



## Synchronis HPLC and UHPLC Columns

### Remarkable separations guaranteed time after time

Thermo Scientific™ Synchronis™ HPLC columns are used to achieve consistent, reproducible separations. Chemistries available for a variety of applications.

- **Consistent Separations**

Highly pure, high surface area silica

- **Dense Bonding and Double Endcapping**

Reduction of residual silanols available to interact with basic analytes

- **Strong Quality Control**

Rigorously tested to ensure quality

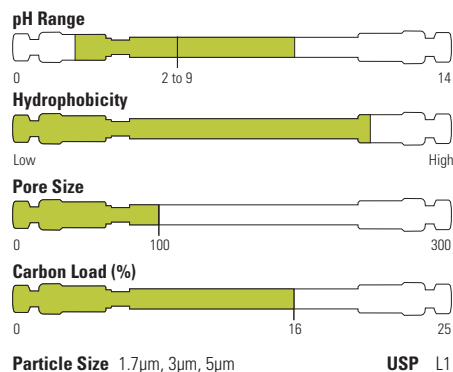


The Synchronis web page contains the latest news, applications and downloads for the Synchronis HPLC column range. Visit [www.thermoscientific.com/synchronis](http://www.thermoscientific.com/synchronis)

## Synchronis C18

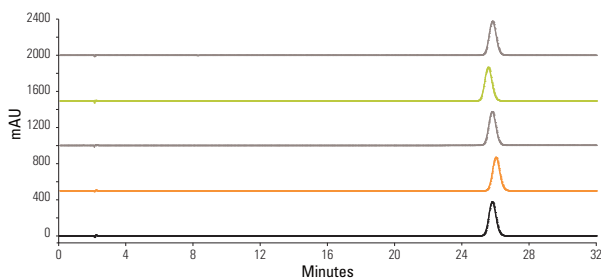
Synchronis C18 columns deliver remarkable separations, time after time

- Highly pure, high surface area silica
- High carbon load for increased retention
- Double endcapped for extra surface coverage
- Highly inert towards basic compounds
- Rigorously tested to ensure quality



Synchronis C18 columns show excellent column to column reproducibility, as illustrated here by the analysis of zidovudine using five separate columns. The reproducibility in terms of retention time and peak area is less than or equal to 0.5%, column to column.

### Zidovudine



#### Synchronis C18, 5µm, 150 x 4.6mm

Mobile Phase:	Water:Methanol (4:1)
Temperature:	25°C
Flow Rate:	1.0mL/min
Injection Volume:	10µL
Detection:	UV, 265nm
Analytes:	1. Zidovudine

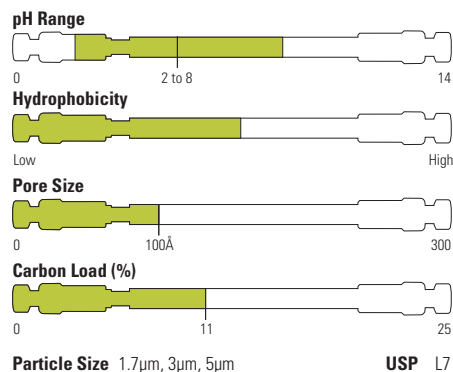
### Synchronis C18

Particle Size (µm)	Format	Length (mm)	2.1mm ID	3.0mm ID	4.6mm ID
1.7	UHPLC Column	30	<b>97102-032130</b>	-	-
		50	<b>97102-052130</b>	-	-
		100	<b>97102-102130</b>	-	-
3	HPLC Column	30	<b>97103-032130</b>	-	-
		50	<b>97103-052130</b>	-	<b>97103-054630</b>
		100	<b>97103-102130</b>	<b>97103-103030</b>	<b>97103-104630</b>
		150	<b>97103-152130</b>	-	<b>97103-154630</b>
5	Drop-in Guard (4/pk)	10	<b>97105-012101</b>	<b>97105-013001</b>	<b>97105-014001</b>
	HPLC Column	30	<b>97105-032130</b>	-	-
		50	<b>97105-052130</b>	<b>97105-053030</b>	<b>97105-054630</b>
		100	<b>97105-102130</b>	<b>97105-103030</b>	<b>97105-104630</b>
		150	<b>97105-152130</b>	<b>97105-153030</b>	<b>97105-154630</b>
		250	<b>97105-252130</b>	<b>97105-253030</b>	<b>97105-254630</b>
	UNIGUARD Drop-in Guard Cartridge Holder	10	<b>852-00</b>	<b>852-00</b>	<b>850-00</b>

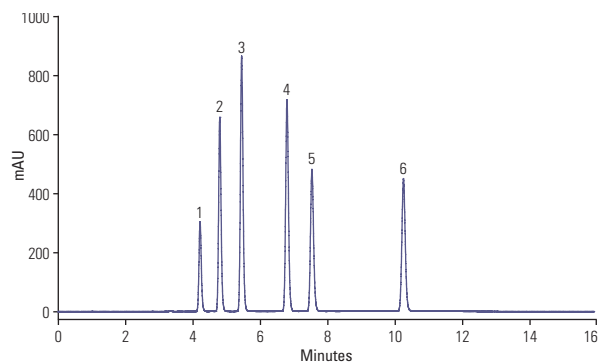
## Synchronis C8

Reduces hydrophobic interactions allowing compounds to elute quicker from the column. Recommended for analytes with medium hydrophobicity or when a less hydrophobic phase is required to obtain optimum retention.

- Highly pure, high surface area silica
- Less hydrophobic than Synchronis C18
- Double endcapped for extra surface coverage
- Rigorously tested to ensure quality



### Uron herbicides



#### Synchronis C8, 5µm, 150 x 4.6mm

Mobile Phase A:	Water
Mobile Phase B:	Acetonitrile
Gradient:	35 to 60% B in 10 minutes
Temperature:	30°C
Flow Rate:	1.0mL/min
Injection Volume:	20µL
Detection:	240nm
Analytes:	1. Tebuthiuron 2. Metoxuron 3. Monuron 4. Chlorotoluron 5. Diuron 6. Linuron

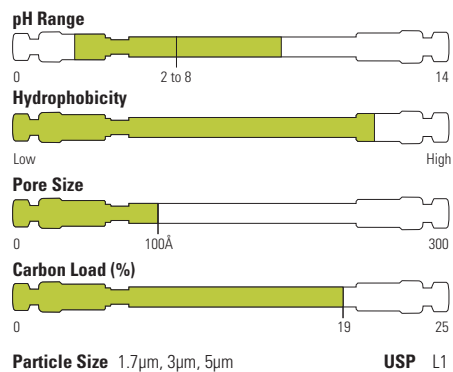
### Synchronis C8

Particle Size (µm)	Format	Length (mm)	2.1mm ID	3.0mm ID	4.6mm ID
1.7	UHPLC Column	50	<b>97202-052130</b>	-	-
		100	<b>97202-102130</b>	-	-
3	HPLC Column	50	<b>97203-052130</b>	-	-
		100	-	<b>97203-103030</b>	<b>97203-104630</b>
		150	-	-	<b>97203-154630</b>
5	Drop-in Guard (4/pk)	10	<b>97205-012101</b>	<b>97205-013001</b>	<b>97205-014001</b>
	HPLC Column	30	<b>97205-032130</b>	-	-
		50	<b>97205-052130</b>	<b>97205-053030</b>	<b>97205-054630</b>
		100	<b>97205-102130</b>	<b>97205-103030</b>	<b>97205-104630</b>
		150	<b>97205-152130</b>	<b>97205-153030</b>	<b>97205-154630</b>
		250	-	<b>97205-253030</b>	<b>97205-254630</b>
	UNIGUARD Drop-in Guard Cartridge Holder	10	<b>852-00</b>	<b>852-00</b>	<b>850-00</b>

## Synchronis aQ

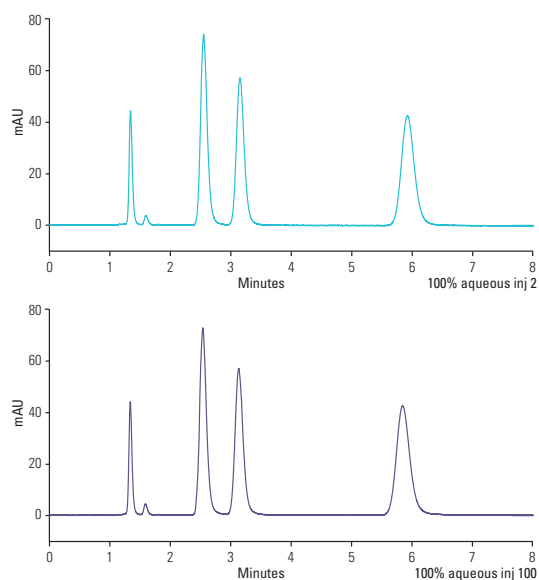
Polar endcapped Synchronis aQ columns provide a controlled interaction mechanism that retains and resolves polar analytes

- Stable in 100% aqueous mobile phase
- Enhanced retention of polar compounds
- Rigorously tested to ensure quality



In comparison to a conventionally endcapped C18, the Synchronis aQ polar end-capped C18 stationary phase exhibits superior stability towards aqueous mobile phase. Synchronis aQ shows no degradation in performance after 100 injections in a buffered 100% aqueous eluent.

### Stability of Synchronis aQ in 100% aqueous mobile phase



**Synchronis aQ, 5µm, 100 x 4.6mm**  
 Mobile Phase: 50mM Aqueous K<sub>2</sub>HPO<sub>4</sub> (pH 6)  
 Temperature: 30°C  
 Flow Rate: 0.7mL/min  
 Injection Volume: 2µL  
 Detection: 260nm  
 Analytes: 1. Cytidine-5'-diphosphate  
 2. Adenosine-5'-triphosphate  
 3. Adenosine-5'-diphosphate  
 4. Adenosine-5'-monophosphate

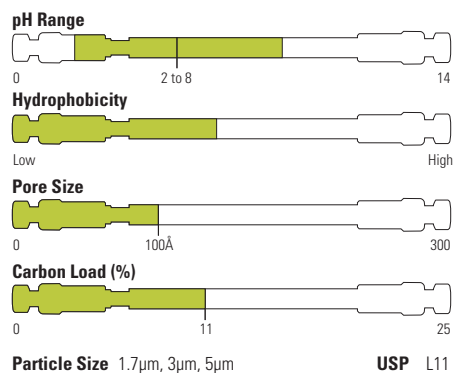
### Synchronis aQ

Particle Size (µm)	Format	Length (mm)	2.1mm ID	3.0mm ID	4.0mm ID	4.6mm ID
1.7	UHPLC Column	50	<b>97302-052130</b>	-	-	<b>97302-054630</b>
		100	<b>97302-102130</b>	<b>97302-103030</b>	-	-
3	HPLC Column	50	<b>97303-052130</b>	-	-	-
		100	-	<b>97303-103030</b>	-	<b>97303-104630</b>
		150	-	-	-	<b>97303-154630</b>
5	Drop-in Guard (4/pk)	10	<b>97305-012101</b>	<b>97305-013001</b>	<b>97305-014001</b>	<b>97305-014001</b>
		50	<b>97305-052130</b>	<b>97305-053030</b>	-	<b>97305-054630</b>
		100	<b>97305-102130</b>	-	-	<b>97305-104630</b>
		150	<b>97305-152130</b>	<b>97305-153030</b>	<b>97305-154030</b>	<b>97305-154630</b>
		250	-	<b>97305-253030</b>	<b>97305-254030</b>	<b>97305-254630</b>
	UNIGUARD Drop-in Guard Cartridge Holder	10	<b>852-00</b>	<b>852-00</b>	<b>850-00</b>	<b>850-00</b>

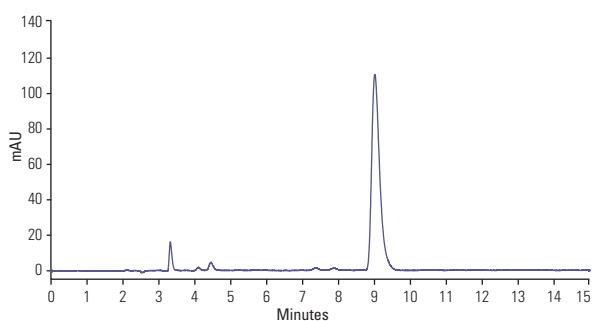
## Synchronis Phenyl

Provides an alternative to Synchronis C18 and is particularly useful for retention of aromatic compounds

- Alternative selectivity to Synchronis C18
- Double endcapped for extra surface coverage
- Highly inert towards basic compounds
- Rigorously tested to ensure quality



### Oxacillin sodium (USP)



#### Synchronis Phenyl, 5µm, 300 x 4.0mm

Mobile Phase:	Phosphate Buffer: MeCN:MeOH (70:30:10)
Temperature:	25°C
Flow Rate:	1.0mL/min (2mL/min in USP method)
Injection Volume:	10µL
Detection:	UV, 225nm
Analytes:	1. Oxacillin Sodium (0.11mg/mL)

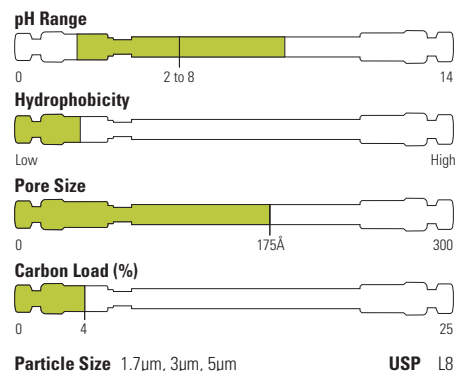
### Synchronis Phenyl

Particle Size (µm)	Format	Length (mm)	2.1mm ID	3.0mm ID	4.6mm ID
1.7	UHPLC Column	50	<b>97902-052130</b>	-	-
		100	<b>97902-102130</b>	-	-
3	HPLC Column	50	<b>97903-052130</b>	-	-
		100	-	-	<b>97903-104630</b>
		150	-	-	<b>97903-154630</b>
5	Drop-in Guard (4/pk)	10	<b>97905-012101</b>	<b>97905-013001</b>	<b>97905-014001</b>
	HPLC Column	50	-	<b>97905-053030</b>	<b>97905-054630</b>
		100	-	<b>97905-103030</b>	<b>97905-104630</b>
		150	<b>97905-152130</b>	-	<b>97905-154630</b>
		250	-	-	<b>97905-254630</b>
		UNIGUARD Drop-in Guard Cartridge Holder	10	<b>852-00</b>	<b>852-00</b>

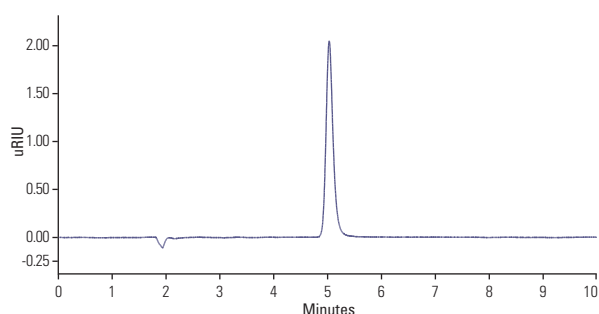
## Synchronis Amino

Provides a versatile aminopropyl phase that gives excellent chromatographic properties in four modes: weak anion exchange, reversed-phase, normal phase and HILIC

- Highly pure, high surface area silica
- Double endcapped for extra surface coverage
- Rigorously tested to ensure quality



### Lactulose



**Synchronis Amino 5µm, 150 x 4.6mm**  
 Mobile Phase: Water: MeCN (30:70)  
 Temperature: 35°C  
 Flow Rate: 1.0mL/min  
 Detection: RI  
 Injection Volume: 5µL  
 Analytes: 1. Lactulose

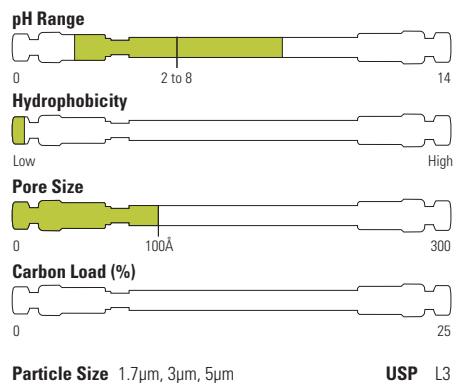
### Synchronis Amino

Particle Size (µm)	Format	Length (mm)	2.1mm ID	3.0mm ID	4.0mm ID	4.6mm ID
1.7	UHPLC Column	50	<b>97702-052130</b>	-	-	-
		100	<b>97702-102130</b>	-	-	-
3	HPLC Column	50	<b>97703-052130</b>	-	-	-
5	Drop-in Guard (4/pk)	10	<b>97705-012101</b>	<b>97705-013001</b>	<b>97705-014001</b>	<b>97705-014001</b>
	HPLC Column	30	<b>97705-032130</b>	-	-	-
		50	<b>97705-052130</b>	-	-	<b>97705-054630</b>
		150	<b>97705-152130</b>	<b>97705-153030</b>	<b>97705-154030</b>	<b>97705-154630</b>
		250	-	<b>97705-253030</b>	<b>97705-254030</b>	<b>97705-254630</b>
UNIGUARD Drop-in Guard Cartridge Holder	10	<b>852-00</b>	<b>852-00</b>	<b>850-00</b>	<b>850-00</b>	

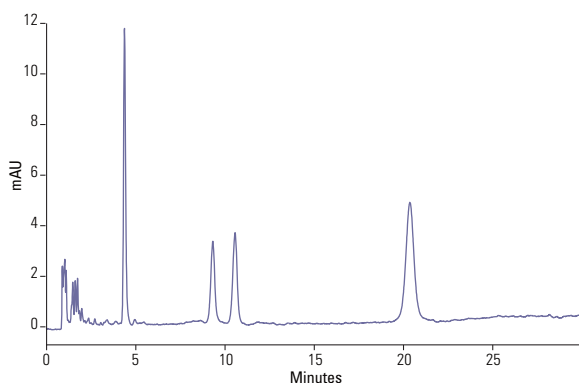
## Synchronis Silica

Serves as a powerful and efficient tool for the chromatography of moderately polar organic compounds by normal phase chromatography

- Highly pure, high surface area silica
- Excellent reproducibility for normal phase chromatography
- Rigorously tested to ensure quality



### Tocopherols



#### Synchronis Silica 5µm, 150 x 4.6mm

Mobile Phase:	Hexane +0.2% propan-2-ol (IPA)
Temperature:	40°C
Flow Rate:	2.0mL/min
Injection Volume:	10µL
Detection:	UV, 254nm
Analytes:	α-tocopherol β-tocopherol γ-tocopherol δ-tocopherol

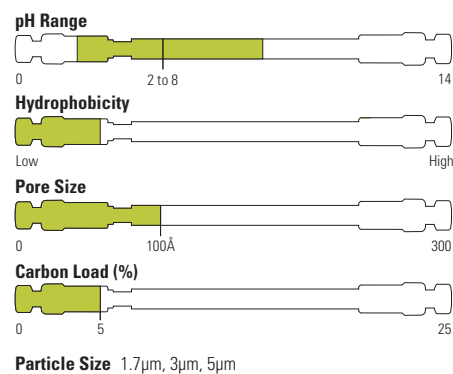
### Synchronis Silica

Particle Size (µm)	Format	Length (mm)	2.1mm ID	3.0mm ID	4.0mm ID	4.6mm ID
1.7	UHPLC Column	50	<b>97002-052130</b>	-	-	-
		100	<b>97002-102130</b>	-	-	-
3	HPLC Column	50	<b>97003-052130</b>	-	-	-
5	Drop-in Guard (4/pk)	10	<b>97005-012101</b>	<b>97005-013001</b>	<b>97005-014001</b>	<b>97005-014001</b>
	HPLC Column	50	<b>97005-052130</b>	-	-	-
		100	<b>97005-102130</b>	-	-	-
		150	<b>97005-152130</b>	<b>97005-153030</b>	<b>97005-154030</b>	<b>97005-154630</b>
		250	-	<b>97005-253030</b>	<b>97005-254030</b>	<b>97005-254630</b>
	UNIGUARD Drop-in Guard Cartridge Holder	10	<b>852-00</b>	<b>852-00</b>	<b>850-00</b>	<b>850-00</b>

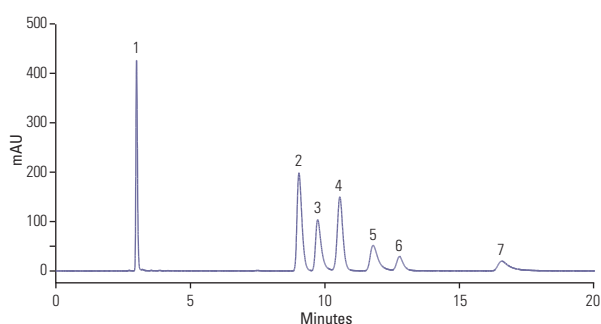
## Synchronis HILIC

Provides enhanced retention of polar and hydrophilic analytes

- Alternative selectivity to Synchronis C18
- Improved sensitivity with MS detection
- No need for ion-pair or derivatization
- Outstanding peak shape and sensitivity
- Highly pure, high surface area silica particles
- Neutral (uncharged), highly polar surface



### Catecholamines



#### Synchronis HILIC, 5µm, 250 x 4.6mm

Mobile Phase:	Water : acetonitrile : 200mM ammonium formate (10.5 : 84.5 : 5)
Temperature:	40°C
Flow Rate:	1.0mL/min
Injection Volume:	5µL
Detection:	UV, 280nm
Analytes:	1. catechol 2. 5-HIAA 3. DOPAC 4. serotonin 5. tyrosine 6. dopamine 7. L-DOPA

### Synchronis HILIC

Particle Size (µm)	Format	Length (mm)	2.1mm ID	3.0mm ID	4.6mm ID
1.7	UHPLC Column	50	<b>97502-052130</b>	-	<b>97502-054630</b>
		100	<b>97502-102130</b>	-	-
3	HPLC Column	50	<b>97503-052130</b>	-	-
		100	-	-	<b>97503-104630</b>
		150	-	-	<b>97503-154630</b>
5	Drop-in Guard (4/pk)	10	<b>97505-012101</b>	<b>97505-013001</b>	<b>97505-014001</b>
	HPLC Column	50	<b>97505-052130</b>	-	<b>97505-054630</b>
		100	<b>97505-102130</b>	-	<b>97505-104630</b>
		150	<b>97505-152130</b>	<b>97505-153030</b>	<b>97505-154630</b>
		250	-	-	<b>97505-254630</b>
	UNIGUARD Drop-in Guard Cartridge Holder	10	<b>852-00</b>	<b>852-00</b>	<b>850-00</b>