



# Interchim

Uptisphere<sup>®</sup> **BIO**

BIOchromatography

Enhanced Selectivity

Reliable Performance

Analytical to Prep

# Interchim

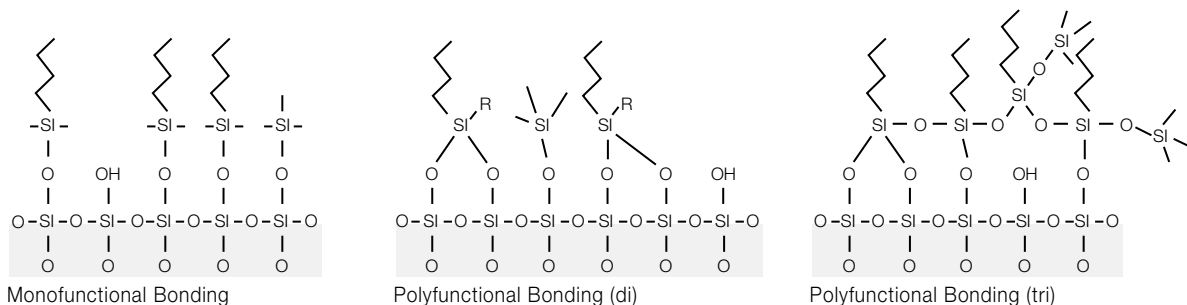
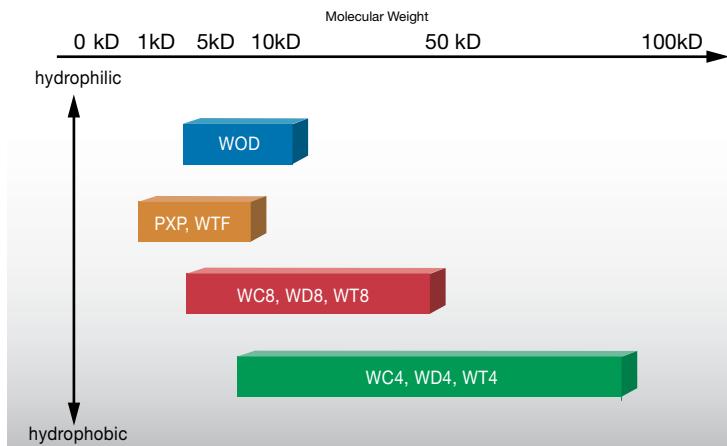
## Uptisphere<sup>®</sup> BIO

### Analytical to Prep.

Uptisphere Bio columns are designed for the identification, separation and purification of proteins, peptides and polypeptides.

Nine unique phases provide the selectivity required to meet the challenges when developing methods to separate bio-molecules. Mono, di- and tri-functional bonding techniques are used with C4, C8 and C18 alkyl chains. This selectivity range is exclusive to Interchim and a necessary tool for bio-chromatography.

Reliable performance is ensured by using the same silica and bonding process from analytical to prep. Particle sizes are offered in 3, 5, 10 and 15µ. Columns are available in any length with internal diameters from 1.0mm to 50mm.



Phase	Chemistry	Bonding Type	% Carbon	End Capped	pH Range	Particle Size	Pore Size	Surface Area
WC4	C4	mono-functional	4%	Yes	2 - 7	3,5,10,15µ	300Å	100 m2/g
WD4	C4	poly-functional	4%	Yes	1.5 - 8	3,5,10,15µ	300Å	100 m2/g
WT4	C4	tri-functional	3%	Yes	1.5 - 8	5,10,15µ	300Å	100 m2/g
WC8	C8	mono-functional	8%	Yes	2 - 7	5,10,15µ	300Å	100 m2/g
WD8	C8	poly-functional	8%	Yes	1.5 - 8	5,10,15µ	300Å	100 m2/g
WT8	C8	tri-functional	6%	Yes	1.5 - 8	5,10,15µ	300Å	100 m2/g
WOD	C18	mono-functional	10%	Yes	1.5 - 7	3,5,10,15µ	300Å	100 m2/g
PXP	C18	poly-functional	8%	Yes	1 - 10	5,10,15µ	300Å	100 m2/g
WTF	C18	tri-functional	12%	Yes	1.5 - 8	5µ	300Å	100 m2/g

# Enhanced Selectivity.

## Separation of Proteins on Different C4 Phases

We analyzed four proteins on our C4 bonded phase and compared them to the leading wide pore C4 column. While we provide three different types of bonding, the competition provides only one. In this case, mono-functional bonding provides the best resolution.

### Conditions

Column Dimensions: 5  $\mu$ m, 250 x 4.6 mm

Solvent: A = ACN

B = H<sub>2</sub>O + TFA 0.04%

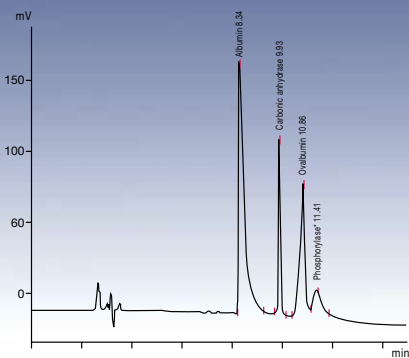
Gradient: 25 -> 98% of A in 20 min

Flow: 1 mL/min

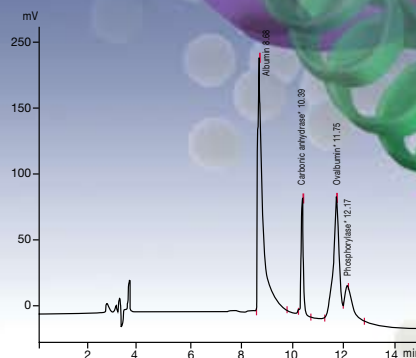
UV Detection: 220 nm

### Protein Mixture

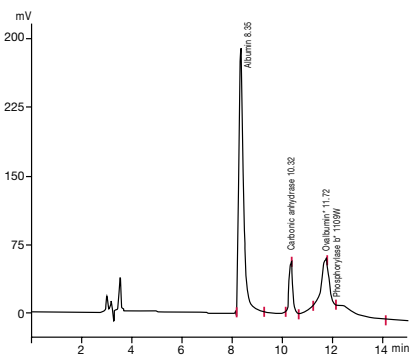
Albumin, Ovalbumin, Phosphorylase b, and Carbonic anhydrase



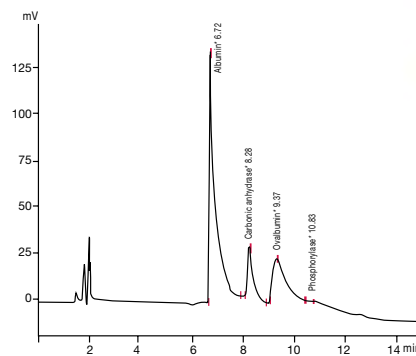
WC4 (monofunctional bonding)



WD4 (difunctional bonding)



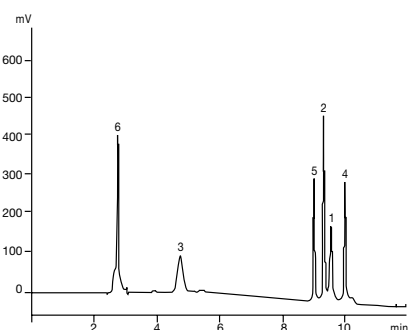
WT4 (trifunctional bonding)



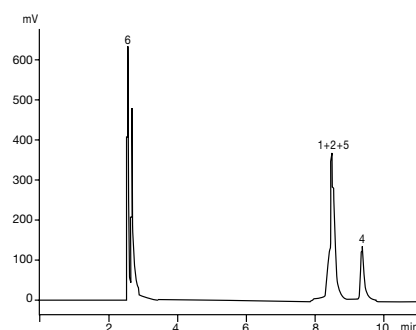
Competitor B (trifunctional bonding)

## Separation of Six Peptides on C18 Phases

Six peptides were analyzed using Uptisphere Bio WTF and compared to the two leading C18 wide pore columns. Noticeably better results were achieved with Uptisphere Bio WTF.



Uptisphere C18 WTF



Competitor A

### Conditions

Column Dimensions: 5  $\mu$ m, 250 x 4.6 mm

Solvent: A = ACN

B = H<sub>2</sub>O + TFA 0.04%

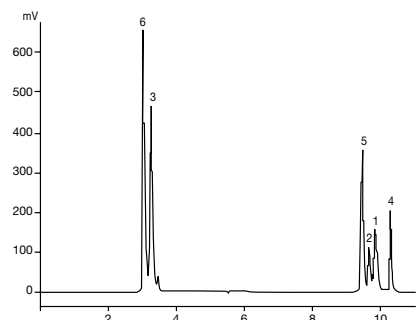
Gradient: 20 -> 90% of A in 20 min

Flow: 1 mL/min

UV Detection: 210 nm

### Peptides Mixture

Synthetic: 1 EPO 1500 Da, 2 A-20-V 2045 Da, 3 K-22-R 2786 Da, 4 H-27-L 3274 Da (A-20-V, K-22-R and H-27-L are proprietary peptides)  
Natural: 5 Insulin 5700 Da, 6 Aprotinin 6500 Da



Competitor B

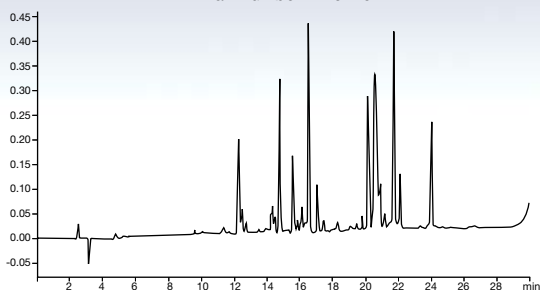
## Uptisphere® Bio/Ordering Information

Phase	Chemistry	Bonding Type	5μ		5μ		10μ		10μ		15μ	
			2.1 x 250 mm	4.6 x 250 mm	21.2 x 250 mm	30.0 x 250 mm	21.2 x 250 mm	30.0 x 250 mm	50.0 x 250 mm	50.0 x 250 mm		
WC4	C4	mono-functional	XA3270 \$520	XA3390 \$520	XP6070 \$4450	XP6110 \$7950	XP6170 \$2950	XP6180 \$4500	XP6190 \$11250	XP6220 \$8950		
WD4	C4	poly-functional	XA3440 \$520	XA3560 \$520	XP6300 \$4450	XP6340 \$7950	XP6400 \$2950	XP6410 \$4500	XP6420 \$11950	XP6450 \$9950		
WT4	C4	tri-functional	XA3610 \$520	XA3730 \$520	XP6530 \$3950	XP6570 \$6950	XP6630 \$2950	XP6640 \$4500	XP6650 \$11500	XP6680 \$8500		
WC8	C8	mono-functional	XA8330 \$520	A8450 \$520	XP5380 \$4450	XP5420 \$7950	XP5480 \$2950	XP5490 \$4500	XP5500 \$11250	XP5530 \$8500		
WD8	C8	poly-functional	XA8500 \$520	XA8620 \$520	XP5610 \$4450	XP5650 \$7950	XP5710 \$2950	XP5720 \$4500	XP5730 \$11500	XP5760 \$9450		
WT8	C8	tri-functional	XA8670 \$520	XA8790 \$520	XP5840 \$3950	XP5880 \$6950	XP5940 \$2950	XP5950 \$4500	XP5960 \$11500	XP5990 \$8500		
WOD	C18	mono-functional	XA2760 \$520	XA2880 \$520	XP4920 \$4450	XP4960 \$7950	XP5020 \$2950	XP5030 \$4500	XP5040 \$11250	XP5070 \$8500		
PXP	C18	poly-functional	XA2930 \$520	XA3050 \$520	XP5150 \$4450	XP5190 \$7950	XP5250 \$2950	XP5260 \$4500	XP5270 \$11500	XP5300 \$9450		
WTF	C18	tri-functional	XA3100 \$520	XA3220 \$520								

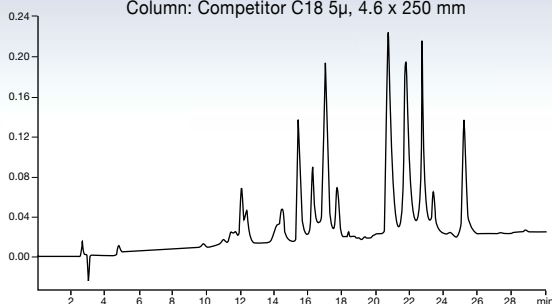
\* Any column dimension is available. Lengths from 25 to 1000 mm and IDs from 1.0 to 50.0 mm

### Lysozyme separation: Uptisphere WTF vs Leading wide pore C18

Column: Uptisphere WTF 5μ, 4.6 x 250 mm  
Part number: XA3220



Column: Competitor C18 5μ, 4.6 x 250 mm



Mobile Phase: 80% (H2O/0.05% TFA), 20% Acetonitrile  
Flow: 1.0 ml/min  
Temperature: 50 C  
Injection Volume: 30 μl

For a complete price list call: 800.560.8262 or email: [bio@interchiminc.com](mailto:bio@interchiminc.com)

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