

Sapphirus

HPLC & UHPLC COLUMNS



STRENGTH

STABILITY

SUITABILITY



SAPPHIRUS HPLC COLUMN

Sapphirus silica is based on a new 100 Å ultra-high purity (99.999%) extra-treated porous spherical silica with a narrow particle size distribution and an extremely low metal content (< 10 ppm) to minimize silanol acidity and reduce surface metal sites available for chelation.

Sapphirus silica is manufactured in a GMP environment under the most rigorously controlled conditions, ensuring lot-to-lot reproducibility, consistent particle size, pore volume and chemical purity. Combined with our proprietary bonding technology this results in columns with optimal efficiency, asymmetry, and minimal back pressure. Sapphirus is available in several bonded phases covering a wide range of reversed-phase applications.

| Sapphirus™ | C18 | C18 HS | C18 HL | C8 | C8 HL | CN | ph-H | ph |
|------------|-----|--------|--------|----|-------|----|------|----|
|------------|-----|--------|--------|----|-------|----|------|----|

| Description | | For classic reversed-phase applications | High Surface carbon load reversed-phase | Higher Carbon load for stronger retention | For reversed phase applications where C18 is too retentive | Higher Carbon load for stronger retention | Stable, Long life CN | Stable, High carbon load Phenyl | Stable, Classic Phenyl |
|---------------|----------------|---|---|---|--|---|----------------------|---------------------------------|------------------------|
| Pore Size | Å | 120 Å | 100 Å | 100 Å | 120 Å | 100 Å | 120 Å | 100 Å | 120 Å |
| Surface Area | m ² | 300 | 450 | 450 | 300 | 450 | 300 | 450 | 300 |
| Carbon load | % | 19% | 20% | 23% | 12% | 16% | 7% | 16% | 12% |
| pH range | | 1.5 - 10.0 | 1.5 - 10.0 | 1.5 - 10.0 | 1.5 - 10.0 | 1.5 - 10.0 | 2 - 8.0 | 1.5 - 10.0 | 1.5 - 10.0 |
| End-Capping | | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Particle Size | µm | 3µm & 5µm | 3µm & 5µm | 3µm & 5µm | 3µm & 5µm | 3µm & 5µm | 3µm & 5µm | 3µm & 5µm | 3µm & 5µm |
| USP | | L1 | L1 | L1 | L7 | L7 | L10 | L11 | L11 |

SPECIAL CHARACTERISTICS

Excellent Strength

- Ultra high purity silica with completely spherical, totally, porous particle
- well controlled narrow particle size distribution

Outstanding Stability

- high bonding density
- Minimal silanol activity bdue to new properitary end capping technology

Superior Loadbility and Surface Area Accessibility

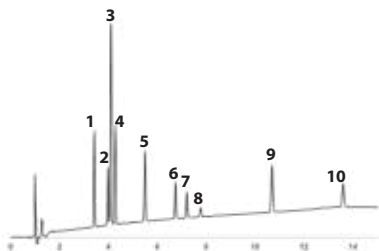
- Optimized paricle surface area, pore volume, pore volume, pore diameter and its distribution to give good surface morphology



APPLICATION

Sapphirus C18 HL / 3u 100 X 2.1mm (P/N : SAP-3C18HL-10021)

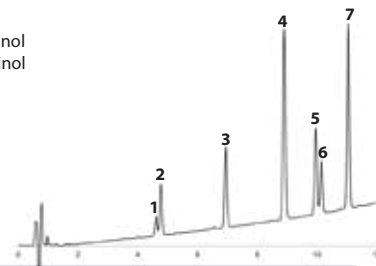
1. Estriol
2. Prednisolone
3. Prednisone
4. Cortisone
5. Corticosterone
6. 17b-Estradiol
7. 17a-Estradiol
8. Impurity
9. Progesterone
10. Hydroxyprogesterone



- Mobile Phase A: 0.1% Formic Acid in Water
- Mobile Phase B: 0.1% Formic Acid in Acetonitrile
- Gradient: 25% B to 85% B in 12min / Hold at 85%B for 4min
- Flow Rate: 1.5mL/min
- Temperature: 25C
- Detection: 235nm

Sapphirus C18 / 5u 150 X 4.6mm (P/N : SAP-5C18-15046)

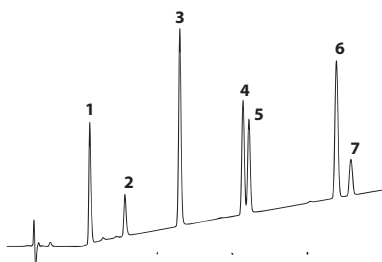
1. 11-Carboxytetrahydrocannabinol
2. 11-Hydroxytetrahydrocannabinol
3. Cannabidiol
4. Cannabichromene
5. D9-Tetrahydrocannabinol
6. D8-Tetrahydrocannabinol
7. Cannabinol



- Mobile Phase A: 0.1% Formic Acid in Water
- Mobile Phase B: 0.1% Formic Acid in Acetonitrile
- Gradient: 60% B to 90% B in 10min / Hold at 90%B for 2min
- Flow Rate: 0.3mL/min
- Temperature: 25C
- Detection: 230nm

Sapphirus C18 HL / 3u 100 X 2.1mm (P/N : SAP-3C18HL-10021)

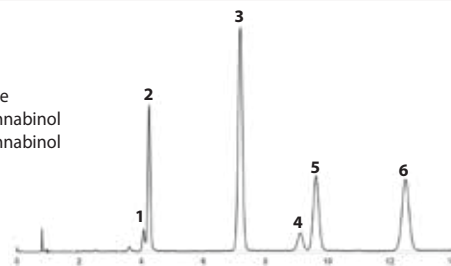
1. Aspirin
2. Impurity
3. Piroxicam
4. Ketoprofen
5. Naproxen
6. Indomethacin
7. Ibuprofen



- Mobile Phase A: 0.1% Formic Acid in Water
- Mobile Phase B: 0.1% Formic Acid in Acetonitrile
- Gradient: 30% B to 70% B in 10min
- Flow Rate: 0.3mL/min
- Temperature: 25C
- Detection: 230nm

Sapphirus C18 HL / 3u 100 X 2.1mm (P/N : SAP-3C18HL-10021)

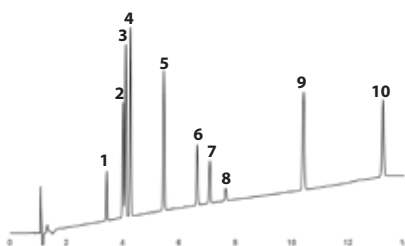
1. Impurity
2. Cannabidiol
3. Cannabichromene
4. D9-Tetrahydrocannabinol
5. D8-Tetrahydrocannabinol
6. Cannabinol



- Mobile Phase Water/Acetonitrile/Methanol (20/65/15)
- Flow Rate: 1.5mL/min
- Temperature: 25C
- Detection: 235nm

Sapphirus C18 / 3u 100 X 2.1mm (P/N : SAP-3C18-10021)

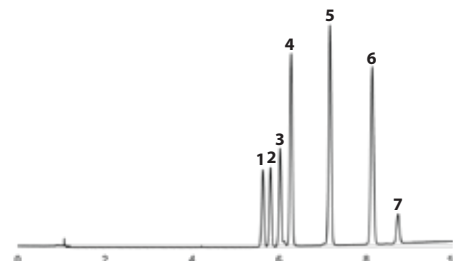
1. Estriol
2. Prednisolone
3. Prednisone
4. Cortisone
5. Corticosterone
6. 17b-Estradiol
7. 17a-Estradiol
8. Impurity
9. Progesterone
10. Hydroxyprogesterone



- Mobile Phase A: 0.1% Formic Acid in Water
- Mobile Phase B: 0.1% Formic Acid in Acetonitrile
- Gradient: 25% B to 85% B in 12min / Hold at 85%B for 4min
- Flow Rate: 1.5mL/min
- Temperature: 25C
- Detection: 235nm

Sapphirus C18 HL / 3u 100 X 4.6mm (P/N : SAP-3C18HL-10046)

1. Lorazepam
2. Oxazepam
3. Alprazolam
4. Temazepam
5. Clonazepam
6. Diazepam



- Mobile Phase A: 0.1% Formic Acid in Water
- Mobile Phase B: 0.1% Formic Acid in Acetonitrile
- Gradient: 30% B to 60% B in 10min
- Flow Rate: 1.5mL/min
- Temperature: 25C
- Detection: 254nm



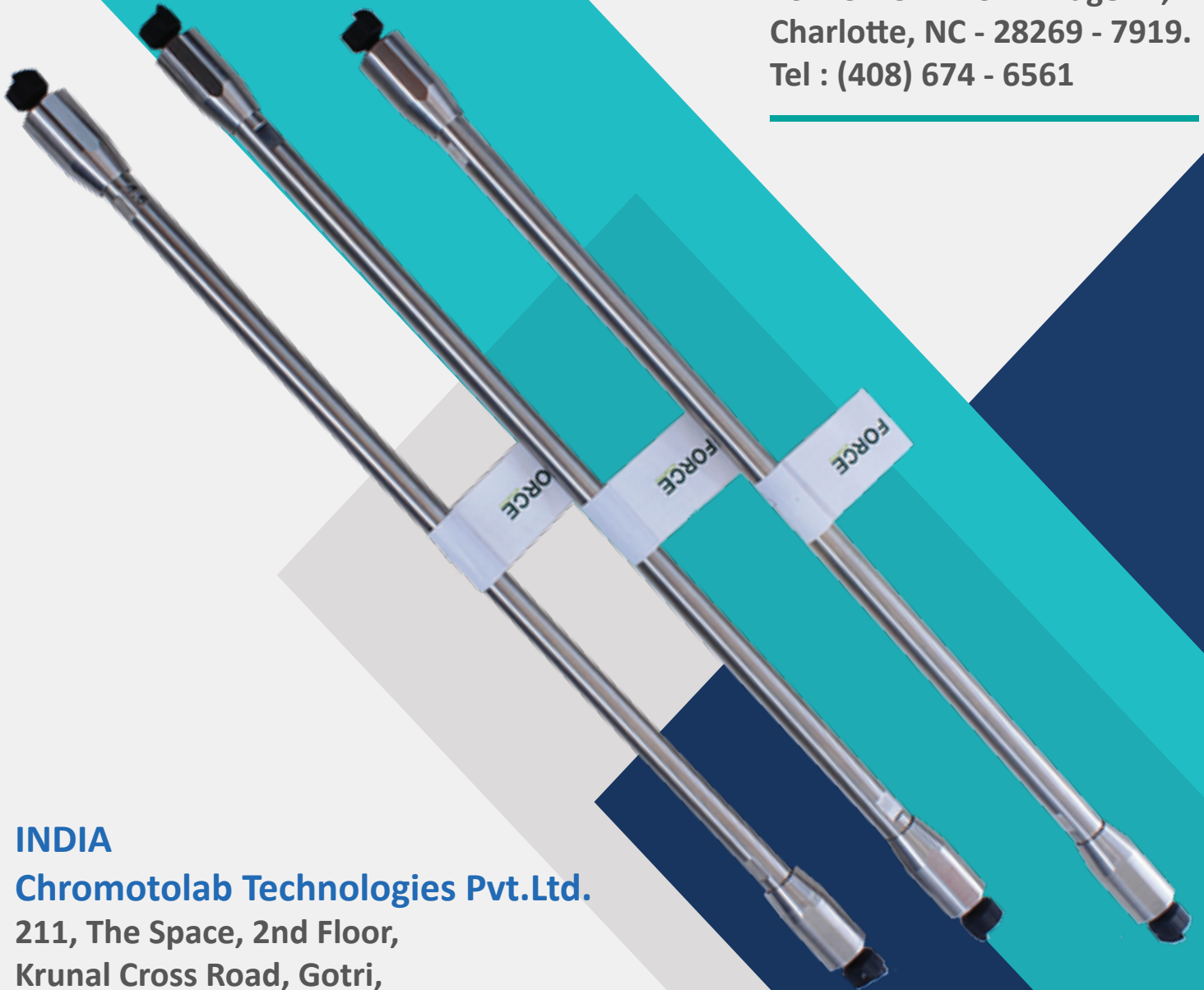
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