Analysis - HPLC - Interchim technology

Upti-prep® silica technology

Upti-prep® is Interchim's proprietary silica technology that is utilized within our range of HPLC, prep LC, SPE and Flash Chromatography products, the Upti-prep® technology has been developed around rigorous, innovative manufacturing processes from the highest quality raw material.
Upti-prep® based silica are manufactured in ceramic reactors from particles exempt of metal trace content. Every step of each synthesis is strictly controlled establishing particles that display extreme mechanical stability. Particle size, porosity & specific surface area exhibit reproducibility and clear definition, achieving a perfectly hydroxylated surface and cylindrical pores.

Upti-prep® technology establishes major advantages that subsequently assist the separation process:

1. A weaker surface energy compared to first generation silicas (A type) and a number of second generation silicas (B type). This ultimately facilitates narrow peaks with basic compounds.
2. A very high quantity of free silanols combined with excellent accessibility leads to homogeneous & dense bonding chemistry. This establishes very high loading capacities and stability of the subsequent stationary phase under aggressive mobile phase conditions such as basic buffers.

Upti-prep

Upti-clean™,
Solid Phase Extraction

Uptisphere®, Uptisphere Strategy™
Analytical and prep HPLC

puriFlash™,
Flash Chromatography purification

Silica : Ultra pure (99,995 %)

Shape : spherical

Particle size :
- 1.7 µm [+/- 0,1]
- 2.2 µm [+/- 0,15]
- 3 µm [+/- 0,2]
- 5 µm [+/- 0,3]
- 10 µm [+/- 1,0]
- 15 µm [+/- 2,0]
- 50 µm [+/- 5,0]

Surface area / Pore size:
- 60 Å [+/- 10] / 500 m^2/g [+/- 50]
- 100 Å [+/- 15] / 425 m^2/g [+/- 40]
- 120 Å [+/- 15] / 320 m^2/g [+/- 40]
- 300 Å [+/- 40] / 100 m^2/g [+/- 20]
- 500 Å [+/- 55] / 60 m^2/g [+/- 10]

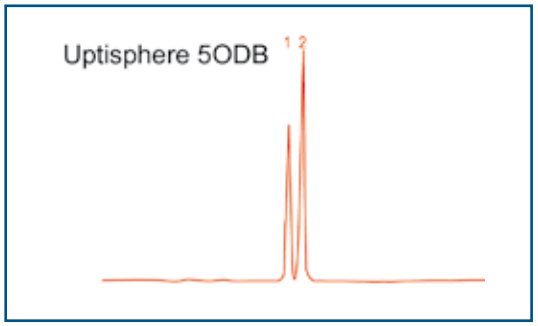
Metal content :
- Uptisphere® < 20 ppm
  (Fe < 1 ppm)
- Strategy™ < 10 ppm

pH stability : 1.5 to 7.5
(Some of our stationary phases are stable between pH 1 to 12)

Upti-prep® Silica technology

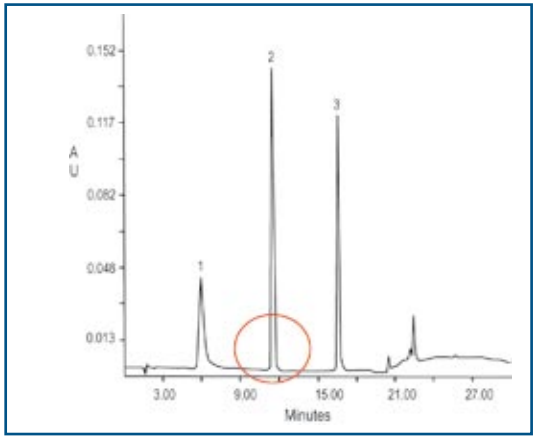
Pyridine and guaiacol (zeolithe content) are the principal probes Interchim utilize to test for inertness and control each and every silica batch we produce

1. Pyridine evaluation



1.0 < Pyridine Symmetry (10%) < 1.15

2. Guaiacol evaluation



1.0 < Guaiacol Symmetry (10%) < 1.15

Characteristics

Suggested applications :

Analytical Services
- Sample preparation
- Method developmemnt and validation
- Stability studies
- QA/QC
- Biological Monitoring

Drug Discovery Lab
Chemical Development Lab
Médicinal Chemistry Lab
Purification – Process
- Identification
- Purity testing
- Purification

As a second pre-cautionary measure, an independent company has evaluated the features of our silica under different conditions of use. It was demonstrated that our range of silica can endure multiple packing & unpacking without damaging the sorbent integrity - a primary preparative requirement.