

## Thermo Scientific Synchronis aQ HPLC Columns

Consistent, predictable separations,  
Column after column, time after time

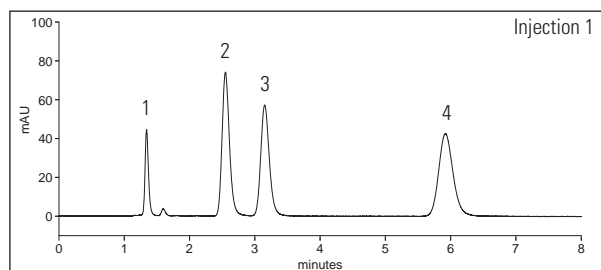
- **Stability in 100% aqueous mobile phase**
- **Outstanding reproducibility**
- **Highly pure, high surface area silica**
- **Highly inert towards basic compounds**
- **Rigorously tested to ensure quality**

### Specifications

<b>Particle size</b>	1.7 $\mu\text{m}$ , 5 $\mu\text{m}$	<b>Carbon load</b>	19 %
<b>Pore size</b>	100 $\text{\AA}$	<b>Endcapped</b>	Polar
<b>Surface area</b>	320 $\text{m}^2/\text{g}$	<b>USP classification</b>	L1
<b>pH range</b>	2 - 8		

### Stability in 100% aqueous mobile phase

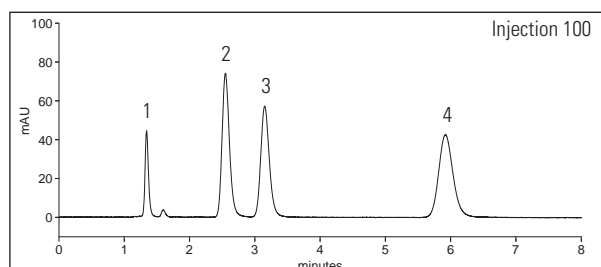
In comparison to a conventionally endcapped C18, the Synchronis™ aQ polar end-capped C18 stationary phase exhibits superior stability towards aqueous mobile phase. Synchronis aQ shows no degradation in performance after 100 injections in a buffered 100% aqueous eluent.



Column: Synchronis aQ, 5  $\mu\text{m}$ , 100mm x 4.6mm

Mobile phase:	50mM Aqueous $\text{K}_2\text{HPO}_4$ (pH 6)
Flow rate:	0.7 mL/min
Temperature:	30°C
Detection:	260 nm
Injection volume:	2 $\mu\text{L}$

1. Cytidine-5'-diphosphate
2. Adenosine-5'-triphosphate
3. Adenosine-5'-diphosphate
4. Adenosine-5'-monophosphate

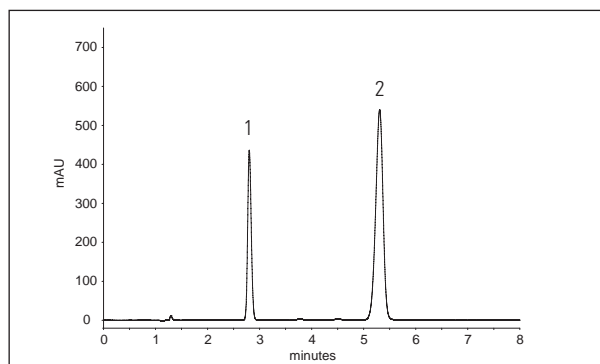


Stability of Synchronis aQ in 100% aqueous mobile phase



Description	Particle size	Length (mm)	2.1 mm ID	3 mm ID	4 mm ID	4.6 mm ID
Synchronis aQ	1.7 µm	30	97302-032130	–	–	–
		50	97302-052130	97302-053030	–	97302-054630
		100	97302-102130	97302-103030	–	–
	5 µm	30	97305-032130	97305-033030	97305-034030	97305-034630
		50	97305-052130	97305-053030	97305-054030	97305-054630
		100	97305-102130	97305-103030	97305-104030	97305-104630
Drop-in guard cartridges (4/pk)	5 µm	10	97305-012101	97305-013001	97305-014001	–

## Application: Amoxicillin and Potassium Clavulanate (USP)



Column: Synchronis aQ, 5µm, 300mm x 4.0mm

Mobile phase: Phosphate Buffer (pH 4.4):  
MeOH (95:5)

Flow rate: 2.0 mL/min

Temperature: 25°C

Detection: 210 nm

Injection volume: 20 µL

1. Amoxicillin
2. Potassium Clavulanate

Parameter	USP Specification	Measured Amoxicillin (6 replicate injections)	Measured K Clavulanate (6 replicate injections)
Resolution	> 3.5	–	12.8
Efficiency (N)	> 550	7598	6475
Tailing factor	< 1.5	1.15	0.92
%RSD Retention time	< 2%	0.29%	0.36%
%RSD Peak area	< 2%	0.30%	0.29%

## Consistent, predictable separations, Column after column, time after time

Synchronis HPLC columns are manufactured, packed and tested in ISO9000 accredited facilities. Each lot of silica is tested for the physical properties of the silica support and only released for production if it meets the stringent test specifications.

Each bonded lot of chromatographic packing material is rigorously tested for primary and secondary interactions with the bonded phase.

New, enhanced, automated packing methods drive consistency even further and every column is individually tested to ensure that it meets the required quality.

These extensive testing and quality control procedures ensure the delivery of a consistent product, column after column.

For more information, visit [www.thermoscientific.com/Synchronis](http://www.thermoscientific.com/Synchronis)

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