

PARTISIL® & PARTISPHERE® COLUMNS

INTRODUCTION:

Partisil is a high-purity irregular silica gel available in both 5 µm and 10 µm particle sizes with a pore size of 80Å. The choice of column packing includes Silica, C-18 polymeric phases (ODS-3, ODS-2) and C-8. Also available are SAX, SCX, and PAC. These columns provide reproducible results, column to column, lot to lot.

Partisphere is available in pre-packed columns and a choice of 5 µm high performance phases. In addition to its efficient pure silica and monomeric C-18 and C-8, SAX, SCX and PAC are also available. PartiSphere media feature narrow particle size distribution and excellent reproducibility.

FEATURES AND BENEFITS:

Unique Void Sealing Cartridge System

Partisphere columns are available in a unique void sealing (WVS) hardware. If a void eventually forms at the top of the column bed, simply hand tighten the inlet fitting to move the frit assembly downwards and recompress the packed bed, thus removing the void and restoring column efficiency. Large knurled end fittings allow ready hand tightening of the system. All WVS cartridge columns are shipped without end fittings and require end fitting kit p/n 4631-1001 - this item can be interchanged with additional WVS columns.

Partisphere Guard Cartridge System

Additional installation of the unique WVS guard cartridge holder (p/n 4631-1003) allows the use of guard cartridges



To order columns directly,
please contact MAC-MOD:

Phone: 610-358-9696

Fax: 610-368-5993

Email: info@mac-mod.com

Web: www.mac-mod.com

PARTISIL

- Irregular porous silica
- 5µm and 10µm particle sizes

Partisil was one of the first commercially available irregular silicas, with a large surface area giving it a high loading capacity. Partisil ion exchange materials are widely referenced and remain one of the most popular choices for analysts. Partisil ODS3 shows similar performance to Waters µBondapak.

PHASES

| Partisil Phase | Functional Group | Particle Size (µm) |
|----------------|----------------------|--------------------|
| Silica | - | 5, 10 |
| C8 | Octyl | 5, 10 |
| ODS | Octadecyl | 5, 10 |
| ODS2 | Octadecyl | 5, 10 |
| ODS3 | Octadecyl | 5, 10 |
| PAC | Amino-cyano | 5, 10 |
| SAX | Tetramethyl Ammonium | 5, 10 |
| SCX | Sulphonic Acid | 5, 10 |

NORMAL PHASE (ADSORPTION) MEDIA

Partisil Silica (5 and 10 µm)

Pure silica stationary phase for adsorption chromatography. Partisil 10 is used particularly for routine separations for higher flow rates and lower back pressures. Partisil 5 is used particularly for higher resolution and fast analysis. These are the supports on which the Partisil bonded phases are based.

ION EXCHANGE MEDIA

Partisil SAX (5 and 10 µm)

A strong anion exchanger based on quaternary ammonium groups (-NR₃⁺). Supplied in the phosphate form in methanol, Partisil 10 SAX has been widely reported in literature and is best known for the separation of nucleotides. Stable over pH range 1.5-7.5 when used in conjunction with a Solutecon mobile phase conditioning column. Obtains the highest anion exchange efficiencies and resolution. Applicable to separations of nucleic acids, organic acids and inorganic anions.

Partisil SCX (5 and 10 µm)

Based on aromatic benzene sulfonic acid groups. Supplied in the ammonium form. Excellent for separation of nucleosides, amino acids, polyamines, drugs and other cationic species. Capable of being loaded with specific metallic cations for use in ligand exchange chromatography. Stable over pH range 1.5-7.0 when used in conjunction with a Solutecon mobile phase conditioning-column. Exceptionally stable Si-O-Si-C bond, both thermally and chemically.

REVERSE PHASE MEDIA

Partisil ODS (10 µm)

A C-18 phase with a 5% carbon load for both normal adsorption and reversed phase partitioning. Dual-mode operation for added selectivity with 50% residual silanols. Lightly loaded C-18 packing is particularly effective for compounds having greater water solubility when used in the reversed phase mode. Creates a moderately polar surface, different from that of pure silica, in normal phase mode.

Partisil ODS-2 (10 µm)

The high carbon load (16%) of this polymeric phase makes it the most nonpolar and, therefore, the most retentive of the reversed phases. An alternative to end-capped C-18 where different elution order is desirable for optimum separation. High sample load capacity and 10 µm particle size are very suitable for preparative work.

Partisil ODS-3 (5 and 10 µm)

A C-18 polymeric phase with a 10.5% carbon load. Medium of choice for improved speed, efficiency and resolution in applications requiring C-18 phases. End-capped for deactivation of silanols to minimize the need for ion suppression or ion pairing agents. Used in a wide range of applications with optimal selectivity, including pharmaceuticals, natural products, food, biological and environmental pollutants.

Partisil C8 (5 and 10 µm)

An end-capped C-8 monomeric phase with at least 8.5% carbon load. Provides high efficiency and rapid mass transfer while maintaining excellent peak shape and stability over a range of aqueous mobile phase compositions. Recommended for ion pair chromatography.

Partisil PAC (5 and 10 µm)

A polar amino cyano bonded phase with secondary amine groups for good thermal and chemical stability. Selectivity and rapid equilibrium allow a range of separation mechanisms to be used, including adsorption, reversed phase and weak anion exchange. Extremely fast equilibration across the entire range of solvents from heptane to water. The media of choice for carbohydrate separations.

PARTISHERE

- Spherical 5µm porous silica
- Unique void-sealing cartridge hardware
- Convenient and easy to use - hand tightened fittings
- Increased column lifetime

Partisphere was one of the first commercially available spherical silicas, and continues to provide reproducible, high efficiency separations. Partisphere columns are available in a wide range of surface chemistries, including a PFP pentafluorophenyl (TAC-1) column.

PHASES

| Partisphere Phase | Functional Group | Particle Size (µm) |
|-------------------|----------------------|--------------------|
| Silica | - | 5 |
| C8 | Octyl | 5 |
| C18 | Octadecyl | 5 |
| PAC | Amino-cyano | 5 |
| SAX | Tetramethyl Ammonium | 5 |
| SCX | Sulphonic Acid | 5 |
| TAC-1 (PFP) | Pentafluorophenyl | 5 |
| WAX (MAX-1) | Proprietary | 5 |

NORMAL PHASE (ADSORPTION) MEDIA

Partisphere Spherical Silica (5 µm)

Partisphere silica features homogenous particles with narrow particle size distribution for sharp separations and excellent reproducibility. It is the basis for Partisphere bonded phases.

ION EXCHANGE MEDIA

Partisphere SAX and SCX (5 µm)

Strong ion exchange media based on homogenous spherical silica particles with very tight size distribution. They produce very sharp separations.

REVERSE PHASE MEDIA

Partisphere C-18 (5 µm)

C-18 stationary phase on homogenous, spherical silica particles for very high separation efficiency.

Partisphere C-8 (5 µm)

Octyl bonded phase on homogenous spherical particles for maximal resolution.

Partisphere PAC (5 µm)

Polar Amino Cyano bonded to homogenous spherical particles for maximal resolution.

Partisphere TAC 1 (5 µm)

For great discoveries such as Taxol, Whatman technology optimally separates the closely eluting taxanes of Pacific yew trees. Whatman worked closely with two leading customers to develop a specific bonded phase that achieves baseline resolution of the paclitaxel molecule from its closest impurity. Each lot of TAC 1 (Taxane Analysis Column) is tested with a paclitaxel chromatographic purity separation to ensure the best possible reproducibility. (Reichheimer SL et al. Anal Chem. 1992; 64: 2323-2326)

SPECIFICATIONS

Partisil

Particle Size: 5, 10µm
350 m²/g surface area
85Å pore size

Partisphere

Particle Size: 5 µm
160 m²/g surface area
120Å pore size

To order columns directly, please contact MAC-MOD:



Phone: 610-358-9696
Fax: 610-368-5993
Email: info@mac-mod.com
Web: www.mac-mod.com

Please contact MAC-MOD for any columns or dimensions not listed in this product bulletin.

| PART NO. | DESCRIPTION | PRICE |
|--|---|--------|
| Partisil 5µm Analytical Columns: | | |
| 4222-225 | Partisil 5µm ODS3 column, 100 x 4.6mm (WCS hardware - RAC-II) | \$771 |
| 4222-227 | Partisil 5µm SAX column, 100 x 4.6mm (WCS hardware - RAC-II) | \$771 |
| 4222-228 | Partisil 5µm SCX column, 100 x 4.6mm (WCS hardware - RAC-II) | \$771 |
| 4222-232 | Partisil 5µm C8 column, 100 x 4.6mm (WCS hardware - RAC-II) | \$771 |
| 4215-001 | Partisil 5µm SIL column, 250 x 4.6mm (WCS hardware) | \$909 |
| 4235-001 | Partisil 5µm PAC column, 250 x 4.6mm (WCS hardware) | \$909 |
| 4238-001 | Partisil 5µm ODS3 column, 250 x 4.6mm (WCS hardware) | \$909 |
| 4239-001 | Partisil 5µm C8 column, 250 x 4.6mm (WCS hardware) | \$909 |
| 4239-001 | Partisil 5µm C8 column, 250 x 4.6mm (WCS hardware) | \$909 |
| Partisil 10µm Analytical Columns: | | |
| 4216-001 | Partisil 10µm SIL column, 250 x 4.6mm (WCS hardware) | \$847 |
| 4223-001 | Partisil 10µm ODS column, 250 x 4.6mm (WCS hardware) | \$847 |
| 4224-001 | Partisil 10µm ODS2 column, 250 x 4.6mm (WCS hardware) | \$847 |
| 4225-001 | Partisil 10µm PAC column, 250 x 4.6mm (WCS hardware) | \$847 |
| 4226-001 | Partisil 10µm SAX column, 250 x 4.6mm (WCS hardware) | \$847 |
| 4227-001 | Partisil 10µm SCX column, 250 x 4.6mm (WCS hardware) | \$847 |
| 4228-001 | Partisil 10µm ODS3 column, 250 x 4.6mm (WCS hardware) | \$847 |
| 4229-001 | Partisil 10µm C8 column, 250 x 4.6mm (WCS hardware) | \$847 |
| 4141-001 | Partisil 10µm SCX column (S-P), 250 x 4.6mm (WCS hardware) | \$847 |
| Partisil 10µm Semi-Prep Columns: | | |
| 4230-120 | Partisil 10µm SIL column, 250 x 9.4mm (Magnum-9 hardware) | \$1901 |
| 4230-124 | Partisil 10µm ODS2 column, 250 x 9.4mm (Magnum-9 hardware) | \$1901 |
| 4230-125 | Partisil 10µm ODS3 column, 250 x 9.4mm (Magnum-9 hardware) | \$1901 |
| 4230-126 | Partisil 10µm PAC column, 250 x 9.4mm (Magnum-9 hardware) | \$1901 |
| 4230-220 | Partisil 10µm SIL column, 500 x 9.4mm (Magnum-9 hardware) | \$2328 |
| 4230-224 | Partisil 10µm ODS2 column, 500 x 9.4mm (Magnum-9 hardware) | \$2328 |
| 4230-225 | Partisil 10µm ODS3 column, 500 x 9.4mm (Magnum-9 hardware) | \$2328 |
| 4232-125 | Partisil 10µm ODS column, 250 x 20mm (Magnum-20 hardware) | \$2683 |
| 4232-220 | Partisil 10µm SIL column, 500 x 20mm (Magnum-20 hardware) | \$4536 |

| PART NO. | DESCRIPTION | PRICE |
|--|---|-------|
| Partisphere 5µm Analytical Columns: | | |
| <i>(note: WVS cartridge columns require end fitting kit p/n 4631-1001)</i> | | |
| 4120-001 | Partisphere 5µm WAX (MAX-1) column, 250 x 4.6mm (WCS hardware) | \$700 |
| 4601-1001 | Partisphere 5µm TAC-1 (PFP) cartridge column, 265 x 4.6mm (WVS hardware) | \$764 |
| 4621-0501 | Partisphere 5µm SIL cartridge column, 125 x 4.6mm (WVS hardware) | \$555 |
| 4621-0502 | Partisphere 5µm C18 cartridge column, 125 x 4.6mm (WVS hardware) | \$571 |
| 4621-0503 | Partisphere 5µm C8 cartridge column, 125 x 4.6mm (WVS hardware) | \$571 |
| 4621-0505 | Partisphere 5µm SAX cartridge column, 125 x 4.6mm (WVS hardware) | \$571 |
| 4621-0507 | Partisphere 5µm SCX cartridge column, 125 x 4.6mm (WVS hardware) | \$571 |
| 4621-0508 | Partisphere 5µm PAC cartridge column, 125 x 4.6mm (WVS hardware) | \$571 |
| 4621-1501 | Partisphere 5µm SIL cartridge column, 250 x 4.6mm (WVS hardware) | \$592 |
| 4621-1502 | Partisphere 5µm C18 cartridge column, 250 x 4.6mm (WVS hardware) | \$610 |
| 4621-1505 | Partisphere 5µm SAX cartridge column, 250 x 4.6mm (WVS hardware) | \$610 |
| 4621-1507 | Partisphere 5µm SCX cartridge column, 250 x 4.6mm (WVS hardware) | \$610 |
| 4621-1508 | Partisphere 5µm PAC cartridge column, 250 x 4.6mm (WVS hardware) | \$610 |
| Partisil Analytical Cartridge Columns: | | |
| 4681-0502 | ODS3 cartridge column, 125 x 4.6mm (WVS hardware) | \$680 |
| 4681-0505 | SAX cartridge column, 125 x 4.6mm (WVS hardware) | \$680 |
| 4681-1501 | SIL cartridge column, 250 x 4.6mm (WVS hardware) | \$831 |
| 4681-1502 | ODS3 cartridge column, 250 x 4.6mm (WVS hardware) | \$831 |
| 4681-1505 | SAX cartridge column, 250 x 4.6mm (WVS hardware) | \$831 |
| 4681-1507 | SCX cartridge column, 250 x 4.6mm (WVS hardware) | \$831 |
| 4681-1509 | ODS2 cartridge column, 250 x 4.6mm (WVS hardware) | \$831 |
| 4682-1502 | ODS3 cartridge column, 250 x 4.6mm (WVS hardware) | \$757 |
| 4682-1505 | SAX cartridge column, 250 x 4.6mm (WVS hardware) | \$757 |
| 4682-1507 | SCX cartridge column, 250 x 4.6mm (WVS hardware) | \$757 |
| Accessories: | | |
| 4250-001 | Partisil 10µm SAX column with Solvecon Kit | \$987 |
| 4251-001 | Partisil 10µm SCX column with Solvecon Kit | \$987 |
| 4631-1001 | Wrenchless WVS End Fitting Kit | \$292 |
| 4631-1003 | WVS Guard Cartridge Holder | \$447 |
| 4631-1004 | WCS Guard Cartridge Holder | \$447 |
| 4641-0001 | Silica Guard Cartridge (5 pack) | \$212 |
| 4641-0002 | Reverse Phase Guard Cartridge (5 pack) | \$219 |
| 4641-0005 | Anion Guard Cartridge (5 pack) | \$219 |
| 4641-0007 | Cation Guard Cartridge (5 pack) | \$219 |
| 4641-0008 | PAC Guard Cartridge (5 pack) | \$219 |
| HI-050X | PEEK Fingertight Fitting (10 pack)—suitable for connection of all Partisil and Partisphere columns to all 1/16"o.d. tubing types – slip free to 6000psi | \$70 |