP5310 | 219TP5315 | 219TP53  | 219GK54                | 219GD54                      |
|                          | 4.6mm   | 219TP5405 | 219TP5410 | 219TP5415 | 219TP54  | 219GK54                | 219GD54                      |
| <b>238TP C18</b>         |         |           |           |           |          |                        |                              |
| 3µm                      | 4.6mm   | 238TP3405 | 238TP3410 | —         | —        | 238GK34                | 238GD34                      |
| 5µm                      | 1.0mm   | 238TP5105 | 238TP5110 | 238TP5115 | 238TP51  | 238GK51                | 238GD51                      |
|                          | 2.1mm   | 238TP5205 | 238TP5210 | 238TP5215 | 238TP52  | 238GK52                | 238GD52                      |
|                          | 3.2mm   | 238TP5305 | 238TP5310 | 238TP5315 | 238TP53  | 238GK54                | 238GD54                      |
|                          | 4.6mm   | 238TP5405 | 238TP5410 | 238TP5415 | 238TP54  | 238GK54                | 238GD54                      |

NOTE: Additional column diameters and lengths are available on request. Please contact Grace Davison Discovery Sciences to discuss your requirements.  
<sup>1</sup>A guard kit includes a holder and one guard cartridge; <sup>2</sup>Guard cartridge units include two guard cartridges.

hplc columns | large molecule

### related products

For prep Vydac® TP Columns, see our prep section pages 158–160.

### related products

Looking for HPLC column prefilters? See page 111.



### related products

Need high-pressure polymeric fittings? See pages 112–114 for our full selection of high-pressure fittings.

### technical assistance

Contact Tech Support: Phone: 1.800.255.8324 (North America)  
 Email: [contact.alltech@grace.com](mailto:contact.alltech@grace.com)  
 Online: [www.discoverysciences.com](http://www.discoverysciences.com)

### related products

Need HPLC tubing? See pages 384–391.

