

## SI-prep - The silica gel of choice for preparative chromatography

The irregular silica gel with tight specifications and high mechanical stability for laboratory and production scale separation processes



Technological precision and our expertise in silica manufacturing have made us one of the world's leading manufacturers of chromatography silica gels. SI-prep® irregular chromatography gel with its rounded edges and tight specifications, produces the best efficiency and resolution and gives a highly reproducible separation. Our state-of-the-art production capabilities, can provide up to 180 kg per batch derivatized Silica. Isn't this enough reason to select SI-prep®?

**The SI-prep® Family** - of irregular silica gel products dedicated to preparative chromatography.

|                    | ZEOprep 40  | ZEOpre p 60           | ZEOpre p 90           | ZEOpre p 110          | ZEOpre p 300         |
|--------------------|---|-----------------------|-----------------------|-----------------------|----------------------|
| Avg. Pore Diameter | 4 nm  | 6 nm                  | 9 nm                  | 11 nm                 | 30 nm                |
| BET Surface Area   | 600 m <sup>2</sup> /g                                   | 500 m <sup>2</sup> /g | 400 m <sup>2</sup> /g | 360 m <sup>2</sup> /g | 90 m <sup>2</sup> /g |
| Pore Volume        | 0.6 ml/g  | 0.8 ml/g              | 0.9 ml/g              | 1.0 ml/g              | 0.7 ml/g             |
| Particle Sizes     | 15-25 µm ? 25-40 µm ? 40-63 µm ? 60-200 µm ? 200-500 µm |                       |                       |                       |                      |

| ZEOprep ...                 | ... 60 C18                   | ... 60 C8               | ... 90 C8               | ... 90 C18              | ... 90 NH <sub>2</sub>  | ... 90 CN               | ... 300 C4              |
|-----------------------------|------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Surface load <sup>(*)</sup> | 2.7 µmol/m <sup>2</sup>      | 3.7 µmol/m <sup>2</sup> | 3.6 µmol/m <sup>2</sup> | 3.0 µmol/m <sup>2</sup> | 3.5 µmol/m <sup>2</sup> | 4.9 µmol/m <sup>2</sup> | 4.8 µmol/m <sup>2</sup> |
| Carbon content              | 20.1 %wt.                    | 13.5 %wt.               | 11.0 %wt.               | 18.7 %wt.               | 4.5 %wt.                | 7.6 %wt.                | 2.0 %wt.                |
| Particle Sizes              | 15-25 µm ? 40-63 µm ? 60-200 |                         |                         |                         |                         |                         |                         |

<sup>(\*)</sup> of functional groups

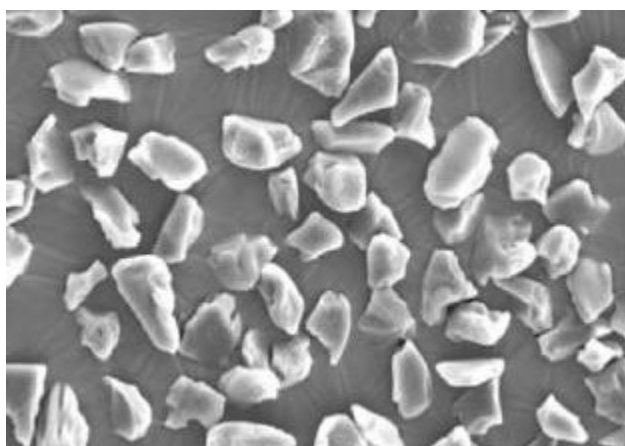


# SI-CHROMATOGRAPHY

## SI-prep® - The silica gel of choice for preparative chromatography

SI-prep® is the trade name for a series of irregular shaped silica, especially tailored for liquid chromatography.

The special milling process applied within the SI-prep® manufacturing process yields particles having virtually rounded edges. The result is less fines in the product keeping backpressure in your column low. Another advantage is the very low fraction of under- and oversized particles; typically 90+% of particles are within the given product range.



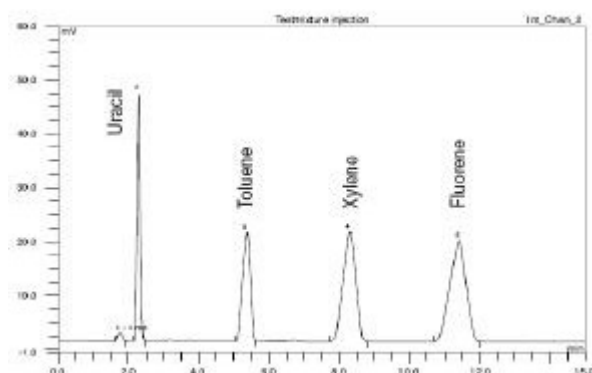
SEM of irregular SI-prep®  
60

All these characteristics are being achieved in large scale commercial production. For further details see the product table on page 1.

High mechanical stability, purity and reproducibility make SI-prep® the perfect choice for your preparative applications.

### Advantages of SI- prep®

- ▶ Tailored for reliable chromatography separations
- ▶ High mechanical stability
- ▶ Irregular silica gel having rounded edges
- ▶ Availability in various pore sizes, ranging from 4 – 30 nm
- ▶ Availability in various particle sizes, ranging from 15-500 µm (other sizes available upon request)
- ▶ Our proprietary modification technology allowing perfect bonding, resulting in state -of-the-art separation
- ▶ Outstanding bonding technology, including C4, C8, C18, CN, NH<sub>2</sub>, SH, DIOL, SAX (other bonding available upon request)
- ▶ Large scale manufacture
- ▶ Tailored solutions for obtaining high resolution, good peak shapes and short elution time



Test chromatographic separation using our SI-prep® 90 C18 silica gel.

**For further detailed information, place an order or request a quotation please contact:**

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# SI-CHROMATOGRAPHY

## SI-sphere® - The spherical silica gel of choice

This novel spherical silica gel is the key to most difficult separations requirements in preparative chromatography – used in laboratory and production scale separation



Technological Precision and our expertise have made us one of the world's leading manufacturers of silica chromatography gels. SI-sphere® spherical chromatography gel with its tight specifications, was designed to produce the best efficiency and resolution and give a highly reproducible separation. Our state-of-the-art production capabilities, can provide up to 180 kg per batch derivatized Silica. Isn't this enough reason to select SI-sphere®?

The SI-sphere® Family - spherical silica gel dedicated to preparative chromatography

|                    | ZEOprep® 70           | ZEOprep® 100          | ZEOprep® 200          | ZEOprep® 300          |
|--------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Avg. Pore Diameter | 7 nm                  | 10 nm                 | 20 nm                 | 30 nm                 |
| BET Surface Area   | 500 m <sup>2</sup> /g | 320 m <sup>2</sup> /g | 200 m <sup>2</sup> /g | 100 m <sup>2</sup> /g |
| Pore Volume        | 0.8 - 1.1 ml/g        |                       |                       |                       |
| Particle Sizes     | 10 µm ? 15 µm ? 20 µm |                       |                       |                       |

|                | ZEOprep® 70 C 18      | ZEOprep® 100 C 18 | ZEOprep® 200 C 18 | ZEOprep® 300 C 18 |
|----------------|-----------------------|-------------------|-------------------|-------------------|
| Carbon Content | 22 %w t.              | 20 %w t.          | 14 %w t.          | 7 %w t.           |
| Particle Sizes | 10 µm ? 15 µm ? 20 µm |                   |                   |                   |

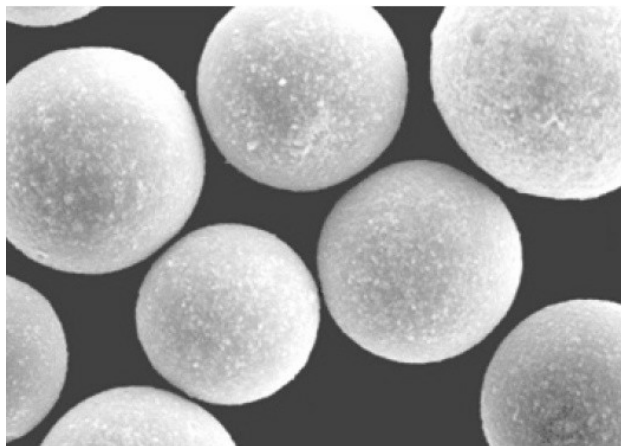


# SI-CHROMATOGRAPHY

## SI-sphere® - The spherical silica gel of choice

SI-sphere® is the tradename for a series of perfectly spherical silica, especially tailored for liquid chromatography.

Its uniform particle size yields a highly pressure stable silica gel, which is free of fines, giving optimum and stable column packing characteristics. The liquid chromatography separation process applied typically results in high product yield. Significant features, including its narrow pore size distribution, high BET surface area and low metals content produce superior results.



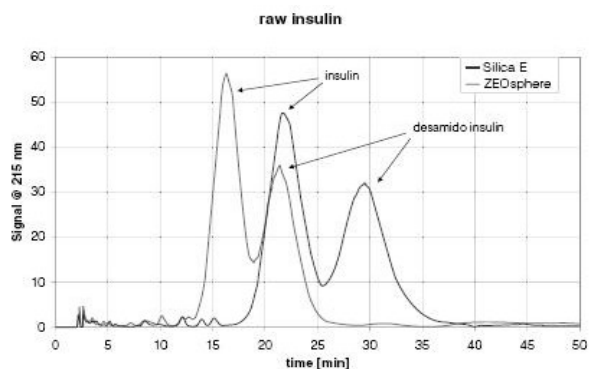
SEM of SI-sphere® 100  
15µm

All these characteristics are being achieved in large scale commercial production in our plant. For further detail see below table.

High mechanical stability, purity and reproducibility make SI-sphere® the perfect choice for demanding preparative applications.

### Advantages of SI-sphere®

- ▶ Tailored for demanding preparative chromatography separations
- ▶ High mechanical stability
- ▶ Availability in various pore sizes, ranging from 7–30 nm
- ▶ Availability in various particle sizes, ranging from 10-20 µm (other sizes available upon request)
- ▶ Our's proprietary modification technology allowing perfect bonding, resulting in state -of-the-art separation
- ▶ Outstanding bonding technology, including C4, C8, C18, CN, NH2, SH, DIOL, SAX (other bonding available upon request)
- ▶ Large scale manufacture
- ▶ Tailored solutions for obtaining high resolution, good peak shapes and short elution time



Chromatographic separation of insulin and desamido-insulin using our SI-sphere® C18 silica gel.

**For further detailed information, place an order or request a quotation please contact:**

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