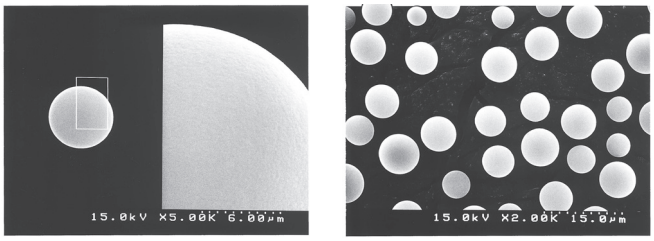
GL Sciences' greatest strength for HPLC Columns.

GL Sciences HPLC columns which play a major role in separation analysis are manufactured by synthesizing base silica-gels, bonging phases and being packed into columns and through demanding tests for a stable supply with the same excellent quality all over the world. Based on accumulated know-how GL Sciences' manufacturing technology keeps on evolving to supply better columns for customers

Sophisticated self-manufacturing technology for the base silica

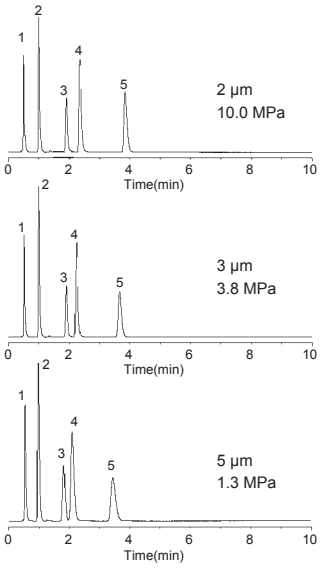
GL Sciences has been synthesizing base silica-gels, bonding phases and endcapping for column packing which enable us stable supply with exceptionally-high quality. Consequently those HPLC columns have been chosen for the method used for many years as reliable products.

Ultra pure base silica



Reliable column performance

Provide the same separation patterns with the changes of particle size

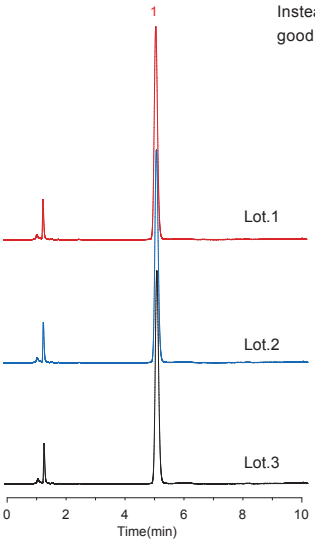


Conditions

Column : InertSustain C18 (50 × 2.1 mm I.D.)
Eluent : A) CH_3OH
B) 25 mM phosphate buffer (pH 7.0)
A/B = 30/70, v/v
Flow Rate : 0.2 mL/min
Col. Temp. : 40 °C
Detection : UV 230 nm
Sample : 1. Uracil
2. Pyridine
3. Phenol
4. Berberine chloride
5. Dextromethorphan

Test by a strong basic compound

Instead of a difficult compound symmetry peak and good reproducibility are obtained

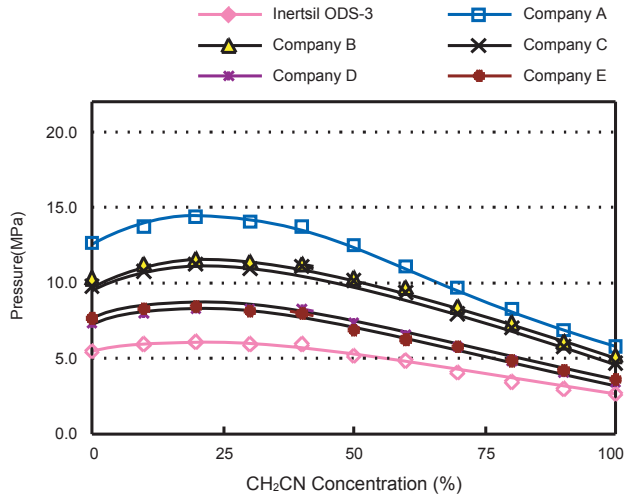


Conditions

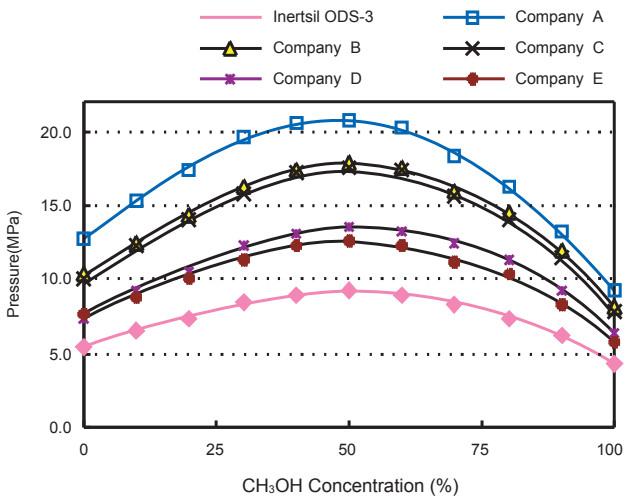
Column : InertSustain C18 (5 µm, 250 × 4.6 mm I.D.)
Eluent : A) CH_3CN
B) 25 mM phosphate buffer (pH 7.0)
A/B = 40/60, v/v
Flow Rate : 1.0 mL/min
Col. Temp. : 40 °C
Detection : UV 220 nm
Sample : 1. Dextromethorphan

Base silica is designed for low column back pressure to reduce the load on the system

Column : 250 × 4.6 mm I.D. Flow Rate : 1 mL/min Col.Temp. : 40 °C

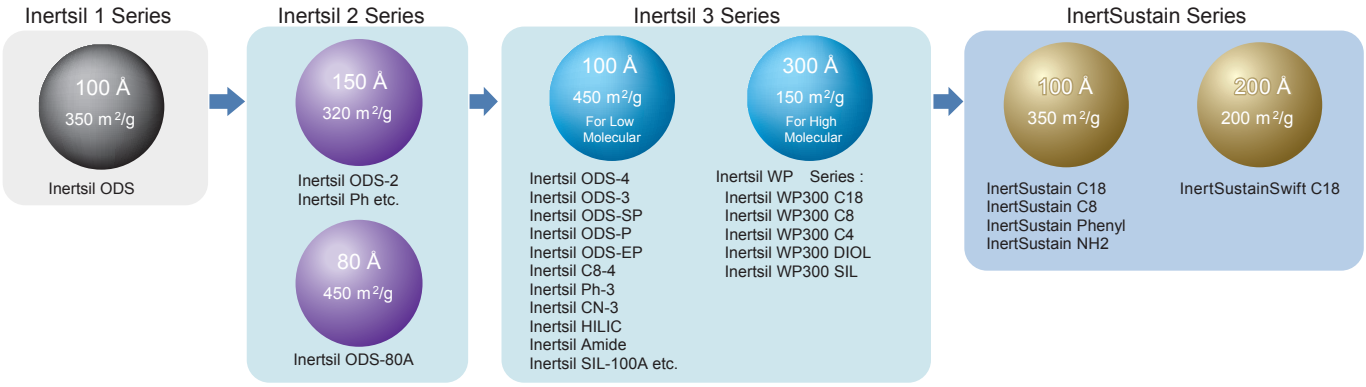


Column : 250 × 4.6 mm I.D. Flow Rate : 1 mL/min Col.Temp. : 40 °C



The Evolving HPLC Column Packings

GL Sciences has been steadily supplying with columns from Inertsil ODS, first-generation to InertSustain series, integration of state-of-the-art technologies, and has established a very good reputation around the world. They are available with the same quality and the same performance anywhere in the world.



Base on Evolutionally Surfaced Silica (ES Silica) evolved from Inertsil, InertSustain has developed

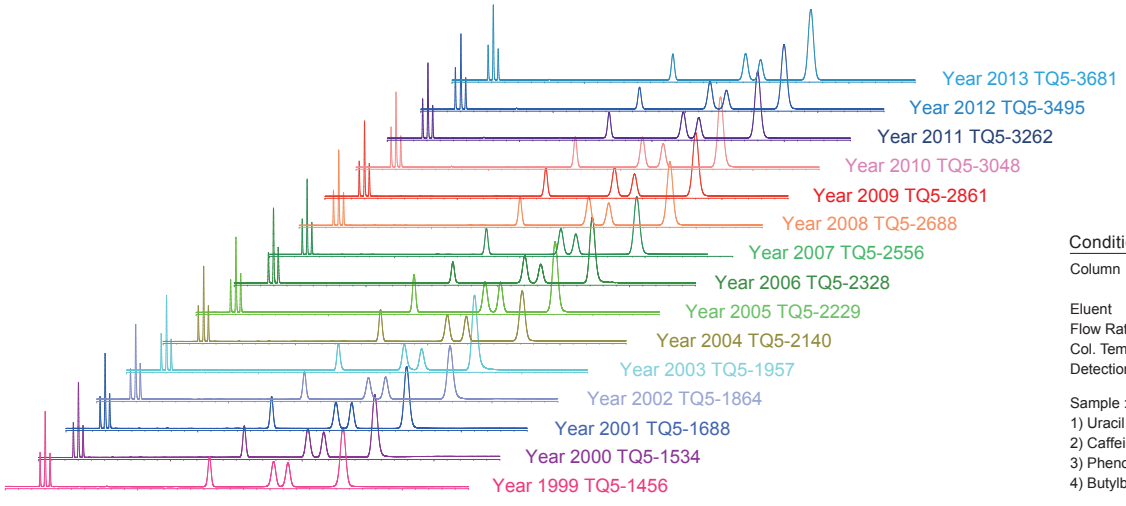
InertSustain employs a radically new type of silica , in which the surface of the silica is uniquely modified, the amount of silanols are controlled. Owing to this state-of-the-art technology ES silica allows easy surface modification including endcapping, which grants the following three favors.

1. Exceptionally improved inertness
2. Robust bonded phase
3. High reproducibility batch to batch

Owing to above benefits InertSustain is recommended as the first choice column for almost all compounds analyzed.

Batch to batch reproducibility

Keeping on stable supplies with high quality and performance, GL Sciences continues to evolve.



Conditions

Column	: Inertsil ODS-3 (5 µm, 250 × 4.6 mm I.D.)
Eluent	: CH_3OH/H_2O=80/20,v/v
Flow Rate	: 1.0 mL/min
Col. Temp.	: 40 °C
Detection	: UV 254 nm

Sample :

1) Uracil	5) o-Terphenyl
2) Caffeine	6) Amylbenzene
3) Phenol	7) Triphenylene
4) Butylbenzene	

QC, ISO

Quality Inspections

- ♦Sphericity and surface smoothness of Silica-gel with Scanning Electron Microscopy.
- ♦Particle size, Surface area, Pore diameter, Pore volume of Base Silica-Gel.
- ♦Trace metals impurity on Base Silica-Gel
- ♦Chemical bonding amount
- ♦Residual Silanol Groups by 29Si-NMR
- ♦Chromatographic Test for each lot (4 Standard Samples)
- ♦Column Performance Tests for Individual Columns

ISO Certification

SYSTEM CERTIFICATION ISO 14001 SGS — UKAS MANAGEMENT SYSTEMS 005

GL Sciences is ISO14001 Compliant Company

Product Ranges: Development, manufacture and sale of instruments, parts, accessories, columns, packing materials, reagents relating to gas chromatography, liquid chromatography and cells for spectrometry

SYSTEM CERTIFICATION ISO 9001 SGS — UKAS MANAGEMENT SYSTEMS 005

GL Sciences Fukushima Factory is ISO9001 Compliant Facility

Product Ranges: Design, manufacture and supply of instruments, parts, accessories, columns, packings, reagents relating to gas chromatography, liquid chromatography and cells for spectrometry

General Technical Division

Fukushima Factory