

## YMC-Triart Bio C4 (Wide Pore)

# Hybrid Columns for Reversed Phase Biomolecule Separations

### Features

- Designed for the separation of intact antibodies
- Available in 3 and 5µm for HPLC, and 1.9µm for UHPLC
- Stable over a wide pH range (1-10) and at high temperatures (up to 90°C)
- Proprietary end-capping makes for excellent peak shapes of proteins
- The chemical and physical stability of the Triart base material contributes to long column lifetime
- Rigorous manufacturing controls result in legendary YMC column-to-column and lot-to-lot reproducibility



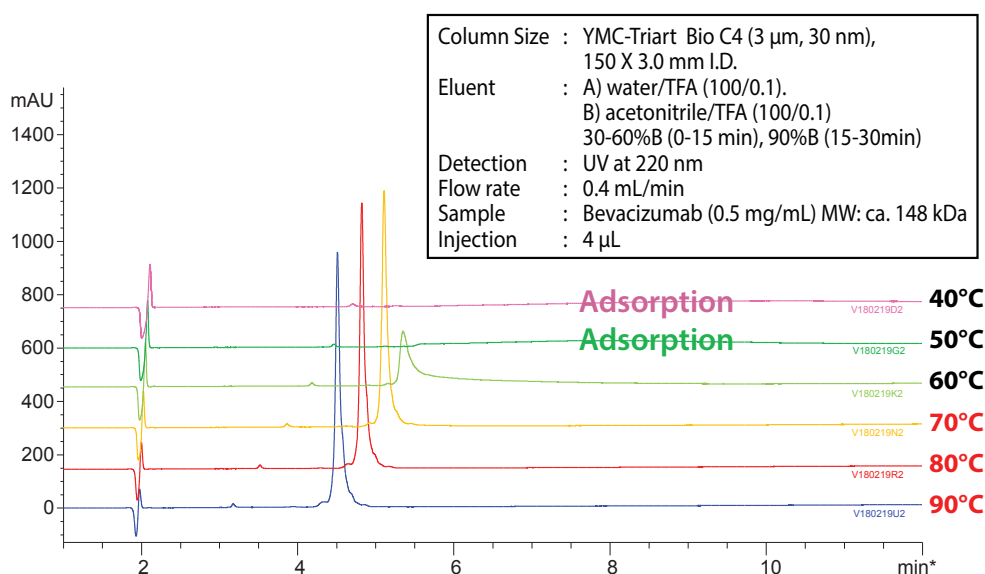
### Specifications

<b>Base Material:</b>	Organic/inorganic hybrid silica
<b>Stationary Phase:</b>	C4 (USP L26)
<b>Particle Size:</b>	1.9µm, 3µm, 5µm
<b>Pore Size:</b>	300Å
<b>Carbon Load:</b>	Proprietary
<b>Bonding:</b>	Polymeric type
<b>Endcapping:</b>	Yes
<b>pH Range:</b>	1-10
<b>Temperature Range:</b>	Up to 90°C for pH 1-7 Up to 50°C for pH 7-10

YMC-Triart Bio C4 is a novel, organic/inorganic hybrid silica derivatized with C4 (L26 USP designation) based on wide-pore (300Å) particles. This new stationary phase is designed for HPLC and UHPLC separations of proteins and oligonucleotides, and is particularly useful for intact antibody analyses run at high temperatures.

Triart Bio C4 is well-suited for high-sensitivity analysis using mass spec-friendly mobile phases containing formic acid and/or TFA. As with all Triart products, chromatographers enjoy wide temperature and pH ranges (up to 90°C at pH 1-7, and 50°C at pH 7-10), allowing these parameters to be used as tools for optimizing separation conditions, without having to worry about stationary phase durability.

## Effective Separations at Elevated Temperatures

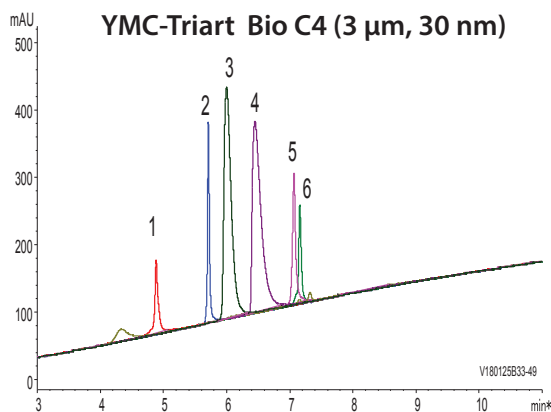


### Separation of Bevacizumab

When analyzing monoclonal antibodies by reversed phase, high temperature analysis is often required to minimize adsorption and obtain good peak shape. YMC-Triart Bio C4 with its high temperature and chemical durability is ideal for use at these conditions.

Improved peak shape was achieved at 60°C and higher, whereas no elution occurred at 50°C and below.

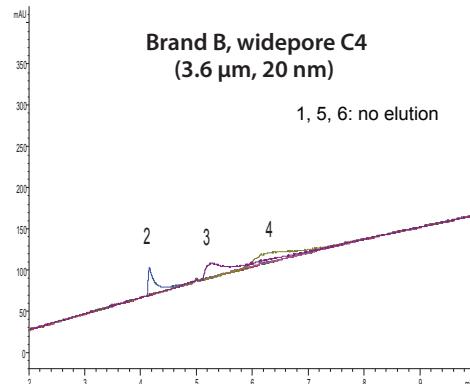
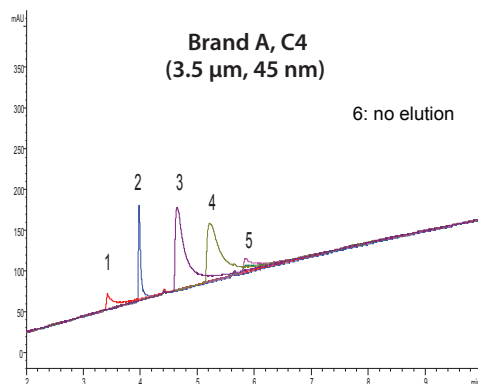
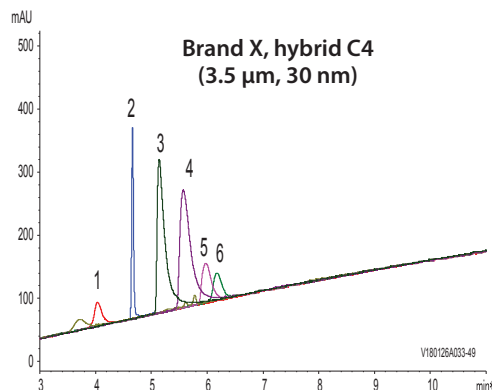
# Superior Performance for LC/MS



Sample:  
 1. Cytochrome-C (Horse heart)  
 2. Insulin (Bovine pancreas)  
 3. Transferrin (Human)  
 4. BSA  
 5. β-Lactoglobulin (Bovine)  
 6. α-Chymotrypsinogen A (Bovine pancreas)

Eluent : A) water/formic acid (100/0.1)  
 B) acetonitrile/formic acid (100/0.1)  
 10-95%B (0-15 min)  
 Temperature : 40°C  
 Detection : UV at 220 nm

Triart Bio C4 exhibits improved peak shape and recovery with mobile phases containing formic acid/TFA, which are commonly used in LC/MS methods. This makes Triart Bio C4 ideal for high-sensitivity analysis of proteins.



## Ordering Information

Particle Size (µm)	Column I.D. x length (mm)	Stainless Steel Column Product Number	PEEK-Lined Column Product Number
1.9	2.1 x 20	TB30SP9-02Q1PT	
	2.1 x 30	TB30SP9-03Q1PT	
	2.1 x 50	TB30SP9-05Q1PT	TB30SP9-05Q1PTP
	2.1 x 75	TB30SP9-L5Q1PT	
	2.1 x 100	TB30SP9-10Q1PT	TB30SP9-10Q1PTP
	2.1 x 150	TB30SP9-15Q1PT	TB30SP9-15Q1PTP
	3.0 x 50	TB30SP9-0503PT	
	3.0 x 75	TB30SP9-L503PT	
	3.0 x 100	TB30SP9-1003PT	
3.0	3.0 x 150	TB30SP9-1503PT	
	2.1 x 20	TB30S03-02Q1PTH	
	2.1 x 33	TB30S03-H3Q1PTH	
	2.1 x 50	TB30S03-05Q1PTH	TB30S03-05Q1PTP
	2.1 x 75	TB30S03-L5Q1PTH	
	2.1 x 100	TB30S03-10Q1PTH	TB30S03-10Q1PTP

Particle Size (µm)	Column I.D. x length (mm)	Stainless Steel Column Product Number	PEEK-Lined Column Product Number
3.0	2.1 x 150	TB30S03-15Q1PTH	TB30S03-15Q1PTP
	3.0 x 50	TB30S03-0503PTH	
	3.0 x 75	TB30S03-L503PTH	
	3.0 x 100	TB30S03-1003PTH	
	3.0 x 150	TB30S03-1503PTH	
	4.6 x 33	TB30S03-H346PTH	
	4.6 x 50	TB30S03-0546PTH	TB30S03-0546PTP
	4.6 x 75	TB30S03-L546PTH	
	4.6 x 100	TB30S03-1046PTH	TB30S03-1046PTP
	4.6 x 150	TB30S03-1546PTH	TB30S03-1546PTP
5.0	4.6 x 250	TB30S03-2546PTH	
	2.1 x 20	TB30S05-02Q1PTH	
	2.1 x 33	TB30S05-H3Q1PTH	
	2.1 x 50	TB30S05-05Q1PTH	TB30S05-05Q1PTP
	2.1 x 75	TB30S05-L5Q1PTH	

Particle Size (µm)	Column I.D. x length (mm)	Stainless Steel Column Product Number	PEEK-Lined Column Product Number
5.0	2.1 x 100	TB30S05-10Q1PTH	TB30S05-10Q1PTP
	2.1 x 150	TB30S05-15Q1PTH	TB30S05-15Q1PTP
	3.0 x 50	TB30S05-0503PTH	
	3.0 x 75	TB30S05-L503PTH	
	3.0 x 100	TB30S05-1003PTH	
	3.0 x 150	TB30S05-1503PTH	
	4.0 x 150	TB30S05-1504PTH	
	4.0 x 250	TB30S05-2504PTH	
	4.6 x 33	TB30S05-H346PTH	
	4.6 x 50	TB30S05-0546PTH	TB30S05-0546PTP
	4.6 x 75	TB30S05-L546PTH	
	4.6 x 100	TB30S05-1046PTH	TB30S05-1046PTP
	4.6 x 150	TB30S05-1546PTH	TB30S05-1546PTP
	4.6 x 250	TB30S05-2546PTH	

Inquire about other column sizes.

Maximum pressure: 100 MPa for 1.9µm; 45 MPa for 3 and 5µm

Endfitting: Parker style (UHPLC compatible)

## Worldwide Availability

**YMC Co., LTD.**  
[www.ymc.co.jp](http://www.ymc.co.jp)

**YMC Europe GmbH**  
[www.ymc.de](http://www.ymc.de)

**YMC Switzerland LLC**  
[www.ymc-schweiz.ch](http://www.ymc-schweiz.ch)

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[www.ymchina.com](http://www.ymchina.com)

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[www.ymckorea.com](http://www.ymckorea.com)

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[www.ymctaiwan.com](http://www.ymctaiwan.com)

**YMC Singapore Tradelinks Pte. Ltd.**  
[www.ymc.sg](http://www.ymc.sg)

**YMC**  
 AMERICA, INC.

**YMC America, Inc.**

941 Marcon Boulevard  
 Allentown, PA 18109 USA  
 Phone: +1-610-266-8650  
 Fax: +1-610-266-8652  
[info@ymcamerica.com](mailto:info@ymcamerica.com)  
[www.ymcamerica.com](http://www.ymcamerica.com)

Distributor