



UHPLC (Ultra-high Pressure Liquid Chromatography) – 1.7 & 2.2 μm Silica and Polymer Particles

Innovative Resin Technologies

Silica Based Column Information

Sepax UHPLC silica packings use high purity (<10 ppm metals), spherical silica with the particle size of 1.7 and 2.2 μm and the pore size of 120 Å. Their unique mono-functional bonding chemistry allows high efficiency, high selectivity and high speed separation. All 1.7 and 2.2 micron particles and bonded phases have excellent resistance to high pressure (>10,000 psi). A typical 2.2 μm GP-C18 has a reduced plate height of 2.22 μm , which is equivalent to plate number of 200,448 per meter.

Phases	Particle size (μm)	Carbon loading	pH range
GP-C18	1.7, 2.2	17.0%	2-8.5
BR-C18	1.7, 2.2	19.0%	1.5-10.5
GP-C8	1.7, 2.2	11.0%	2-8.5
GP-C4	1.7, 2.2	8.0%	2-8.5
GP-Phenyl	1.7, 2.2	11.0%	2-8.5
HP-Cyano	1.7, 2.2	7.0%	2-8.5
HP-Amino	1.7, 2.2	4.0%	2-8.5
HP-SCX	1.7, 2.2	11.0%	2-8.5
HP-SAX	1.7, 2.2	16.0%	2-8.5
HP-Silica	1.7, 2.2	0.0%	2-8.5
HILIC Polar-100	1.7, 2.2	11.0%	2-8.5

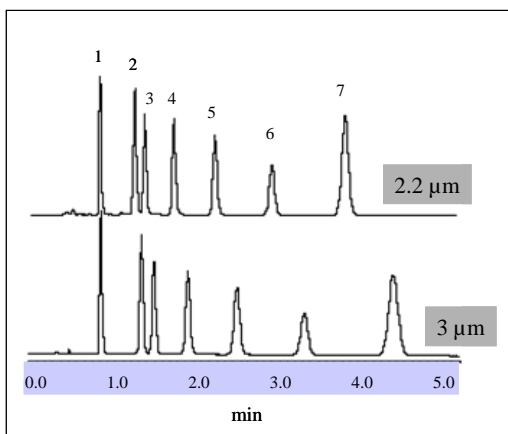
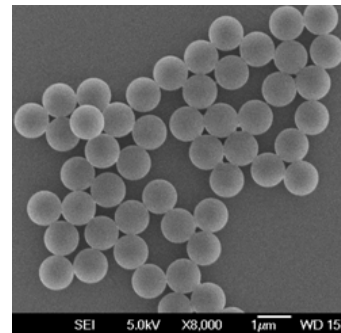


Fig. 1. Barbitals separated by a 2.2 μm GP-C18 column and a 3 μm C18 column (4.6x50 mm). Mobile phase: 50% MeOH/50% H₂O. Flow rate: 1.0 mL/min. Temperature: 30°C. Detection: UV 214 nm. Injection: 3 μL . Sample: 1. barbitol, 2. phenobarbital, 3.

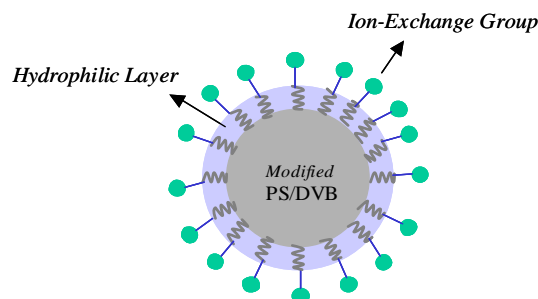
aprobital, 4. butabarbital, 5. mephobarbital, 6. pentobarbital, and 7. secobarbital.

PolyRP Phase Information

PolyRP phases are made of 80% cross-linking PS/DVB spherical particles. Those highly rigid particles have both non-porous and porous structures with the particle size of 1.0 and 1.7 μm . The phase structure is phenyl functional group that enables hydrophobic interaction. Compared with silica based reversed phases, PolyRP phases have advantages over applications at extreme pH (1-14) with special selectivity and slightly lower separation efficiency.



Proteomix Ion-exchange phases



- Pioneered high capacity 1.7 μm non-porous ion-exchange packings
- Unprecedented high efficiency and resolution
- High mechanical stability to resist the pressure as high as up to 10,000 psi
- High speed, high recovery and high stability

Proteomix Phases	Functional Group	Dynamic loading capacity	pH range
SCX-NP1.7	Sulfonate	65 mg/mL	2-12
WCX-NP1.7	Carboxylate	25 mg/mL	2-12
SAX-NP1.7	Quaternary ammonium	43 mg/mL	2-12
WAX-NP1.7	Tertiary amine	35 mg/mL	2-12

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