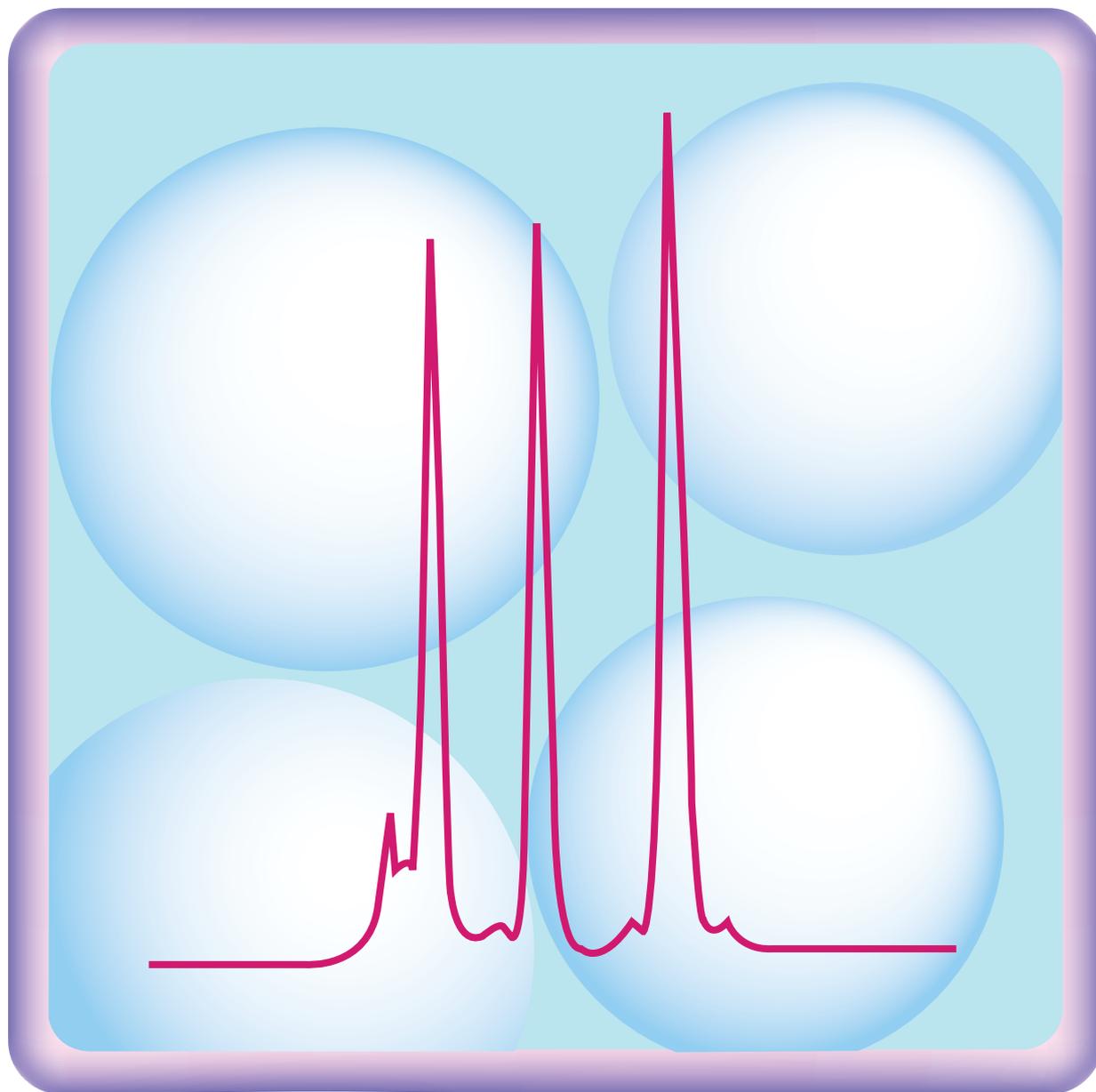


Silica gel for Column Chromatography



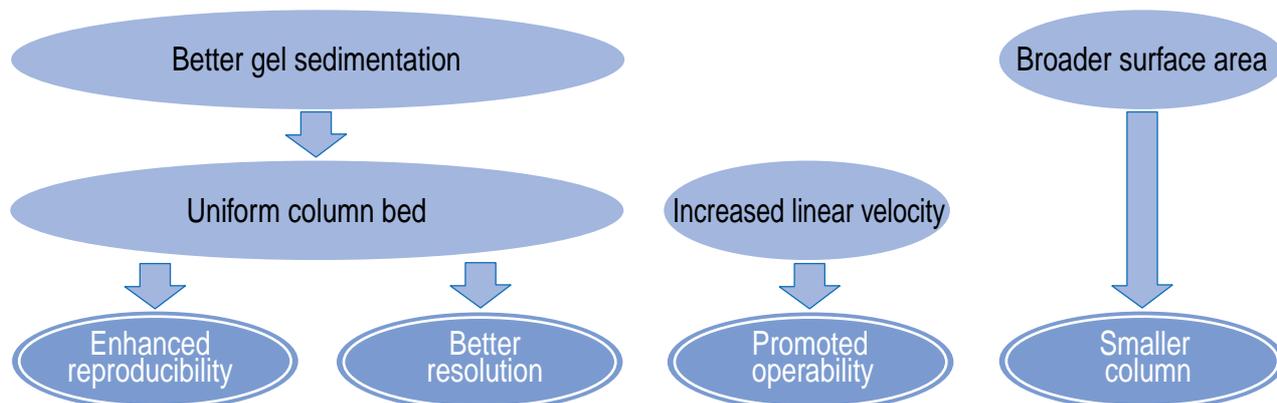
Spherical Silica gel for Preparative LC
Column Chromatography
Flash Chromatography

Spherical Silica gel for Column Chromatography

CHARACTERISTICS

Spherical silica gel are superior to irregular shaped silica gel in gel sedimentation, and form more uniform column beds. They have begun to be in wide use for laboratory-scale purification to industrial-scale preparative work.

Advantages of Spherical Silica gel as Compared to Irregular shaped



Selection Guide for Preparative Chromatography

pH of Silica Gel

Pure silica gel (SiO₂) is known to be a weak acid from its surface structure. In instances where samples are unstable under acidic conditions, pure silica gel may

not be suited for their separation. Our pH-adjusted material, Silicagel 60N, are ideal in separating a wide range of compounds.

Particle Size

	Particle size	Characteristics
Flash Chromatography	40~ 50 μ m	Loose material for high-resolution, flash chromatography. Due to narrow particle size distribution, easily prepare column beds with superior in resolution, permeability and uniformity. Suitable for purification of target substances in complex matrix. Useful as loose material for medium-pressure preparative columns.
	40~ 100 μ m	Loose material for standard flash chromatography. Due to high permeability, usable under hydrostatic pressure, depending on eluents. Useful as fillers for high-resolution, small-scale open columns.
Column Chromatography	63~ 210 μ m	Economical material for open column chromatography, having the advantage of easy handling and high cost performance. Suitable for rough purification. Contribute greatly to reduction in purification cost in a large-scale preparative operation.
	100~ 210 μ m	Loose material for standard open column chromatography. Form uniform beds even in large columns. Suitable for mass preparative chromatography treatment by overload technique. Due to high permeability and increased throughput, enhances productivity.

Spherical Silica gel for Column Chromatography

Comparison of Resolution

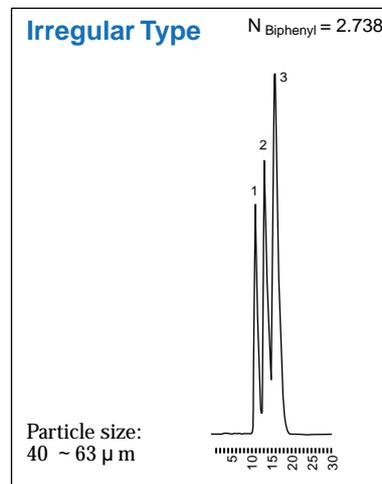
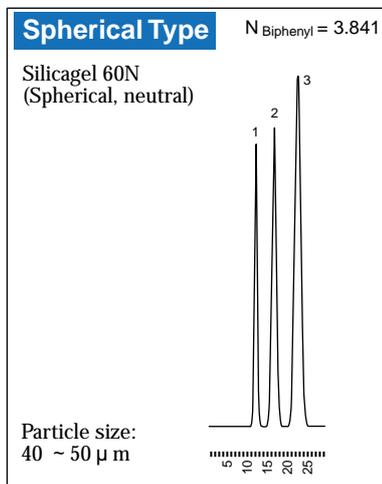
The separating ability of our spherical Silicagel was compared with that of irregular shaped silica gel with a similar particle size.

The spherical silica gels are expected to enhance resolution and reproducibility because they are able to form more uniform column beds.

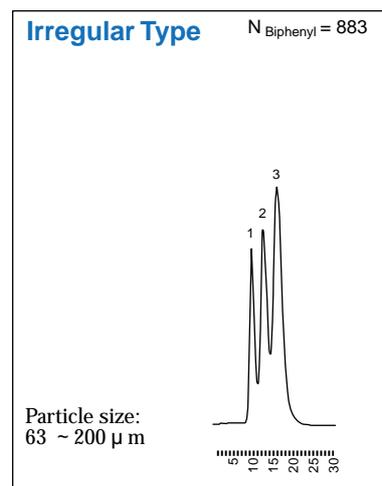
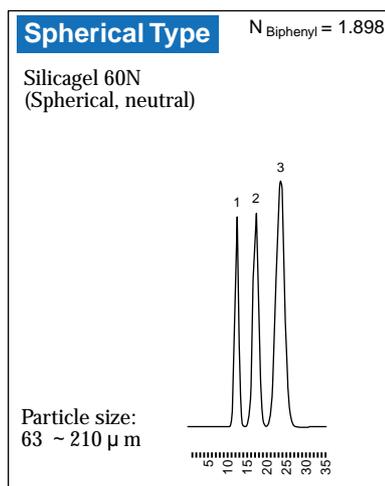
Chromatographic conditions

Column : stainless steel,
length 250mm,
inner diameter 10mm
Mobile phase : *n*-Heptane
Flow rate : 2.5mL/min
Temperature : Room temperature
Detection : UV 254nm
Amount of Injection : 50 μ L
Sample : 1. Benzene 0.5 mg/mL
2. Naphthalene 0.05 mg/mL
3. Biphenyl 0.015 mg/mL

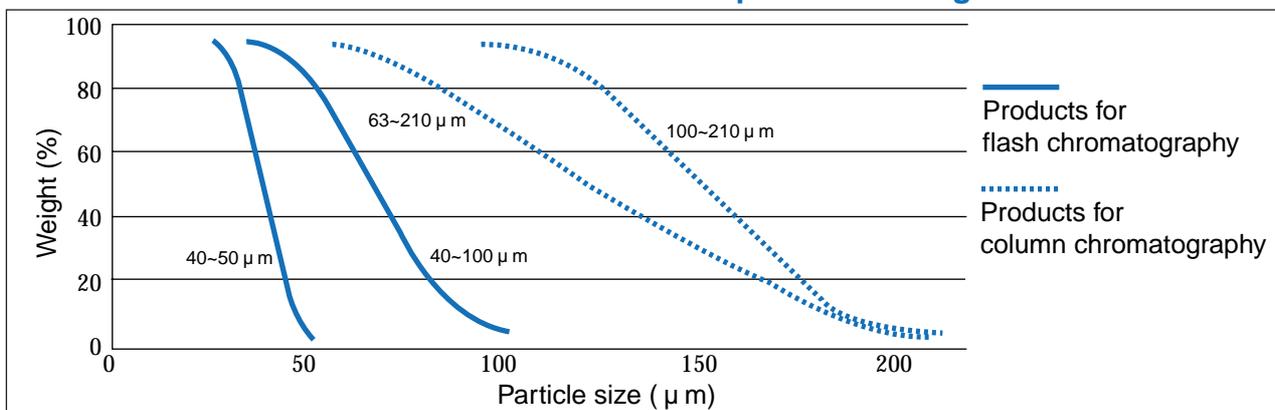
Products For Flash Chromatography



Products For Column Chromatography



Particle Size Distribution of Spherical Silicagel



Ordering information

Product Name	Silicagel 60 (Spherical)				Silicagel 60N (Spherical, Neutral)			
pH (10% sus.)	6.0 ± 1.0 (Acidic)				7.0 ± 0.5 (Neutral)			
Particle size (μm)	For flash chromatography		For column chromatography		For flash chromatography		For column chromatography	
	Cat.No.	Pack size						
	40~50	40~100	63~210	100~210	40~50	40~100	63~210	100~210
1kg	37562-79	37559-79	37564-79	37558-79	37563-79	37561-79	37565-79	37560-79
10kg	37562-84	37559-84	37564-84	37558-84	37563-84	37561-84	37565-84	37560-84
25kg	37562-85	37559-85	37564-85	37558-85	37563-85	37561-85	37565-85	37560-85

Physical Properties of Silica gel

Product Name	Silicagel 60 (Spherical)		Silicagel 60N (Spherical, Neutral)	
pH (10% sus.)	6.0 ± 1.0 (Acidic)		7.0 ± 0.5 (Neutral)	
Specific surface area	700 ± 50 m ² /g		650 ± 50 m ² /g	
Pore diameter	65 ± 10		60 ± 10	
Pore volume	1.15 ± 0.10 mL/g		0.90 ± 0.10 mL/g	
Bulk density	0.40 ± 0.05 g/mL		0.50 ± 0.05 g/mL	
Water content	15.0 %		15.0 %	
Cl	100 ppm		100 ppm	
Na	100 ppm		100 ppm	
Mg	50 ppm		50 ppm	
Ca	50 ppm		500 ppm	
Al	150 ppm		150 ppm	
Ti	150 ppm		150 ppm	
Fe	50 ppm		50 ppm	



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