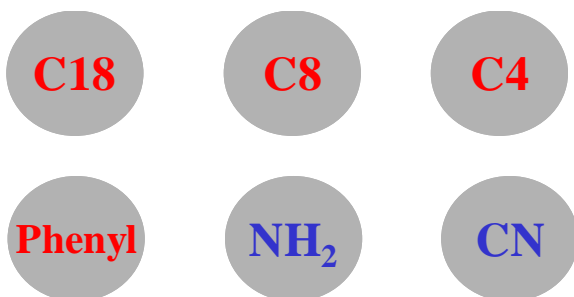


# Sepax Capillary LC Columns

## Silica Based Packings

### Stationary Phases

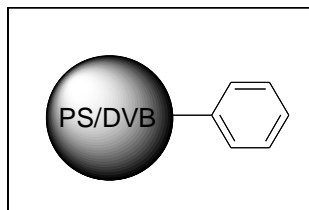


### Specifications

Silica: Spherical, high purity (<10 ppm metals)  
Pore size: 120, 200, 300 Å  
Particle size: 1.7, 2.2, 3, 5 µm  
Pore volume: 1.0 ml/g  
Surface area: 300, 200 and 105 m<sup>2</sup>/g  
Phase structure: chemically bonded  
pH range: 2-8.5

## PS/DVB Packings

### Stationary Phases



### Specifications

#### Porous Packings

PS/DVB Particles: spherical, 80% cross-linking  
Pore size: 100, 300 Å  
Particle size: 3, 5 µm  
Pore volume: 1.0 mL/g  
Surface area: 280 m<sup>2</sup>/g for 100 Å pore size  
Phase structure: phenyl group  
pH range: 1-14

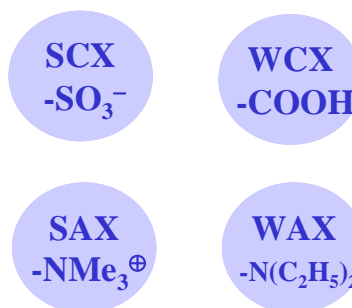
#### Non-Porous Resins

PS/DVB Particles: spherical, 80% cross-linking  
Pore size: non-porous

Particle size: 1.7, 3, 5 µm  
Surface area: <10 m<sup>2</sup>/g  
Phase structure: phenyl group  
pH range: 1-14

## Proteomix Ion-exchange Packings

### Stationary Phases



### Specifications

PS/DVB Particles: spherical, 80% cross-linking  
Pore size: non-porous  
Particle size: 1.7, 3, 5 µm  
Surface area: <10 m<sup>2</sup>/g  
Phase structure: phenyl group  
Pressure resistance: >8,000 psi  
pH range: 2-12

### Characteristics

- Most comprehensive selection of the stationary phases
- Pioneered sub-2 µm PS/DVB based ion-exchange phases
- Combined high efficiency and high capacity for non-porous Proteomix ion-exchange phases
- High speed, high recovery and high stability
- Column ID selection of 75, 150, and 300 µm and length selection of 5, 10 and 15 cm

### Applications

- Proteome analysis
- Protein separation and analysis
- Peptide separation and analysis
- 2D capillary LC/MS/MS analysis of complex biological samples

## Separation of proteins from cell lysate

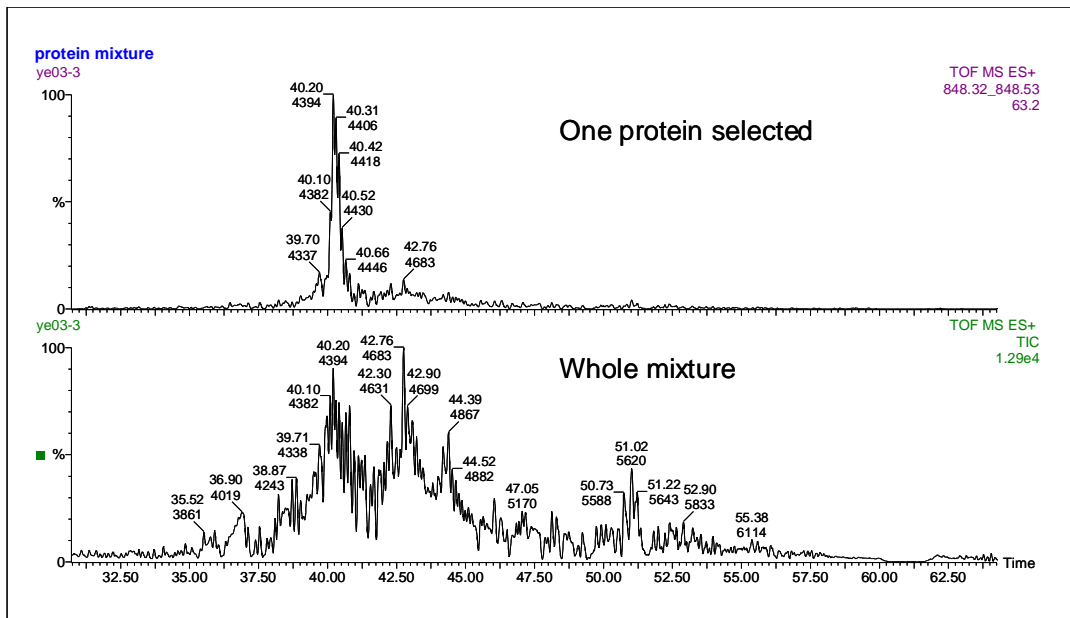


Figure A. Separation of home grown *C. tepidum* lysate. Column: Bio-C4 (5 $\mu$ m, 300 $\text{\AA}$ , 75 $\mu$ m $\times$ 100mm); Sample: home grown *C. tepidum* lysate, 2  $\mu$ g; Detector: Waters Q-TOF Ultima nanoflow electrospray source, 3.5KV, 0.5s per spectrum; Flow rate: 200 nL/min measured at 70%A/30%B, Phase A: 94.9% water/5% ACN/0.1% formic acid, Phase B: 94.9% ACN/5% water/0.1% formic acid; Gradient: 30%-70%B (45 min); Injection: 2  $\mu$ l with Micron capillary protein trap column. (Courtesy of Feng Zhou, University of Delaware)

## Separation and Analysis of digested proteins

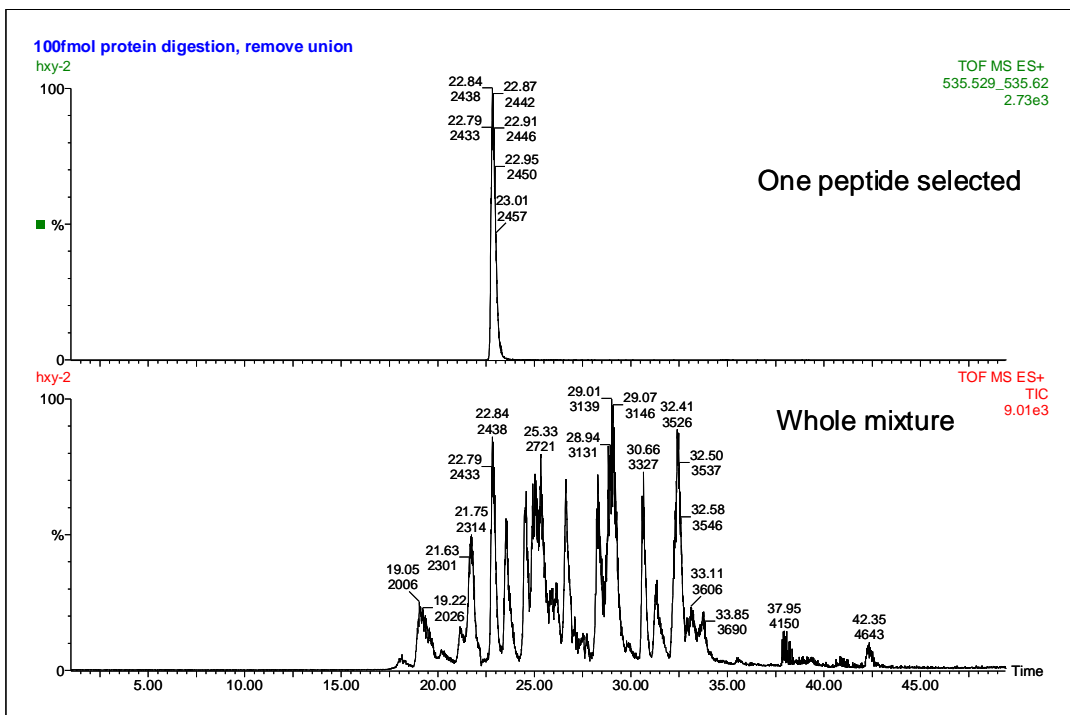


Figure B. Separation of protein digests. Column: GP-C18 (5 $\mu$ m, 120 $\text{\AA}$ , 75 $\mu$ m $\times$ 100mm); Sample: standard protein mixture digestion (Cytochrome C, Lysozyme, Alcohol dehydrogenase, Bovine serum albumin, Apo-transferrin, Beta-Galactosidase), 200 picogram; Detector: Waters Q-TOF Ultima nanoflow electrospray source, 3.5KV, 0.5s per spectrum; Flow rate: 200 nL/min measured at 70%A/30%B, Phase A: 94.9% water/5% ACN/0.1% formic acid, Phase B: 94.9% ACN/5% water/0.1% formic acid; Gradient: 5%-40%B (45 min); Injection: 2  $\mu$ l with a LC Packings trap column (300 $\mu$ m $\times$ 5mm, C18). (Courtesy of Feng Zhou, University of Delaware)

## Ordering Information

<b>1.7 <math>\mu\text{m}</math> Capillary LC Columns (length x ID, mm x <math>\mu\text{m}</math>)</b>						
Phases	50x75	100x75	150x75	50x100	100x100	150x100
GP-C18 (120 Å)	101181-0005	101181-0010	101181-0015	101181-0105	101181-0110	101181-0115
HP-C18 (120 Å)	103181-0005	103181-0010	103181-0015	103181-0105	103181-0110	103181-0115
GP-C8 (120 Å)	107081-0005	107081-0010	107081-0015	107081-0105	107081-0110	107081-0115
GP-C4 (120 Å)	109041-0005	109041-0010	109041-0015	109041-0105	109041-0110	109041-0115
GP-Phenyl (120 Å)	111361-0005	111361-0010	111361-0015	111361-0105	111361-0110	111361-0115
HP-CN (120 Å)	113311-0005	113311-0010	113311-0015	113311-0105	113311-0110	113311-0115
HP-NH <sub>2</sub> (120 Å)	115301-0005	115301-0010	115301-0015	115301-0105	115301-0110	115301-0115
HP-SCX (120 Å)	120361-0005	120361-0010	120361-0015	120361-0105	120361-0110	120361-0115
HP-Silica (120 Å)	117001-0005	117001-0010	117001-0015	117001-0105	117001-0110	117001-0115
PolyRP-NP1.7	262002-0005	262001-0010	262001-0015	262001-0105	262001-0110	262001-0115
<b>Phases</b>						
Proteomix	50x75	100x75	150x75	50x100	100x100	150x100
SCX-NP1.7	401NP2-0005	401NP2-0010	401NP2-0015	401NP2-0105	401NP2-0110	401NP2-0115
WCX-NP1.7	402NP2-0005	402NP2-0010	402NP2-0015	402NP2-0105	402NP2-0110	402NP2-0115
SAX-NP1.7	403NP2-0005	403NP2-0010	403NP2-0015	403NP2-0105	403NP2-0110	403NP2-0115
WCX-NP1.7	404NP2-0005	404NP2-0010	404NP2-0015	404NP2-0105	404NP2-0110	404NP2-0115



<b>1.7 <math>\mu\text{m}</math> Capillary LC Columns (length x ID, mm x <math>\mu\text{m}</math>)</b>						
<b>Phases</b>	<b>50x300</b>	<b>100x300</b>	<b>150x300</b>	<b>50x500</b>	<b>100x500</b>	<b>150x500</b>
GP-C18 (120 Å)	101181-0305	101181-0310	101181-0315	101181-0505	101181-0510	101181-0515
HP-C18 (120 Å)	103181-0305	103181-0310	103181-0315	103181-0505	103181-0510	103181-0515
GP-C8 (120 Å)	107081-0305	107081-0310	107081-0315	107081-0505	107081-0510	107081-0515
GP-C4 (120 Å)	109041-0305	109041-0310	109041-0315	109041-0505	109041-0510	109041-0515
GP-Phenyl (120 Å)	111361-0305	111361-0310	111361-0315	111361-0505	111361-0510	111361-0515
HP-CN (120 Å)	113311-0305	113311-0310	113311-0315	113311-0505	113311-0510	113311-0515
HP-NH <sub>2</sub> (120 Å)	115301-0305	115301-0310	115301-0315	115301-0505	115301-0510	115301-0515
HP-SCX (120 Å)	120361-0305	120361-0310	120361-0315	120361-0505	120361-0510	120361-0515
HP-Silica (120 Å)	117001-0305	117001-0310	117001-0315	117001-0505	117001-0510	117001-0515
PolyRP-NP1.7	262002-0305	262001-0310	262001-0315	262001-0505	262001-0510	262001-0515
<b>Phases</b>						
<b>Proteomix</b>	<b>50x300</b>	<b>100x300</b>	<b>150x300</b>	<b>50x500</b>	<b>100x500</b>	<b>150x500</b>
SCX-NP1.7	401NP2-0305	401NP2-0310	401NP2-0315	401NP2-0505	401NP2-0510	401NP2-0515
WCX-NP1.7	402NP2-0305	402NP2-0310	402NP2-0315	402NP2-0505	402NP2-0510	402NP2-0515
SAX-NP1.7	403NP2-0305	403NP2-0310	403NP2-0315	403NP2-0505	403NP2-0510	403NP2-0515
WCX-NP1.7	404NP2-0305	404NP2-0310	404NP2-0315	404NP2-0505	404NP2-0510	404NP2-0515

Ordering Information

<b>3 <math>\mu</math>m Capillary LC Columns (length x ID, mm x <math>\mu</math>m)</b>						
Phases	50x75	100x75	150x75	50x100	100x100	150x100
GP-C18 (120 Å)	101183-0005	101183-0010	101183-0015	101183-0105	101183-0110	101183-0115
BR-C18 (120 Å)	102183-0005	102183-0010	102183-0015	102183-0105	102183-0110	102183-0115
HP-C18 (120 Å)	103183-0005	103183-0010	103183-0015	103183-0105	103183-0110	103183-0115
HP-C18 (200 Å)	104183-0005	104183-0010	104183-0015	104183-0105	104183-0110	104183-0115
Bio-C18 (200 Å)	105183-0005	105183-0010	105183-0015	105183-0105	105183-0110	105183-0115
Bio-C18 (300 Å)	106183-0005	106183-0010	106183-0015	106183-0105	106183-0110	106183-0115
GP-C8 (120 Å)	107083-0005	107083-0010	107083-0015	107083-0105	107083-0110	107083-0115
Bio-C8 (300 Å)	108083-0005	108083-0010	108083-0015	108083-0105	108083-0110	108083-0115
GP-C4 (120 Å)	109043-0005	109043-0010	109043-0015	109043-0105	109043-0110	109043-0115
Bio-C4 (300 Å)	110043-0005	110043-0010	110043-0015	110043-0105	110043-0110	110043-0115
GP-Phenyl (120 Å)	111363-0005	111363-0010	111363-0015	111363-0105	111363-0110	111363-0115
HP-CN (120 Å)	113313-0005	113313-0010	113313-0015	113313-0105	113313-0110	113313-0115
HP-NH <sub>2</sub> (120 Å)	115303-0005	115303-0010	115303-0015	115303-0105	115303-0110	115303-0115
HP-SCX (120 Å)	120363-0005	120363-0010	120363-0015	120363-0105	120363-0110	120363-0115
HP-Silica (120 Å)	117003-0005	117003-0010	117003-0015	117003-0105	117003-0110	117003-0115
HILIC Polar-100	131583-0005	131583-0010	131583-0015	131583-0105	131583-0110	131583-0115
PolyRP-NP3	262003-0005	262003-0010	262003-0015	262003-0105	262003-0110	262003-0115
<b>Phases</b>						
<i>Proteomix</i>	50x75	100x75	150x75	50x100	100x100	150x100
SCX-NP3	401NP3-0005	401NP3-0010	401NP3-0015	401NP3-0105	401NP3-0110	401NP3-0115
WCX-NP3	402NP3-0005	402NP3-0010	402NP3-0015	402NP3-0105	402NP3-0110	402NP3-0115
SAX-NP3	403NP3-0005	403NP3-0010	403NP3-0015	403NP3-0105	403NP3-0110	403NP3-0115
WCX-NP3	404NP3-0005	404NP3-0010	404NP3-0015	404NP3-0105	404NP3-0110	404NP3-0115

<b>3 <math>\mu</math>m Capillary LC Columns (length x ID, mm x <math>\mu</math>m)</b>						
Phases	50x300	100x300	150x300	50x500	100x500	150x500
GP-C18 (120 Å)	101183-0305	101183-0310	101183-0315	101183-0505	101183-0510	101183-0515
BR-C18 (120 Å)	102183-0305	102183-0310	102183-0315	102183-0505	102183-0510	102183-0515
HP-C18 (120 Å)	103183-0305	103183-0310	103183-0315	103183-0505	103183-0510	103183-0515
HP-C18 (200 Å)	104183-0305	104183-0310	104183-0315	104183-0505	104183-0510	104183-0515
Bio-C18 (200 Å)	105183-0305	105183-0310	105183-0315	105183-0505	105183-0510	105183-0515
Bio-C18 (300 Å)	106183-0305	106183-0310	106183-0315	106183-0505	106183-0510	106183-0515
GP-C8 (120 Å)	107083-0305	107083-0310	107083-0315	107083-0505	107083-0510	107083-0515
Bio-C8 (300 Å)	108083-0305	108083-0310	108083-0315	108083-0505	108083-0510	108083-0515
GP-C4 (120 Å)	109043-0305	109043-0310	109043-0315	109043-0505	109043-0510	109043-0515
Bio-C4 (300 Å)	110043-0305	110043-0310	110043-0315	110043-0505	110043-0510	110043-0515
GP-Phenyl (120 Å)	111363-0305	111363-0310	111363-0315	111363-0505	111363-0510	111363-0515
HP-CN (120 Å)	113313-0305	113313-0310	113313-0315	113313-0505	113313-0510	113313-0515
HP-NH <sub>2</sub> (120 Å)	115303-0305	115303-0310	115303-0315	115303-0505	115303-0510	115303-0515
HP-SCX (120 Å)	120363-0305	120363-0310	120363-0315	120363-0505	120363-0510	120363-0515
HP-Silica (120 Å)	117003-0305	117003-0310	117003-0315	117003-0505	117003-0510	117003-0515
HILIC Polar-100	131583-0305	131583-0310	131583-0315	131583-0505	131583-0510	131583-0515
PolyRP-NP3	262003-0505	262003-0510	262003-0515	262003-0505	262003-0510	262003-0515
<b>Phases</b>						
<i>Proteomix</i>	50x300	100x300	150x300	50x500	100x500	150x500
SCX-NP3	401NP3-0305	401NP3-0310	401NP3-0315	401NP3-0505	401NP3-0510	401NP3-0515
WCX-NP3	402NP3-0305	402NP3-0310	402NP3-0315	402NP3-0505	402NP3-0510	402NP3-0515
SAX-NP3	403NP3-0305	403NP3-0310	403NP3-0315	403NP3-0505	403NP3-0510	403NP3-0515
WCX-NP3	404NP3-0305	404NP3-0310	404NP3-0315	404NP3-0505	404NP3-0510	404NP3-0515

## Ordering Information

<b>5 <math>\mu</math>m Capillary LC Columns (length x ID, mm x <math>\mu</math>m)</b>						
Phases	50x75	100x75	150x75	50x100	100x100	150x100
GP-C18 (120 Å)	101185-0005	101185-0010	101185-0015	101185-0105	101185-0110	101185-0115
BR-C18 (120 Å)	102185-0005	102185-0010	102185-0015	102185-0105	102185-0110	102185-0115
HP-C18 (120 Å)	103185-0005	103185-0010	103185-0015	103185-0105	103185-0110	103185-0115
HP-C18 (200 Å)	104185-0005	104185-0010	104185-0015	104185-0105	104185-0110	104185-0115
Bio-C18 (200 Å)	105185-0005	105185-0010	105185-0015	105185-0105	105185-0110	105185-0115
Bio-C18 (300 Å)	106185-0005	106185-0010	106185-0015	106185-0105	106185-0110	106185-0115
GP-C8 (120 Å)	107085-0005	107085-0010	107085-0015	107085-0105	107085-0110	107085-0115
Bio-C8 (300 Å)	108085-0005	108085-0010	108085-0015	108085-0105	108085-0110	108085-0115
GP-C4 (120 Å)	109045-0005	109045-0010	109045-0015	109045-0105	109045-0110	109045-0115
Bio-C4 (300 Å)	110045-0005	110045-0010	110045-0015	110045-0105	110045-0110	110045-0115
GP-Phenyl (120 Å)	111365-0005	111365-0010	111365-0015	111365-0105	111365-0110	111365-0115
HP-CN (120 Å)	113315-0005	113315-0010	113315-0015	113315-0105	113315-0110	113315-0115
HP-NH <sub>2</sub> (120 Å)	115305-0005	115305-0010	115305-0015	115305-0105	115305-0110	115305-0115
HP-SCX (120 Å)	120365-0005	120365-0010	120365-0015	120365-0105	120365-0110	120365-0115
HP-Silica (120 Å)	117005-0005	117005-0010	117005-0015	117005-0105	117005-0110	117005-0115
HILIC Polar-100	131585-0005	131585-0010	131585-0015	131585-0105	131585-0110	131585-0115
PolyRP-NP5	262005-0005	262005-0010	262005-0015	262005-0105	262005-0110	262005-0115
PolyRP-100	260100-0005	260100-0010	260100-0015	260100-0105	260100-0110	260100-0115
Phases	50x75	100x75	150x75	50x100	100x100	150x100
<i>Proteomix</i>						
SCX-NP5	401NP3-0005	401NP5-0010	401NP5-0015	401NP5-0105	401NP5-0110	401NP5-0115
WCX-NP5	402NP3-0005	402NP5-0010	402NP5-0015	402NP5-0105	402NP5-0110	402NP5-0115
SAX-NP5	403NP3-0005	403NP5-0010	403NP5-0015	403NP5-0105	403NP5-0110	403NP5-0115
WCX-NP5	404NP3-0005	404NP5-0010	404NP5-0015	404NP5-0105	404NP5-0110	404NP5-0115

<b>5 <math>\mu</math>m Capillary LC Columns (length x ID, mm x <math>\mu</math>m)</b>						
Phases	50x300	100x300	150x300	50x500	100x500	150x500
GP-C18 (120 Å)	101185-0305	101185-0310	101185-0315	101185-005	101185-0510	101185-0515
BR-C18 (120 Å)	102185-0305	102185-0310	102185-0315	102185-0505	102185-0510	102185-0515
HP-C18 (120 Å)	103185-0305	103185-0310	103185-0315	103185-0505	103185-0510	103185-0515
HP-C18 (200 Å)	104185-0305	104185-0310	104185-0315	104185-0505	104185-0510	104185-0515
Bio-C18 (200 Å)	105185-0305	105185-0310	105185-0315	105185-0505	105185-0510	105185-0515
Bio-C18 (300 Å)	106185-0305	106185-0310	106185-0315	106185-0505	106185-0510	106185-0515
GP-C8 (120 Å)	107085-0305	107085-0310	107085-0315	107085-0505	107085-0510	107085-0515
Bio-C8 (300 Å)	108085-0305	108085-0310	108085-0315	108085-0505	108085-0510	108085-0515
GP-C4 (120 Å)	109045-0305	109045-0310	109045-0315	109045-0505	109045-0510	109045-0515
Bio-C4 (300 Å)	110045-0305	110045-0310	110045-0315	110045-0505	110045-0510	110045-0515
GP-Phenyl (120 Å)	111365-0305	111365-0310	111365-0315	111365-0505	111365-0510	111365-0515
HP-CN (120 Å)	113315-0305	113315-0310	113315-0315	113315-0505	113315-0510	113315-0515
HP-NH <sub>2</sub> (120 Å)	115305-0305	115305-0310	115305-0315	115305-0505	115305-0510	115305-0515
HP-SCX (120 Å)	120365-0305	120365-0310	120365-0315	120365-0505	120365-0510	120365-0515
HP-Silica (120 Å)	117005-0305	117005-0310	117005-0315	117005-0505	117005-0510	117005-0515
HILIC Polar-100	131585-0305	131585-0310	131585-0315	131585-0505	131585-0510	131585-0515
PolyRP-NP5	262005-0305	262005-0310	262005-0315	262005-0505	262005-0510	262005-0515
PolyRP-100	260100-0305	260100-0310	260100-0315	260100-0505	260100-0510	260100-0515
Phases	50x300	100x300	150x300	50x500	100x500	150x500
Proteomix						
SCX-NP5	401NP3-0305	401NP5-0310	401NP5-0315	401NP5-0505	401NP5-0510	401NP5-0515
WCX-NP5	402NP3-0305	402NP5-0310	402NP5-0315	402NP5-0505	402NP5-0510	402NP5-0515
SAX-NP5	403NP3-0305	403NP5-0310	403NP5-0315	403NP5-0505	403NP5-0510	403NP5-0515
WCX-NP5	404NP3-0305	404NP5-0310	404NP5-0315	404NP5-0505	404NP5-0510	404NP5-0515