

SPHERECLONE™



If SphereClone does not provide at least an equivalent separation as compared to Spherisorb columns of the same phase, particle size and comparable dimensions, send in your comparative data within 45 days and keep the SphereClone column for FREE.

Use SphereClone Columns as an Alternative to Spherisorb

- **Performance guaranteed**

SphereClone is packed only by Phenomenex, thereby reducing the chance of column-to-column variation. You will receive columns of consistent quality and reproducibility, and will benefit from Phenomenex's excellent customer support and technical service.

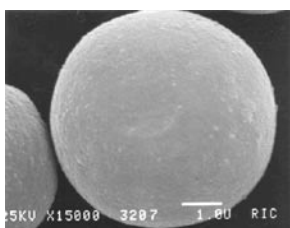
Below are listed side-by-side comparisons of physical material characteristics. As you can see, SphereClone™ and Spherisorb® compare very well for important specifications such as particle size, surface area, pore size and carbon load.

SphereClone™

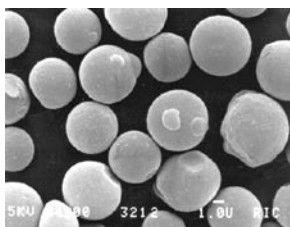
VS.

Spherisorb®†

SEM of Base Silica



Surface
15,000x Magnification

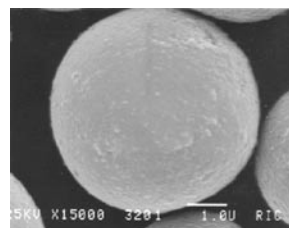


Physical Mass
Distribution & Shape
4,000x Magnification

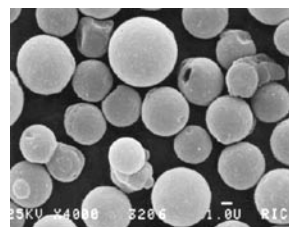
Material Characteristics

SphereClone™	vs.	Spherisorb®†
3, 5, 10μ	Particle Size	3, 5, 10μ
80Å	Pore Size	80Å
200m ² /g	Surface Area	200m ² /g
	Carbon Load	
—	Silica	—
6%	C6	6%
6%	C8	6%
7%	ODS(1)	7%
12%	ODS(2)	12%
2%	NH ₂	2%
3.0%	Phenyl	3.0%
—	SCX	—

SEM of Base Silica

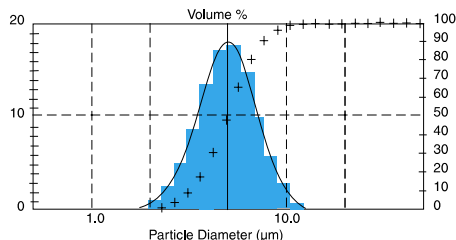


Surface
15,000x Magnification



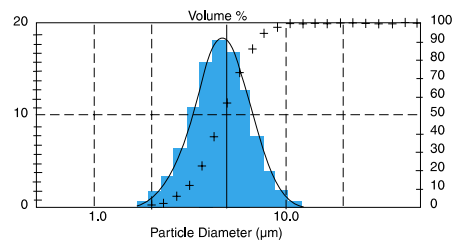
Physical Mass
Distribution & Shape
4,000x Magnification

Particle Size Distribution



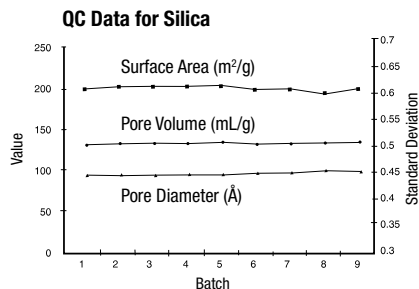
SphereClone™ 5μ Silica

VS.

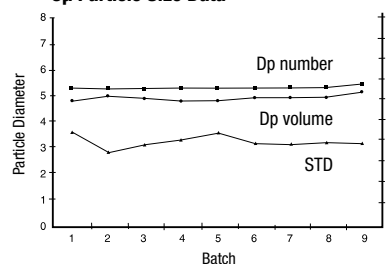


Spherisorb® 5μ Silica

SphereClone Reproducibility



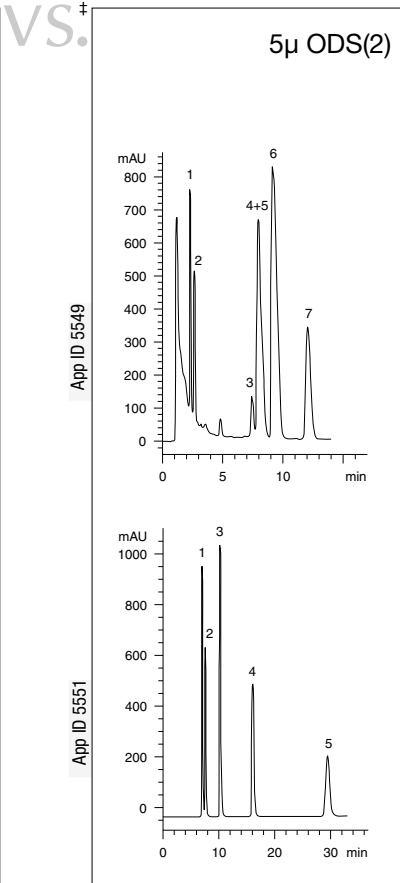
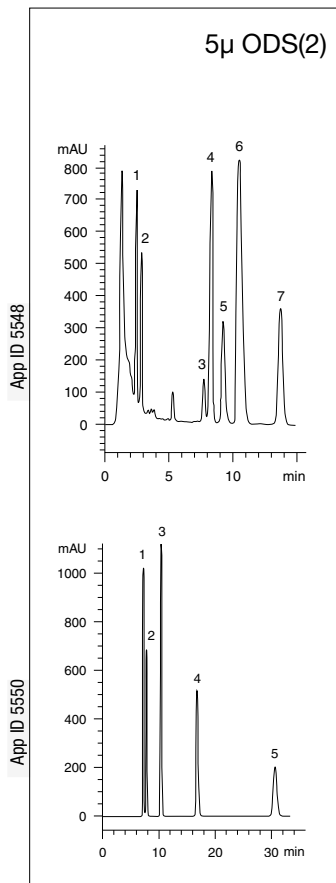
5μ Particle Size Data



SPHERECLONE™

SphereClone™

Spherisorb®†

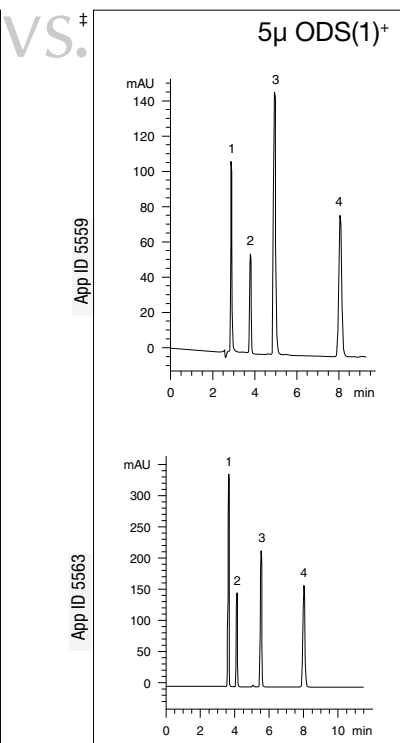
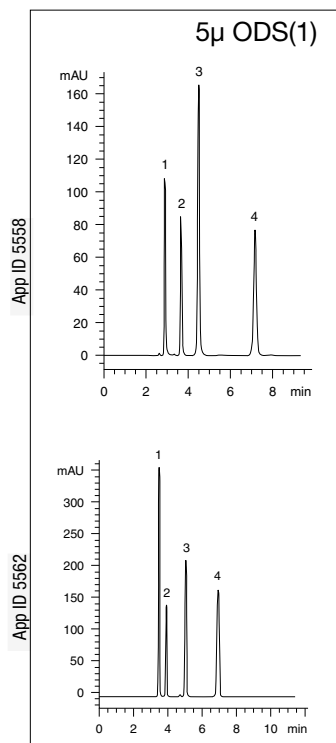


Fat-Soluble Vitamins

Dimensions: 150 x 4.6mm
Mobile Phase: Acetonitrile/Methanol (75:25)
Flow Rate: 1.3mL/min
Detection: UV @ 280nm
Sample: 1. Vitamin A
 2. Vitamin A Acetate
 3. Vitamin D₂
 4. Vitamin D₃
 5. Vitamin E
 6. Vitamin E Acetate
 7. Vitamin K₁

Pesticides/Herbicides

Dimensions: 150 x 4.6mm
Mobile Phase: Water/Acetonitrile (70:30)
Flow Rate: 1.5mL/min
Detection: UV @ 220nm
Sample: 1. Baygon™
 2. Carbofuran
 3. Carbaryl
 4. Protham
 5. Captan



Polar Compounds

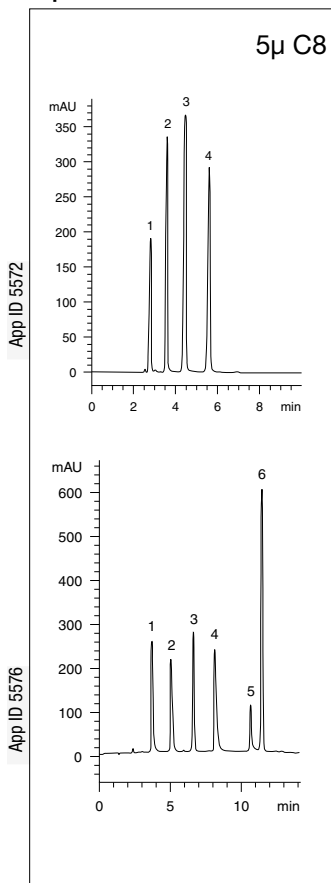
Dimensions: 250 x 4.6mm
Mobile Phase: 25mM KH₂PO₄, pH 2.5
Flow Rate: 1.0mL/min
Temperature: 40°C
Detection: UV @ 230nm
Sample: 1. L-Cysteine
 2. L-Ascorbic Acid
 3. Glutathione
 4. Uric Acid

Phthalate

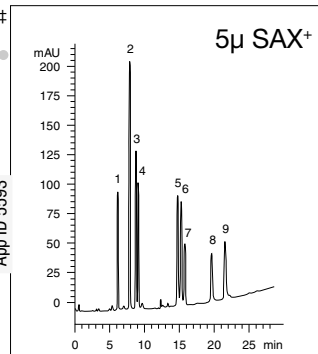
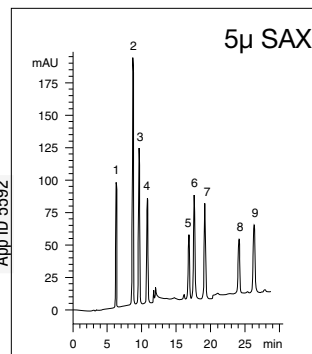
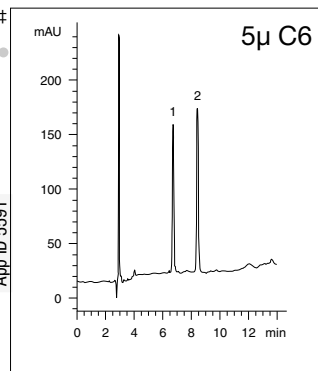
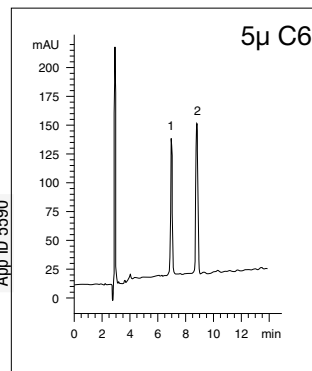
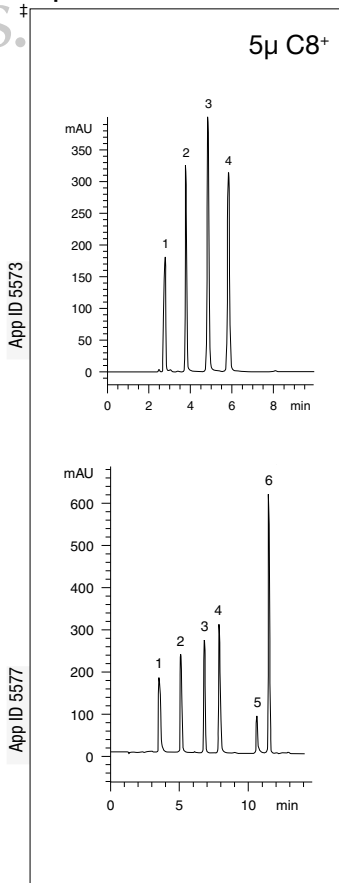
Dimensions: 250 x 4.6mm
Mobile Phase: Acetonitrile/Water (70:30)
Flow Rate: 1.0mL/min
Detection: UV @ 230nm
Sample: 1. Dimethyl Phthalate
 2. Anisole
 3. Naphthalene
 4. Dibutyl Phthalate

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Spherisorb®†



Polar Compounds

Dimensions: 250 x 4.6mm
Mobile Phase: 25mM KH_2PO_4 , pH 2.5
Flow Rate: 1.0mL/min
Detection: UV @ 230nm
Sample:
 1. L-Cysteine
 2. L-Ascorbic Acid
 3. Glutathione
 4. Uric Acid

Water-Soluble Vitamins

Dimensions: 150 x 4.6mm
Mobile Phase:
 A: 5mM Sodium 1-Pentanesulfonate in 0.1% H_3PO_4
 B: 5mM Sodium 1-Pentanesulfonate in 0.1% H_3PO_4 in 80% Acetonitrile
Gradient: A/B (97.5:2.5) to A/B (70:30) in 20 min
Flow Rate: 1.0mL/min
Temperature: 40°C
Detection: UV @ 254nm
Sample:
 1. Niacinamide
 2. Pyridoxal
 3. *p*-Aminobenzoic Acid
 4. Thiamine
 5. Folic Acid
 6. Riboflavin

Endorphins

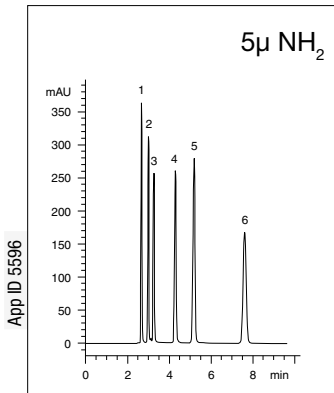
Dimensions: 250 x 4.6mm
Mobile Phase:
 A: 0.1% TFA in Water
 B: 0.1% TFA in Acetonitrile/Water (90:10)
Gradient: A:B-70:30 to A:B-55:45 in 15 min
Flow Rate: 1.0mL/min
Detection: UV @ 214nm
Sample:
 1. Met Enkephalin
 2. Leu Enkephalin

Nucleotides

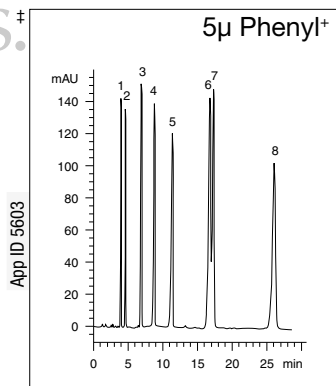
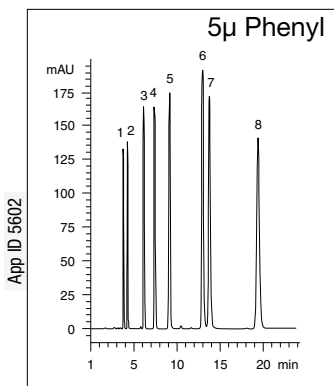
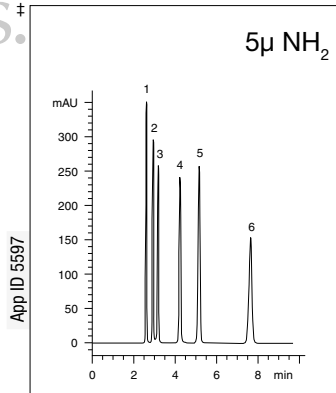
Dimensions: 250 x 4.6mm
Mobile Phase:
 A: 0.04M KH_2PO_4 , pH 5.5
 B: 0.5M KH_2PO_4 , pH 5.5
Gradient: A/B: 100:0 to A/B 0:100 in 26 min
Flow Rate: 1.0mL/min
Detection: UV @ 254nm
Sample:
 1. β -NAD
 2. IMP
 3. GMP
 4. AMP
 5. GDP
 6. ADP
 7. NADP
 8. ITP
 9. ATP

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Corticosteroids

Dimensions: 250 x 4.6mm
Mobile Phase: Dichloromethane/Methanol (95:5)
Flow Rate: 1.0mL/min
Detection: UV @ 254nm
Sample: 1. Deoxycorticosterone Acetate
 2. Deoxycorticosterone
 3. Hydrocortisone 21-Acetate
 4. Corticosterone
 5. Cortisone
 6. Hydrocortisone

Aromatic Ketones

Dimensions: 250 x 4.6mm
Mobile Phase: Acetonitrile/Water (33:67)
Flow Rate: 1.0mL/min
Detection: UV @ 254nm
Sample: 1. Benzamide
 2. Benzyl Alcohol
 3. Acetophenone
 4. Methyl Benzoate
 5. Phenetole
 6. Naphthalene
 7. Benzophenone
 8. Biphenyl

ORDERING INFORMATION

SecurityGuard™ Cartridges require universal holder Order No.: KJO-4282

3µ Columns (mm)

Phases	SecurityGuard™ Cartridges				SecurityGuard™ Cartridges				
	150 x 1.0	100 x 2.0	150 x 2.0	100 x 3.2	150 x 3.2	100 x 4.6	150 x 4.6	4 x 2.0mm /10pk	4 x 3.0mm /10pk
Silica	—	—	—	—	—	00D-4130-E0	00F-4130-E0	AJO-4347	AJO-4348
C6	—	—	00F-4132-B0	—	—	00D-4132-E0	00F-4132-E0	—	—
C8	—	—	—	00D-4133-R0	—	00D-4133-E0	—	AJO-4289	AJO-4290
ODS (1)	—	00D-4134-B0	00F-4134-B0	00D-4134-R0	00F-4134-R0	00D-4134-E0	00F-4134-E0	AJO-4286	AJO-4287
ODS(2)	00F-4135-A0	00D-4135-B0	00F-4135-B0	00D-4135-R0	00F-4135-R0	00D-4135-E0	00F-4135-E0	AJO-4286	AJO-4287
NH ₂	—	—	—	—	00F-4137-R0	—	00F-4137-E0	AJO-4301	AJO-4302
Phenyl	—	—	—	—	—	00D-4138-E0	00F-4138-E0	AJO-4350	AJO-4351

for ID: 2.0-3.0mm 3.2-8.0mm

5µ Columns (mm)

Phases	SecurityGuard™ Cartridges						SecurityGuard™ Cartridges			
	250 x 2.0	150 x 3.2	250 x 3.2	150 x 4.6	250 x 4.6	250 x 10.0	250 x 21.2	4 x 2.0mm /10pk	4 x 3.0mm /10pk	10 x 10mm /3pk
Silica	00G-4139-B0	—	—	00F-4139-E0	00G-4139-E0	—	—	AJO-4347	AJO-4348	AJO-7223
C6	—	—	—	00F-4141-E0	00G-4141-E0	00G-4141-N0	—	—	—	—
C8	00G-4142-B0	00F-4142-R0	00G-4142-R0	00F-4142-E0	00G-4142-E0	00G-4142-N0	—	AJO-4289	AJO-4290	AJO-7222
ODS (1)	00G-4143-B0	00F-4143-R0	00G-4143-R0	00F-4143-E0	00G-4143-E0	00G-4143-N0	—	AJO-4286	AJO-4287	AJO-7221
ODS (2)	00G-4144-B0	00F-4144-R0	00G-4144-R0	00F-4144-E0	00G-4144-E0	00G-4144-N0	00G-4144-P0	AJO-4286	AJO-4287	AJO-7221
NH ₂	—	—	00G-4147-R0	00F-4147-E0	00G-4147-E0	00G-4147-N0	—	AJO-4301	AJO-4302	AJO-7364
Phenyl	—	—	—	00F-4148-E0	00G-4148-E0	—	—	AJO-4350	AJO-4351	AJO-7314
SAX	00G-4149-B0	00F-4149-R0	00G-4149-R0	00F-4149-E0	00G-4149-E0	00G-4149-N0	—	AJO-4310	AJO-4311	AJO-7370

for ID: 2.0-3.0mm 3.2-8.0mm 9-16mm

10µ Columns (mm)

Phases	SecurityGuard™ Cartridges	
	250 x 4.6	4 x 3.0mm /10pk
C8	00G-4154-E0	AJO-4290
ODS (1)	00G-4155-E0	AJO-4287
ODS (2)	00G-4156-E0	AJO-4287
SAX	00G-4160-E0	AJO-4311

for ID: 3.2-8.0mm

† Comparative separations may not be representative of all applications.

SphereClone™ is a trademark of Phenomenex.

Phenomenex is a registered trademark.

* Spherisorb columns used for comparison studies were purchased from manufacturer.

† Spherisorb is a registered trademark of Waters. Phenomenex has no affiliation with Waters.



See p. 213 for Semi-prep SecurityGuard Cartridge Holders



C1, CN, SCX not currently available. See PhenoSphere on p. 193. Other dimensions from microbore/SFC to preparative columns available upon request.