

PURITAS™

HPLC Columns



CONSISTENT PRECISION


CHROMACHEMIE™



CHROMACHEMIE™
HPLC Column

FLOW →
PRODUCT CODE : PP18-15-100-250B
SPECIFICATIONS : C18, 15 µm, 100 Å
DIMENSIONS : 20 mm x 250 mm

PURITAS™ PREP

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ABOUT PURITAS™

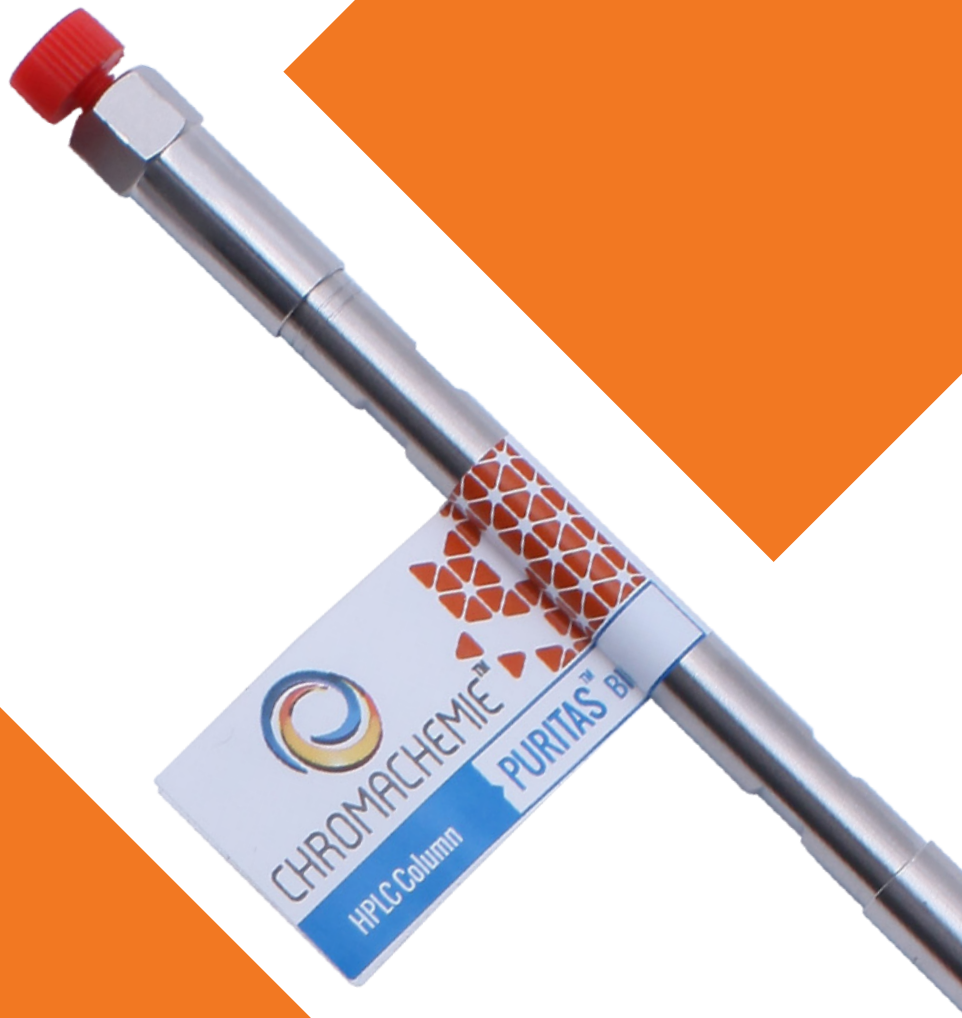
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HIGH PRECISION COLUMNS

The New Generation PURITAS™ range of columns brings to you the highest performance levels of silica which was unheard of till recent times.



PURITAS™

PURITAS™ COLUMNS OFFER

Excellent Mechanical Strength

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

Outstanding Chemical Stability

- High bonding density
- Absolutely minimal silanol activity due to new proprietary end capping technology

Superior Loadability and Surface Area Accessibility

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

Easy Scale Up and Availability in Bulk Quantity

- The same selectivity, retention characteristics and high efficiency from Analytical to Preparative and Process scale
- Well experienced and well controlled Large scale silica manufacturing in bulk batches

Excellent Homogeneity and Batch to Batch Reproducibility

- Quality carefully monitored and very tightly controlled in each step of manufacturing by QbD
- Manufactured from ISO 9001 certified bare silica and bonded phases originating from GMP compliant chemical bonding process

THE PURITY OF BASE SILICA

The most important feature of the silica used in column manufacturing is low metal impurities content. If metal impurities are present, there is possibility of peak deterioration (tailing, low peak height etc.) which results in lower sample recoveries. The purity of silica used in manufacturing of PURITAS™ columns can be underlined by the lowest metal impurities content as shown below in the table,

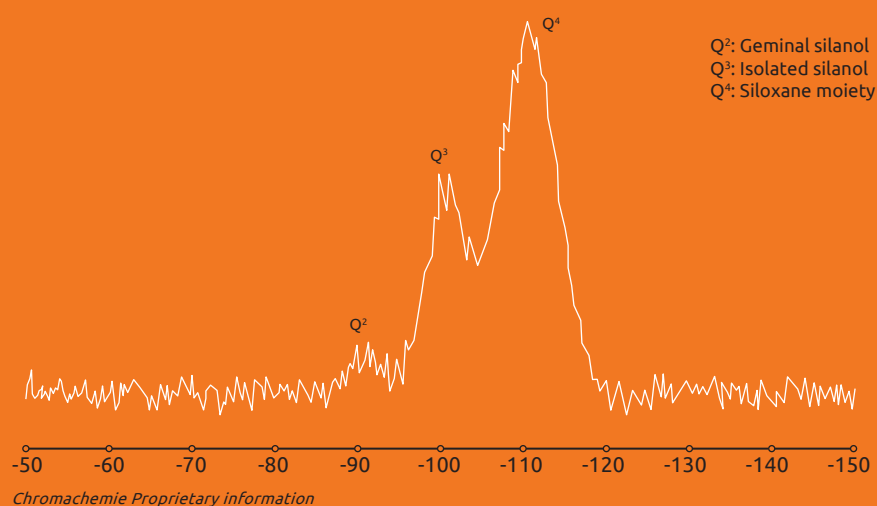
	Al	Ti	Fe	Zr
Acceptable Standard Values (ppm)	<10.0	<10.0	<10.0	<10.0
Measured Value (ppm)	<1.0	<1.0	<1.0	<1.0

NEW BONDING TECHNOLOGY

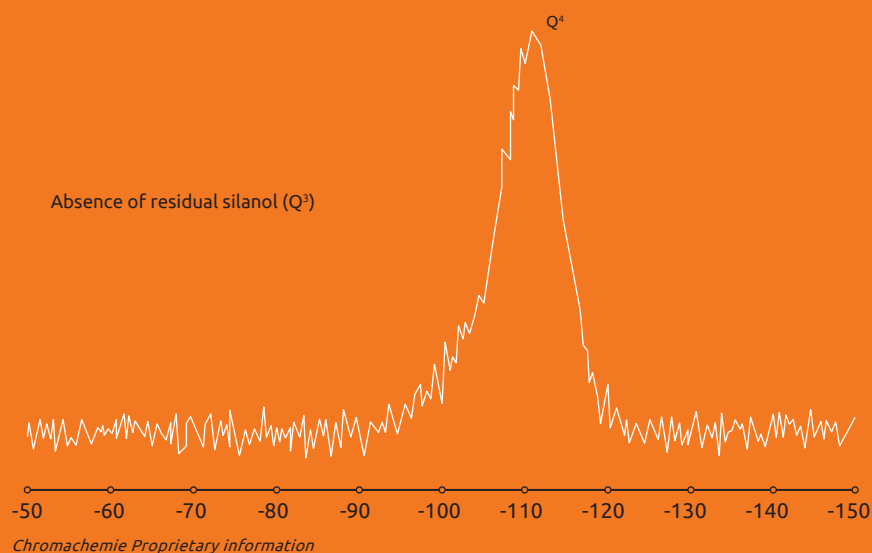
The New bonding technology minimizes free residual silanol interactions by removing almost all free silanol groups as shown in the following graph,

PURITAS™ EXIMIUS C18 : SILANOL DETERMINATION BY ^{29}Si -NMR

BEFORE BONDING PURITAS™ EXIMIUS C18



AFTER BONDING PURITAS™ EXIMIUS C18



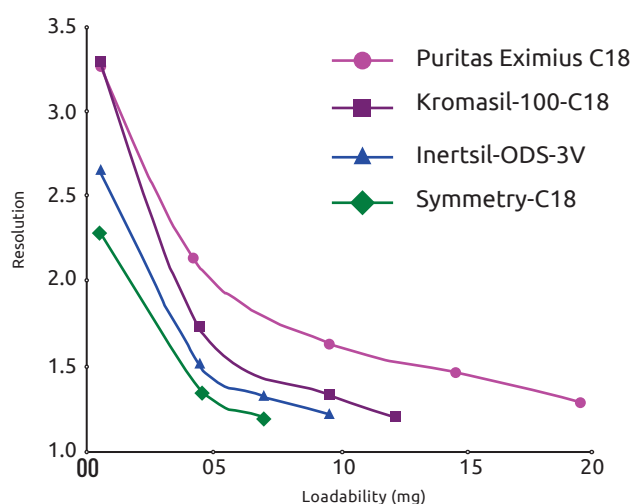
HIGH SURFACE AREA (EXTRAORDINARY LOADABILITY)

PURITAS™ EXIMIUS EXTRA ORDINARY LOADABILITY

Grade	Maximum loadability (mg)
Puritas Eximius C18	19.7
Kromasil-100-C18	10.6
Inertsil-ODS-3V	8.2
Symmetry-C18	5.8

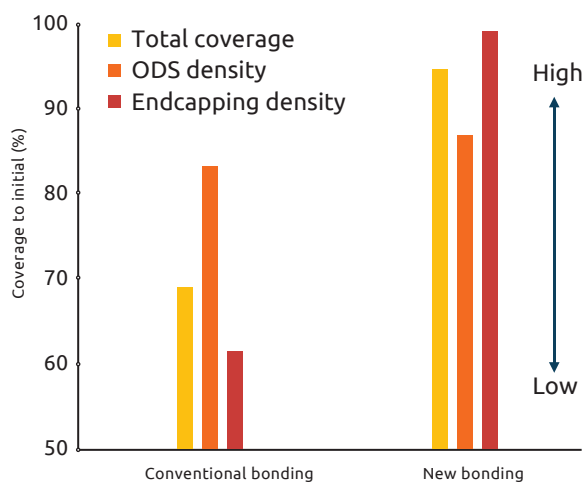
Column: 5µm, 4.6mm I.D x 150 mm;
Mobile phase: CH₃OH/H₂O=70/30;
Flow rate: 1.0 ml/min;
Temperature: 30°C; Detector: UV 254nm;
Solutes: Methyl Benzoate/Ethyl Benzoate (1/1).

RESOLUTION-LOADABILITY CORRELATION

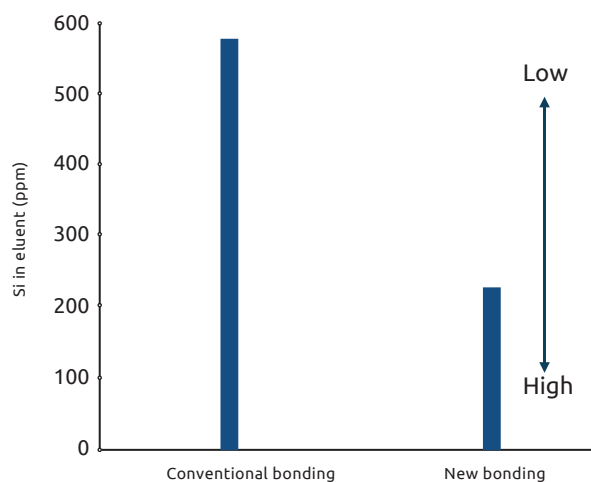


HIGH STABILITY OVER WIDE PH RANGE

ACIDIC RESISTANCE (pH=1)



ALKALIC RESISTANCE (pH=12)



PURITAS™ EXIMIUS 100Å C18

GENERAL INFORMATION

The PURITAS™ EXIMIUS represents a high performance ODS phase based on a new generation of silica gel developed to show long peak retention and high loadability, as a result of its exceptionally high surface area.

The ODS bonding density is chosen with respect to optimal selectivity for both hydrophilic and hydrophobic compounds, enabling even the use of 100% aqueous eluents. Our proprietary end capping technology minimizes residual silanol groups amount below the detectable level. This result in very good peak symmetry, particularly in case of basic compounds and exhibits high chemical phase robustness.

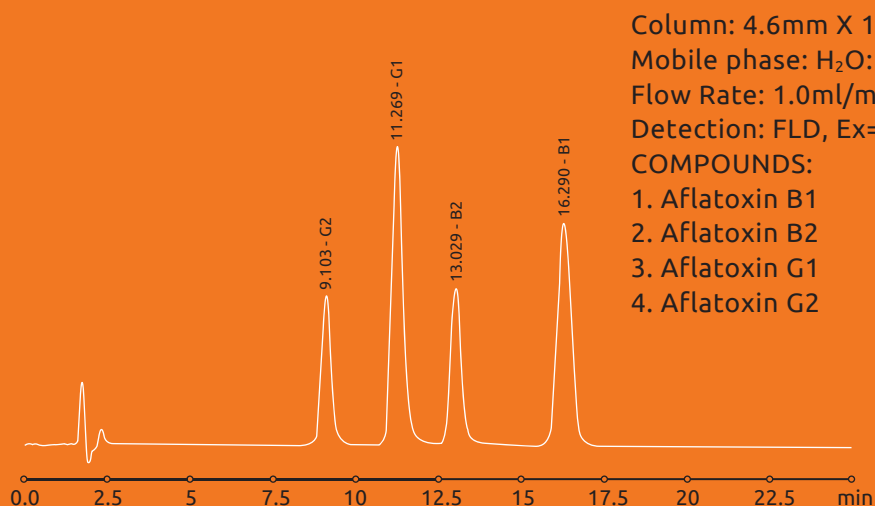
PURITAS™ EXIMIUS C18 series is available with particle sizes of 2.1, 3, 5, 10 and 15 microns for both analytical as well as preparative applications.

KEY FEATURES

- Ultra high purity silica
- High surface area and optimum porosity
- Narrow pore size distribution
- Superior Loadability and Surface Area Accessibility
- Easy Scale Up and Availability in Large Quantity
- Mechanical Strength of Base Silica
- Higher pH stability
- Superior performance for both hydrophilic and hydrophobic compounds
- Minimal silanol activity due to our new proprietary end capping technology

AFLATOXIN ANALYSIS

4.6mm X 150mm, 100Å, 5µm



Chromachemie Proprietary information

Column: 4.6mm X 150mm, C18, 5µm
Mobile phase: H₂O: MeOH: ACN (60:30:15)
Flow Rate: 1.0ml/min
Detection: FLD, Ex=365, Em=464
COMPOUNDS:
1. Aflatoxin B1
2. Aflatoxin B2
3. Aflatoxin G1
4. Aflatoxin G2





TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATION				
Average particle size *) (μm)	2.1μm	3μm	5μm	8μm	10μm
Average pore size (Å)	100	100	100	100	100
Specific surface area (m ² /g)	435	414	455	441	438
Average pore volume (ml/g)	1.1	1.1	1.1	1.00	1.08
Carbon Load (%)	17	15.9	17	17.2	16.1
pH range	1.5-10	1.5-10	1.5-10	1.5-10	1.5-10

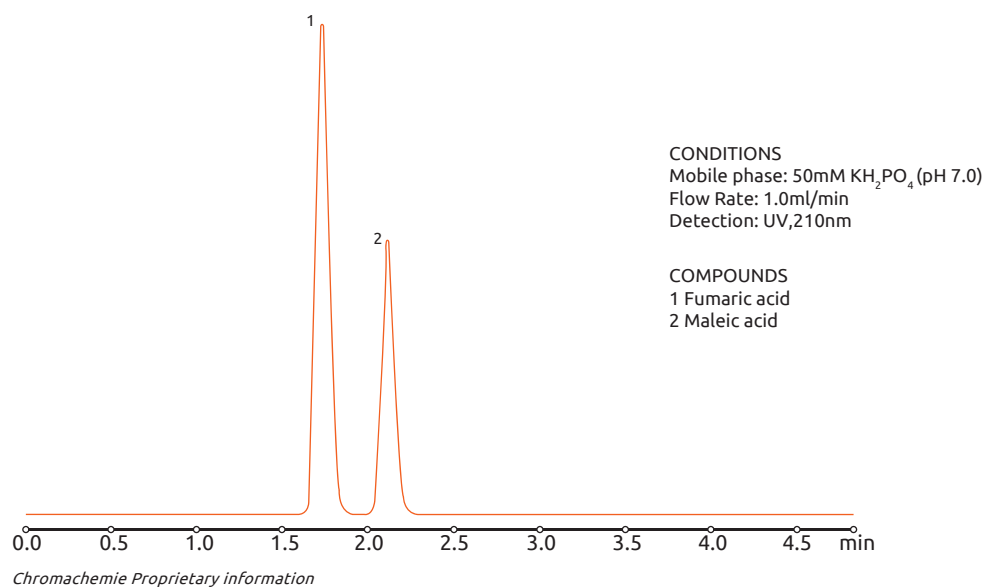
*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ EXIMIUS ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

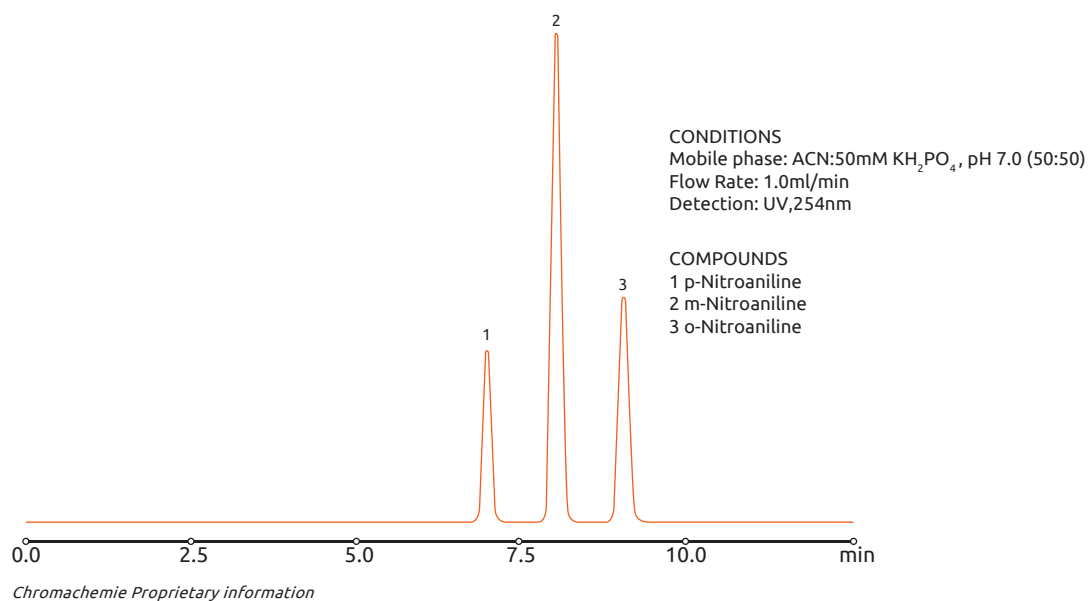
PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	BONDING PHASE
PE18-02-100-100	100mmx4.6mm	2.1	ODS(C18)
PE18-02-100-050	50mmx4.6mm	2.1	ODS(C18)
PE18-03-100-250	250mmx4.6mm	3	ODS(C18)
PE18-03-100-150	150mmx4.6mm	3	ODS(C18)
PE18-03-100-100	100mmx4.6mm	3	ODS(C18)
PE18-03-100-050	50mmx4.6mm	3	ODS(C18)
PE18-05-100-250	250mmx4.6mm	5	ODS(C18)
PE18-05-100-150	150mmx4.6mm	5	ODS(C18)
PE18-05-100-100	100mmx4.6mm	5	ODS(C18)
PE18-05-100-050	50mmx4.6mm	5	ODS(C18)
PE18-08-100-250	250mmx4.6mm	8	ODS(C18)
PE18-08-100-150	150mmx4.6mm	8	ODS(C18)
PE18-08-100-100	100mmx4.6mm	8	ODS(C18)
PE18-08-100-050	50mmx4.6mm	8	ODS(C18)
PE18-10-100-250	250mmx4.6mm	10	ODS(C18)

PURITAS™ EXIMIUS 100Å C18

APPLICATION: MALEIC AND FUMARIC ACIDS 4.6mm X 150mm, 100Å, 5µm

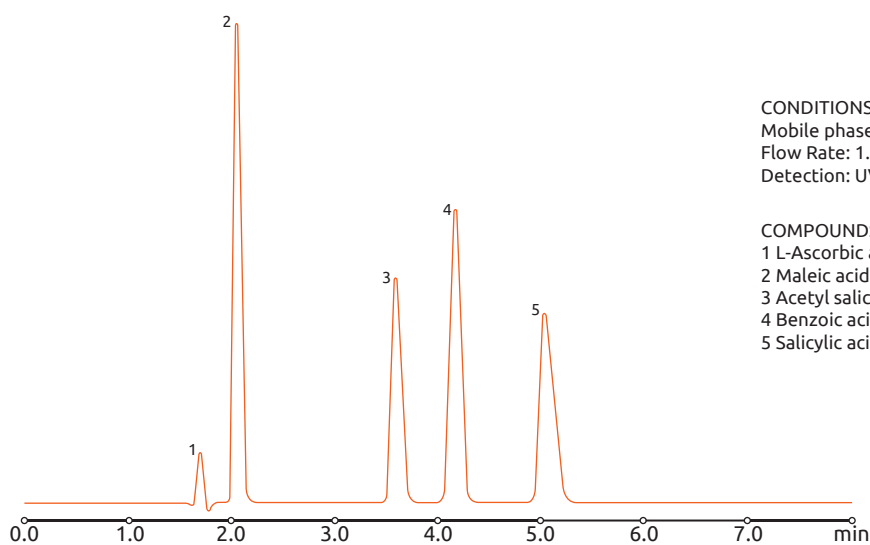


APPLICATION: NITROANILINES 4.6mm X 150mm, 100Å, 5µm



APPLICATION: ORGANIC ACIDS

4.6mm X 150mm, 100Å, 5µm



Chromachemie Proprietary information

CONDITIONS

Mobile phase: MeOH:50mM KH_2PO_4 , pH 5.7 (30:70)

Flow Rate: 1.0ml/min

Detection: UV,220nm

COMPOUNDS

1 L-Ascorbic acid

2 Maleic acid

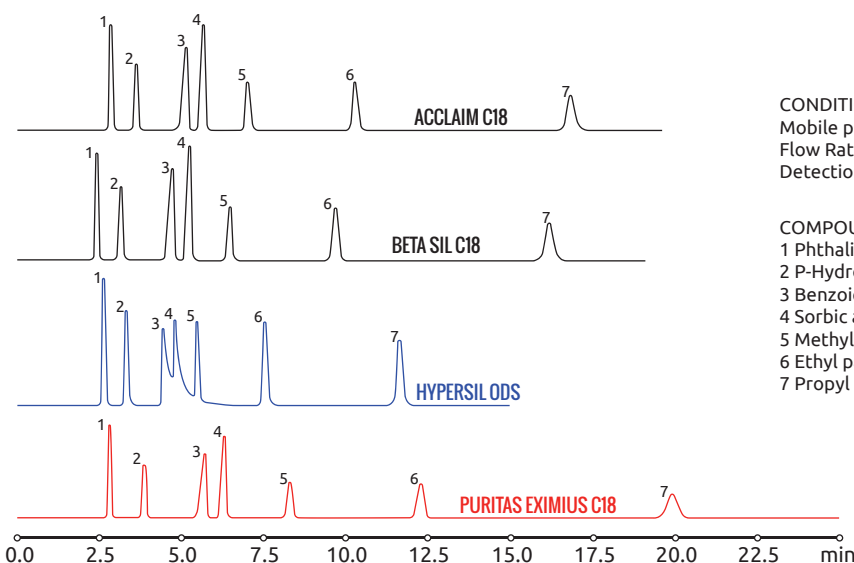
3 Acetyl salicylic acid

4 Benzoic acid

5 Salicylic acid

APPLICATION: FOOD ADDITIVES

4.6mm X 250mm, 100Å, 5µm



Chromachemie Proprietary information

CONDITIONS

Mobile phase: ACN:50mM KH_2PO_4 , pH 4.4 (40:60)

Flow Rate: 1.0ml/min

Detection: UV,230nm

COMPOUNDS

1 Phthalic acid

2 P-Hydroxy benzoic acid

3 Benzoic acid

4 Sorbic acid

5 Methyl paraben

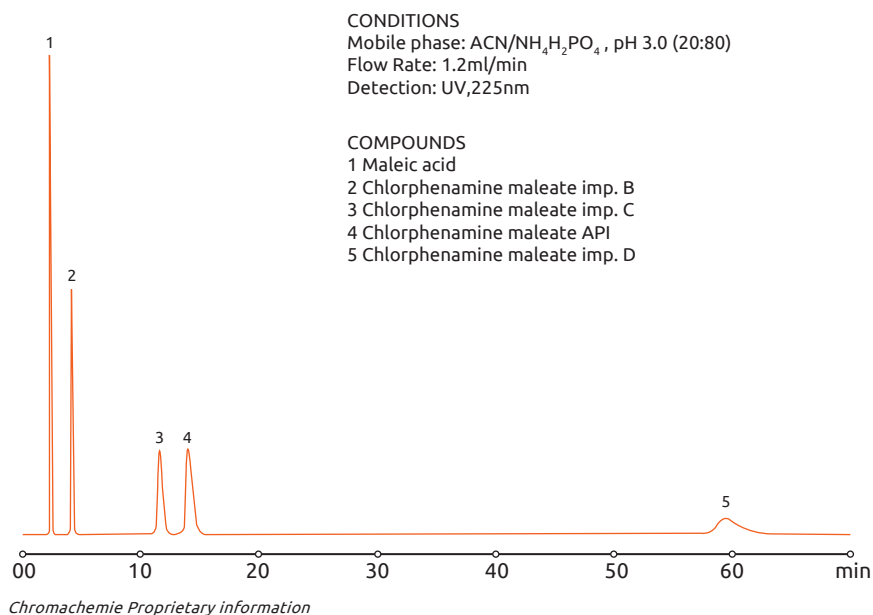
6 Ethyl paraben

7 Propyl paraben

PURITAS™ EXIMIUS 100Å C18

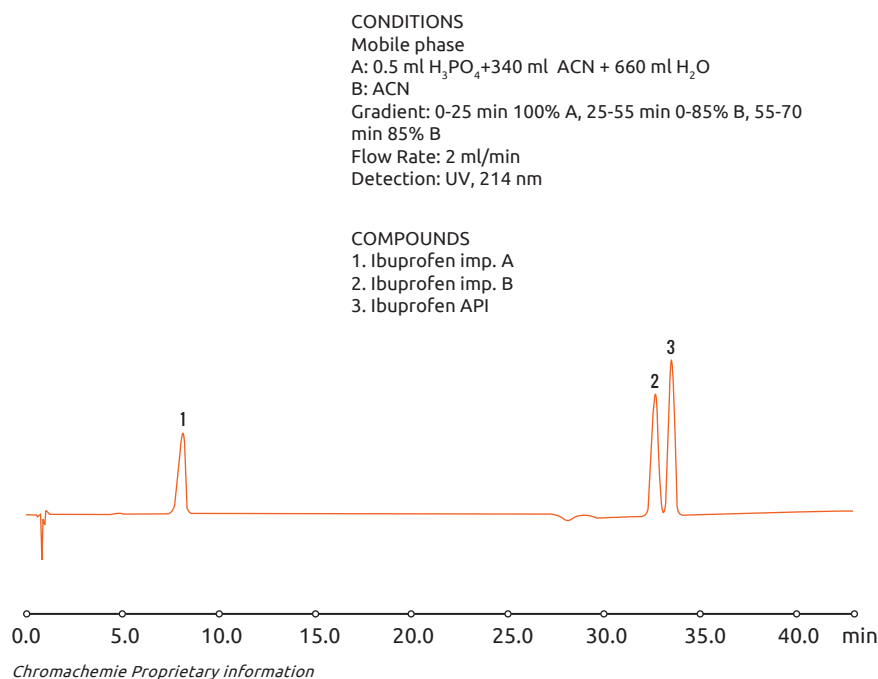
APPLICATION: CHLORPHENAMINE MALEATE IMPURITIES

4.6mm X 250mm, 100Å, 10µm



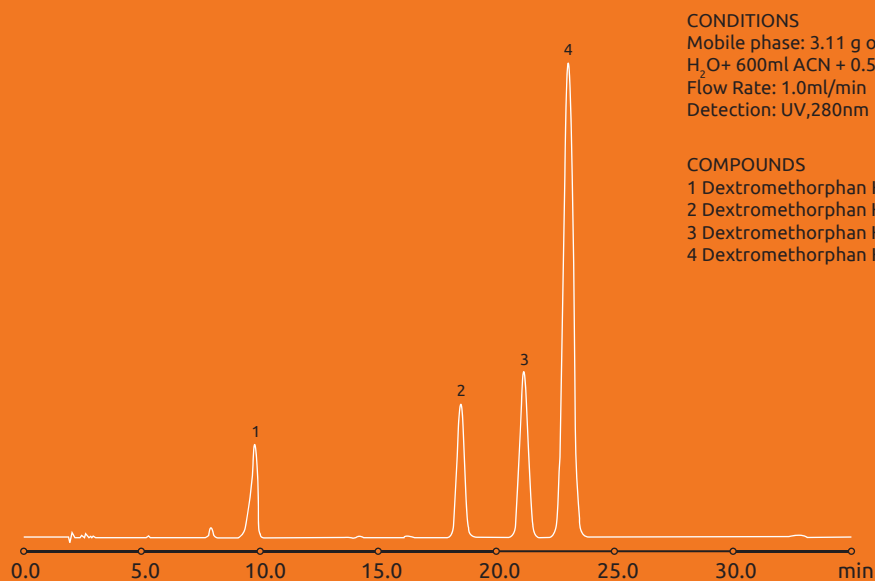
APPLICATION: IBUPROFEN IMPURITIES

4.6mm X 150mm, 100Å, 5µm



APPLICATION: DEXTROMETHORPHAN HYDROBROMIDE IMPURITIES

4.6mm X 250mm, 100Å, 5µm



Chromachemie Proprietary information

CONDITIONS

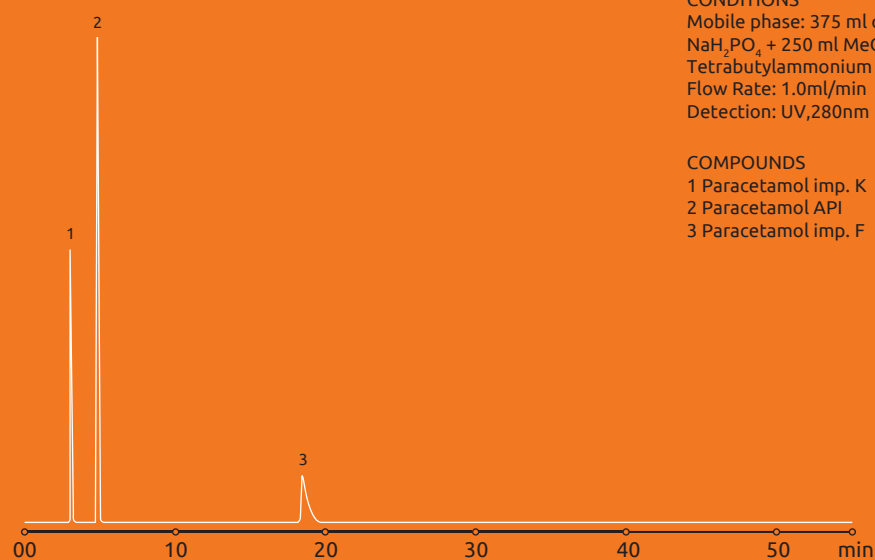
Mobile phase: 3.11 g of docusate sodium in 400 ml H_2O + 600ml ACN + 0.56 g NH_4NO_3 (pH-2.0)
Flow Rate: 1.0ml/min
Detection: UV,280nm

COMPOUNDS

1 Dextromethorphan Hydrobromide imp. B
2 Dextromethorphan Hydrobromide imp. C
3 Dextromethorphan Hydrobromide API
4 Dextromethorphan Hydrobromide imp. A

APPLICATION: PARACETAMOL IMPURITIES

4.6mm X 250mm, 100Å, 5µm



Chromachemie Proprietary information

CONDITIONS

Mobile phase: 375 ml of 17.9 g/L Na_2HPO_4 + 375 ml of 7.8 g/L NaH_2PO_4 + 250 ml MeOH containing 4.6 g/L of Tetrabutylammonium hydroxide
Flow Rate: 1.0ml/min
Detection: UV,280nm

COMPOUNDS

1 Paracetamol imp. K
2 Paracetamol API
3 Paracetamol imp. F

PURITAS™ EXIMIUS 100Å C18

APPLICATION: AZITHROMYCIN AND IMPURITIES AS PER EP

4.6mm X 250mm, 100Å, 5µm

CONDITIONS

Mobile phase A: 1.80 g/L of anhydrous Na_2HPO_4 (pH 8.9)

Mobile phase B: Methanol: ACN (250:750)

Gradient: 50-55 % B in 0-25 min, 55-60% B in 25-30 min, 60-75% B in 30-80 min, 75-50% B in 80-81 min, 50% B in 81-93 min.

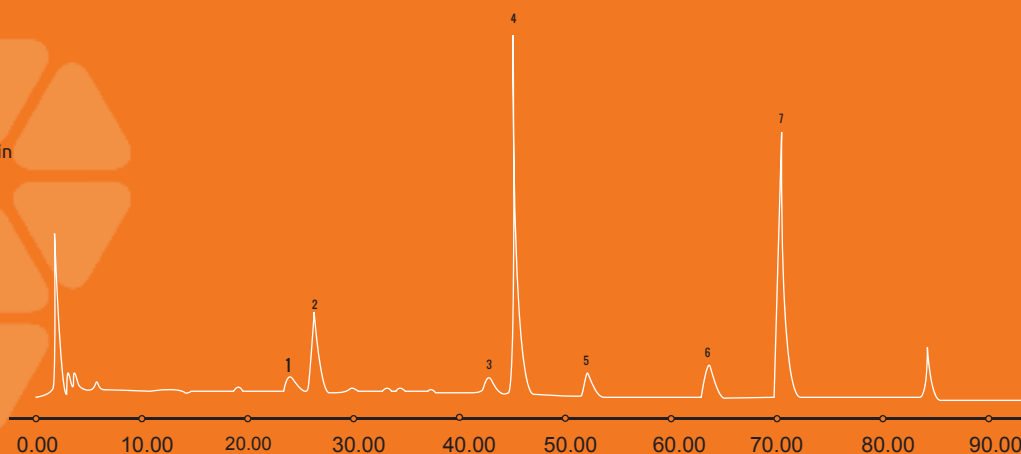
Temperature: 60°C

Flow Rate: 1.0 ml/min

Detection: PDA, 210 nm

COMPOUNDS

1. Impurity-L
2. Impurity-E
3. Impurity-I
4. Impurity-H
5. Impurity-A
6. Azithromycin
7. Impurity-G



APPLICATION: GALANTAMINE HYDROBROMIDE AND IMPURITIES AS PER USP 38

4.6mm X 100mm, 100Å, 3µm

CONDITIONS

Buffer: 0.79 g/L of $\text{Na}_2\text{HPO}_4 \cdot 2\text{H}_2\text{O}$ and 2.46 g/L of anhydrous NaH_2PO_4 in water.

Mobile phase A: Methanol and Buffer (5:95)

Mobile phase B: Acetonitrile

Gradient: 0% B in 0-6 min, 0-5% B in 6-20 min, 5-15% B in 20-35 min, 15-20% B in 35-50 min, 20-60% B in 50-51 min, 60% B in 51-55 min, 60-0% B in 55-56 min, 0% B in 56-60 min

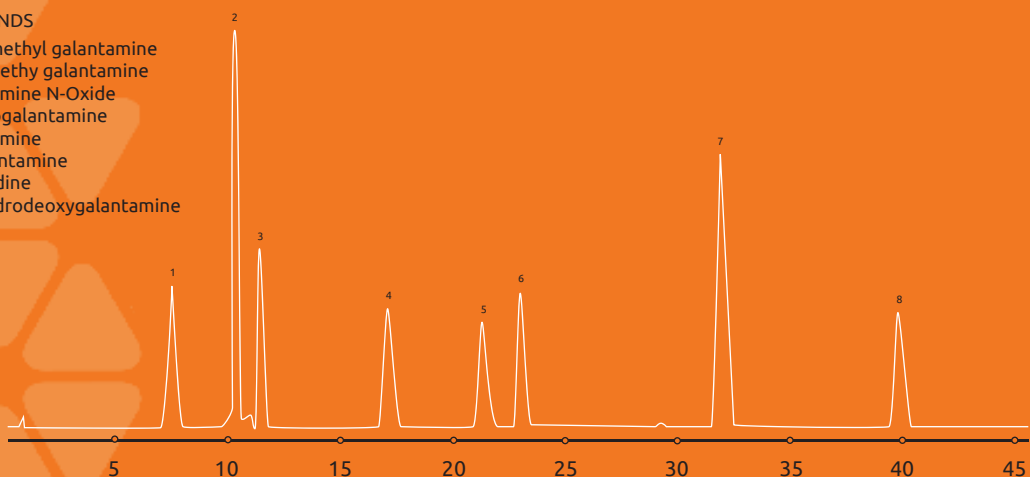
Temperature: 55°C

Flow Rate: 1.5 ml/min

Detection: UV, 230 nm

COMPOUNDS

1. N-desmethyl galantamine
2. O-desmethy galantamine
3. Galantamine N-Oxide
4. Dihydrogalantamine
5. Galantamine
6. 6S-Galantamine
7. Narwedine
8. Didehydrodeoxygalantamine

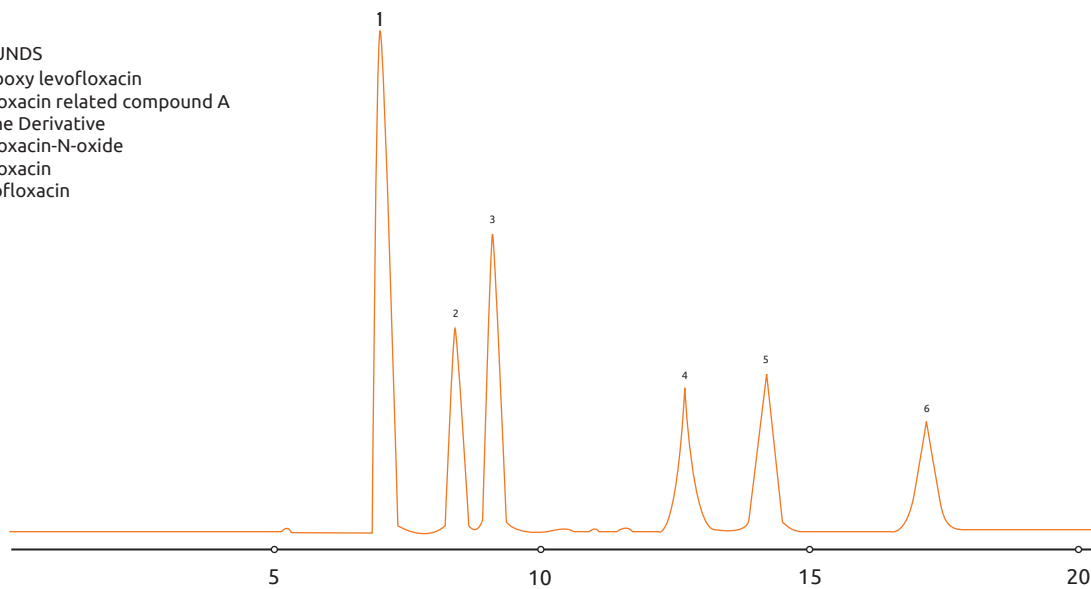


CONDITIONS

Mobile phase : 874 mg of cupric sulfate + 918 mg of L-isoleucine + 5.94 g of $\text{CH}_3\text{CO}_2\text{NH}_4$ in 700 mL of water and 300 mL of methanol.
Temperature: 45°C
Flow Rate: 0.8 ml/min
Detection: UV, 360 nm

COMPOUNDS

1. Decarboxy levofloxacin
2. Levofloxacin related compound A
3. Diamine Derivative
4. Levofloxacin-N-oxide
5. Levofloxacin
6. Dextrofloxacina

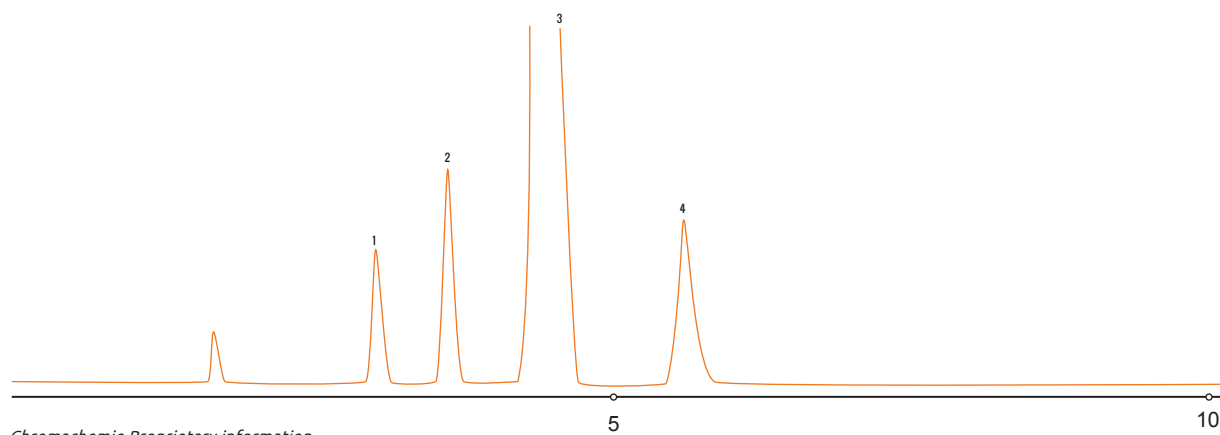


CONDITIONS

Mobile phase: 2.3 g/L solution of ammonium acetate and methanol (30:70)
Temperature: 30°C
Flow Rate: 1.5 ml/min
Detection: UV, 237 nm

COMPOUNDS

1. Amlodipine Besilate Imp. D
2. Amlodipine Besilate Imp. F
3. Amlodipine Besilate
4. Amlodipine Besilate Imp. E



PURITAS™ EXIMIUS 100Å C18

APPLICATION: DOCETAXEL AND IMPURITIES AS PER USP

4.6mm X 150mm, 100Å, 3µm

CONDITIONS

Mobile phase A: Water

Mobile phase B: ACN

Gradient: 28% B in 0-9 min, 28-72% B in 9-39 min, 72-28% B in 39-39.1 min, 28% B in 39.1-50 min

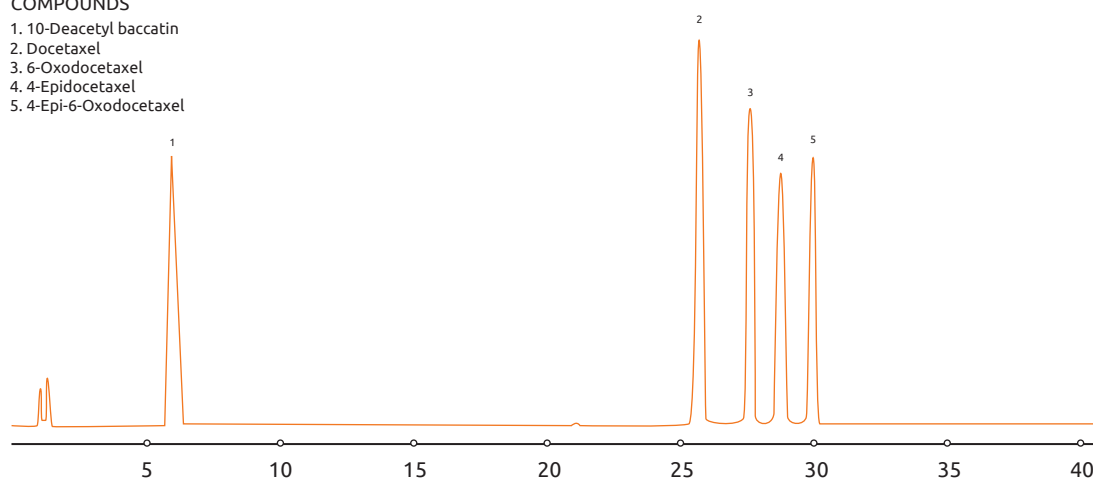
Temperature: 45°C

Flow Rate: 1.2 ml/min

Detection: UV, 232 nm

COMPOUNDS

1. 10-Deacetyl baccatin
2. Docetaxel
3. 6-Oxodocetaxel
4. 4-Epidocetaxel
5. 4-Epi-6-Oxodocetaxel



Chromachemie Proprietary information

APPLICATION: FLUCONAZOLE AND IMPURITIES AS PER USP

4.6mm X 150mm, 100Å, 3µm

CONDITIONS

Mobile phase: Acetonitrile and Water (20:80)

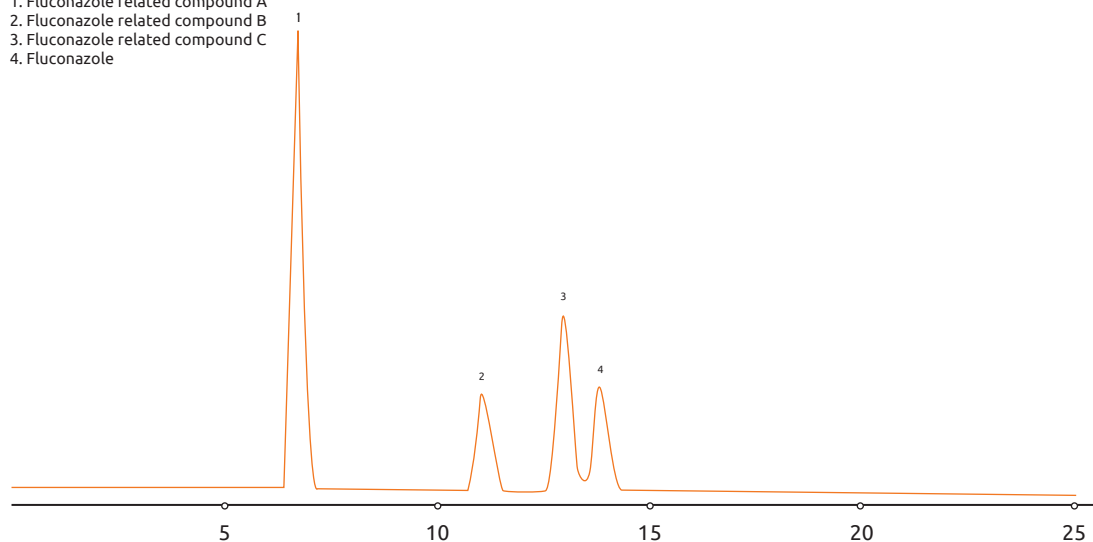
Temperature: 40°C

Flow Rate: 0.5 ml/min

Detection: UV, 260 nm

COMPOUNDS

1. Fluconazole related compound A
2. Fluconazole related compound B
3. Fluconazole related compound C
4. Fluconazole



Chromachemie Proprietary information

APPLICATION: CLARITHROMYCIN AND IMPURITIES AS PER USP

4.6mm X 100mm, 100Å, 3µm

01

CONDITIONS

Mobile phase A: 4.76g/L of KH_2PO_4 (pH 4.4)

Mobile phase B: Acetonitrile

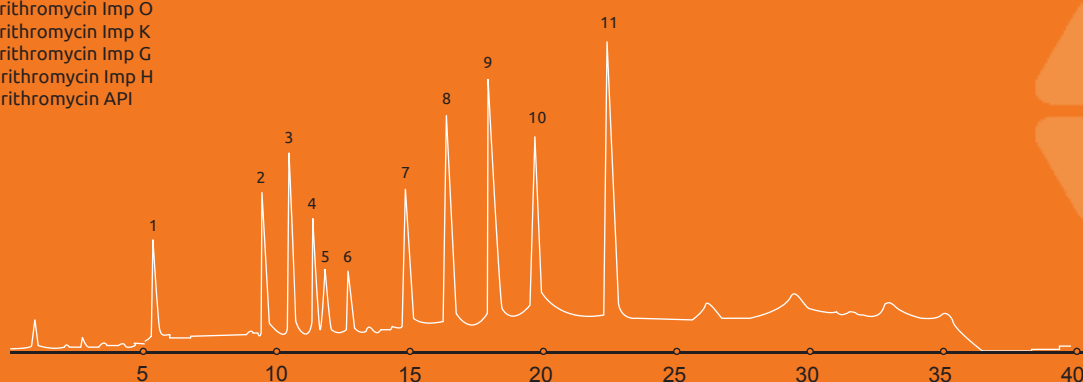
Gradient: 25% B in 0min, 25-60% B in 0-32 min, 60% B in 32-34min, 60-25% in 34-36min, 25% in 36-42min

Flow Rate: 1.1 ml/min

Detection: UV, 205 nm

COMPOUNDS

- 1 Clarithromycin Imp I
- 2 Clarithromycin Imp L
- 3 Clarithromycin Imp M
- 4 Clarithromycin Imp C
- 5 Clarithromycin Imp D
- 6 Clarithromycin Imp N
- 7 Clarithromycin Imp O
- 8 Clarithromycin Imp K
- 9 Clarithromycin Imp G
- 10 Clarithromycin Imp H
- 11 Clarithromycin API



Chromachemie Proprietary information

APPLICATION: GLIMEPIRIDE AND IMPURITIES AS PER EP

4.6mm X 250mm, 100Å, 5µm

CONDITIONS

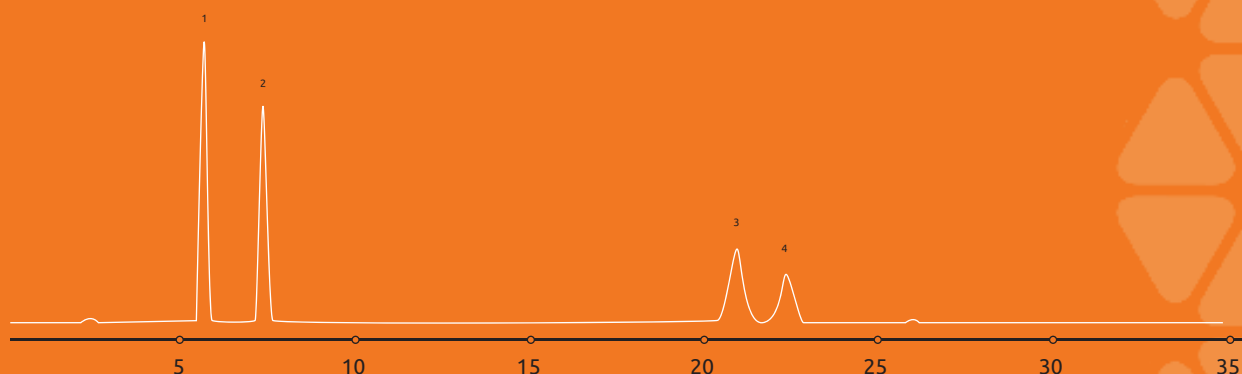
Mobile phase: Dissolve 0.5g of NaH_2PO_4 in 500mL of water and adjust to pH 2.5 with H_3PO_4 and add 500mL of Acetonitrile.

Flow Rate: 1.0 ml/min

Detection: UV, 228 nm

COMPOUNDS

- 1 Glimepiride Imp. B
- 2 Glimepiride Imp. C
- 3 Glimepiride API
- 4 Glimepiride Imp. D



Chromachemie Proprietary information

PURITAS™ EXIMIUS 100Å C8

GENERAL INFORMATION

PURITAS™ EXIMIUS C8 phases are given multiple end-capping treatment to offer stronger selectivity compared to PURITAS™ C8 phase. This octyl phase is expected to retain hydrophobic analytes stronger which can be considered bridging conventional C8 and C18 phases. The analyst can select this column to work with multiple applications where they need separation of both Hydrophilic and Hydrophobic analytes in one analysis.

KEY FEATURES

- Stable C8 phase designed for separation of both Hydrophilic and Hydrophobic analysis.
- LCMS compatible low bleed phase.
- Available in 5µm, 10µm particle size .
- Suitable for small molecules.

APPLICATION: OMEPRAZOLE AND IMPURITIES AS PER USP 38 4.6mm X 250mm, 100Å, 5µm

CONDITIONS

Mobile phase A: Dissolve 0.725 g of NaH_2PO_4 + 4.472 g anhydrous Na^2HPO_4 in 1000mL of water. Dilute 250mL of this solution with water to 1000 mL (pH 7.0).

Mobile phase B: ACN

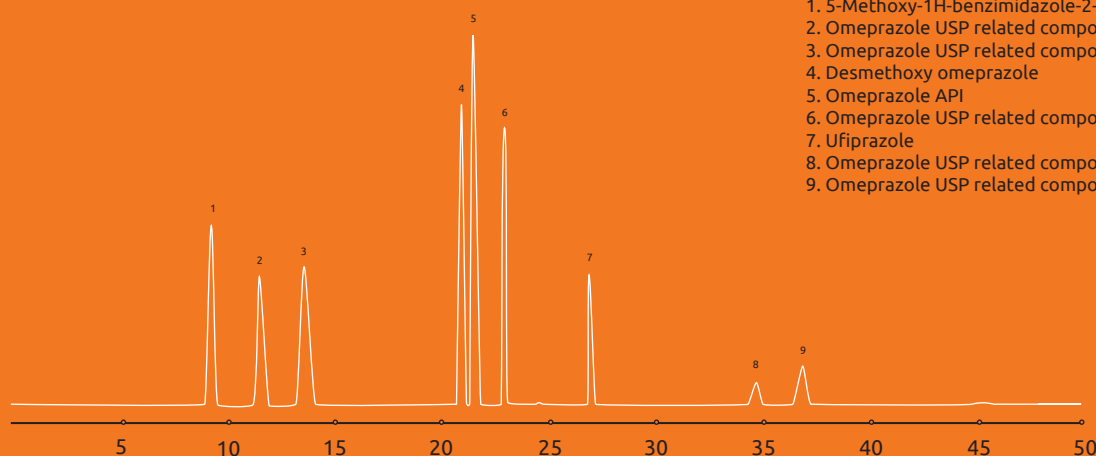
Gradient: 25% B in 0-12 min, 25-50% B in 12-22 min, 50% B in 22-45 min, 50-25% B in 45-45.1 min.

Flow Rate: 0.8 ml/min

Detection: UV, 264 nm

COMPOUNDS

1. 5-Methoxy-1H-benzimidazole-2-thiol
2. Omeprazole USP related compound E
3. Omeprazole USP related compound I
4. Desmethoxy omeprazole
5. Omeprazole API
6. Omeprazole USP related compound A
7. Ufiprazole
8. Omeprazole USP related compound F
9. Omeprazole USP related compound G



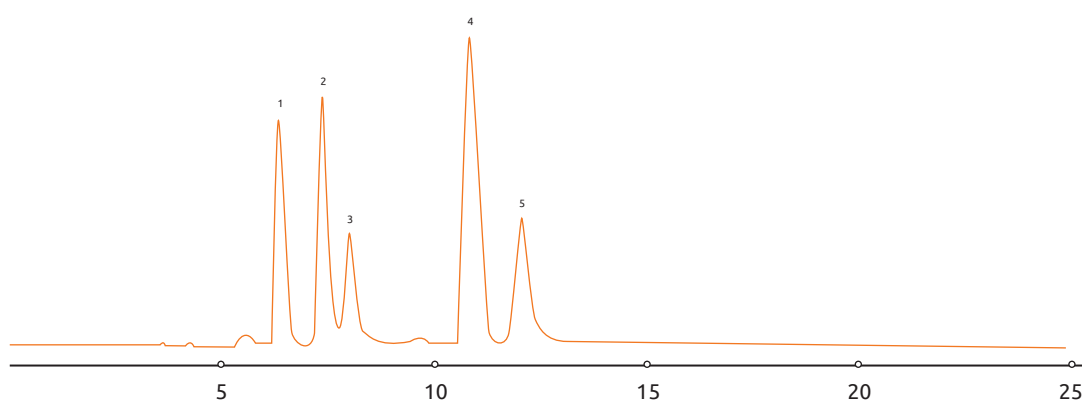
Chromachemie Proprietary information

CONDITIONS

Mobile phase: Mix 30 vol. of THF + 70 vol. of a solution of 5.75g of $\text{NH}_4\text{H}_2\text{PO}_4$ in 900ml of Water (pH 3.0) and dilute to 1000 mL with water
Temperature: 40°C
Flow Rate: 1.5 ml/min
Detection: UV, 313 nm

COMPOUNDS

1. Ketorolac imp.C
2. Ketorolac imp.A
3. Ketorolac imp.D
4. Ketorolac imp.B
5. Ketorolac API



Chromachemie Proprietary information

TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS	
Average particle size *) (µm)	5µm	10µm
Average pore size (Å)	100	100
Specific surface area (m ² /g)	466	466
Average pore volume (ml/g)	1.06	1.05
Carbon Load (%)	15.7	15.7
pH range	1.5-10	1.5-10

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ EXIMIUS C8 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PE08-05-100-250	250mmx4.6mm	5	C8
PE08-05-100-150	150mmx4.6mm	5	C8
PE08-05-100-100	100mmx4.6mm	5	C8
PE08-05-100-050	50mmx4.6mm	5	C8
PE08-10-100-250	250mmx4.6mm	10	C8

PURITAS™ ODS 120Å C18



GENERAL INFORMATION

PURITAS™ ODS phases featuring maximum surface coverage are the ideal choice for a wide variety of organic compounds.

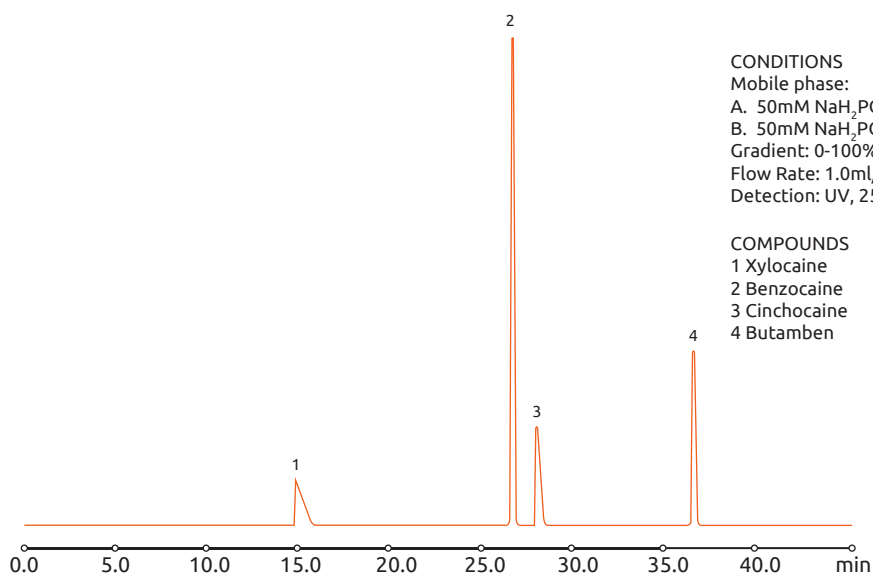
Carefully controlled full end capping leads to optimal performance with acidic, basic and chelating compounds. For analytical high speed applications 12 nm phases offer a good compromise between surface area available, separation speed and solvent consumption.

KEY FEATURES

- High coverage and exhaustive end capping
- Exceptional batch-to-batch reproducibility
- Enhanced mechanical stability
- Suitable for easy scale up and preparative analysis

APPLICATION: LOCAL ANAESTHETICS

4.6mm X 250mm, 120Å, 5µm



CONDITIONS

Mobile phase:

A. 50mM NaH₂PO₄ (pH-2.5):ACN (95:5)

B. 50mM NaH₂PO₄ (pH-2.5):ACN (47:53)

Gradient: 0-100% B in 30 min, 100% B 30-45 min

Flow Rate: 1.0ml/min

Detection: UV, 254nm

COMPOUNDS

1 Xylocaine

2 Benzocaine

3 Cinchocaine

4 Butamben

Chromachemie Proprietary information



TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS		
Average particle size ^{*)}	3µm	5µm	10µm
Average pore size (Å)	120	120	120
Specific surface area (m ² /g)	287	332	325
Average pore volume (ml/g)	1.04	1.08	1.05
Carbon Load (%)	19	17.9	18
pH range	2-8	2-8	2-8

*)The Specification of particle size and physical properties are those of base silicagel

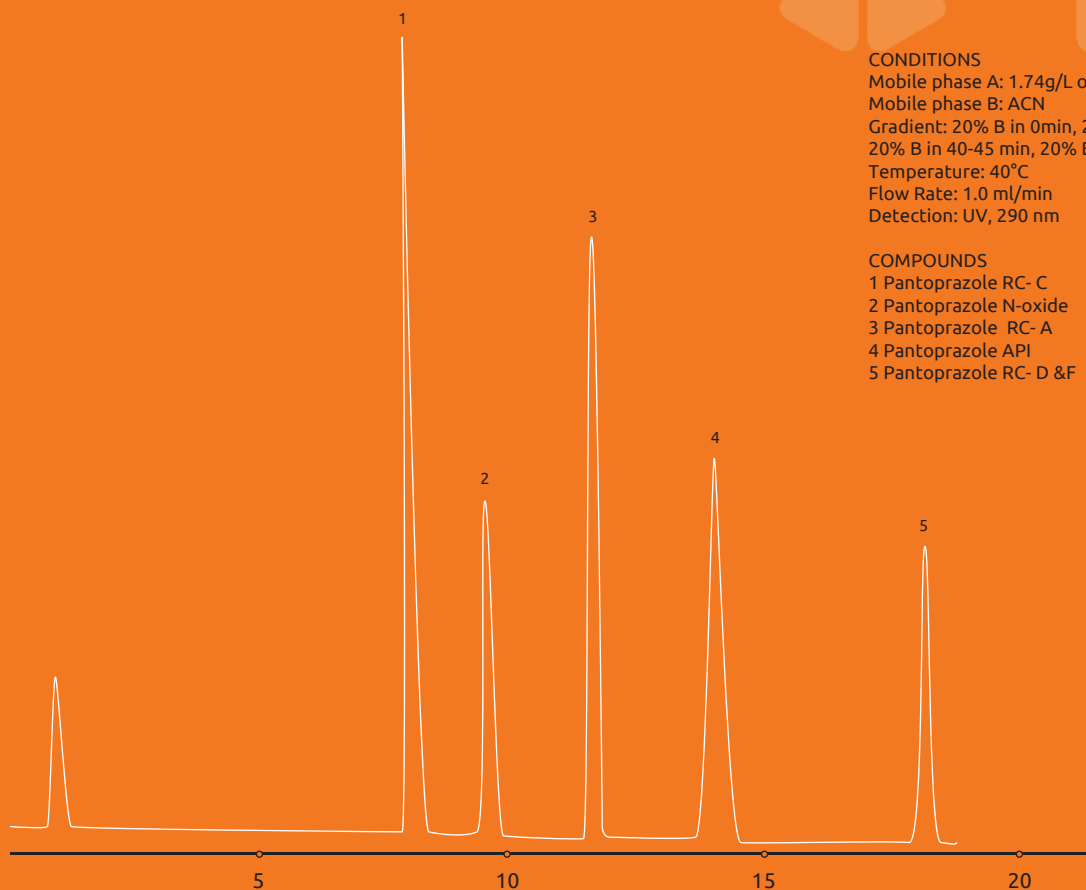
PURITAS™ ODS ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PN18-03-120-250	250mmx4.6mm	3	ODS(C18)
PN18-03-120-150	150mmx4.6mm	3	ODS(C18)
PN18-03-120-100	100mmx4.6mm	3	ODS(C18)
PN18-03-120-050	50mmx4.6mm	3	ODS(C18)
PN18-05-120-250	250mmx4.6mm	5	ODS(C18)
PN18-05-120-150	150mmx4.6mm	5	ODS(C18)
PN18-05-120-100	100mmx4.6mm	5	ODS(C18)
PN18-05-120-050	50mmx4.6mm	5	ODS(C18)
PN18-10-120-250	250mmx4.6mm	10	ODS(C18)

PURITAS™ ODS 120Å C18

APPLICATION: PANTOPRAZOLE AND IMPURITIES AS PER USP

4.6mm X 150mm, 120Å, 5µm



Chromachemie Proprietary information

CONDITIONS

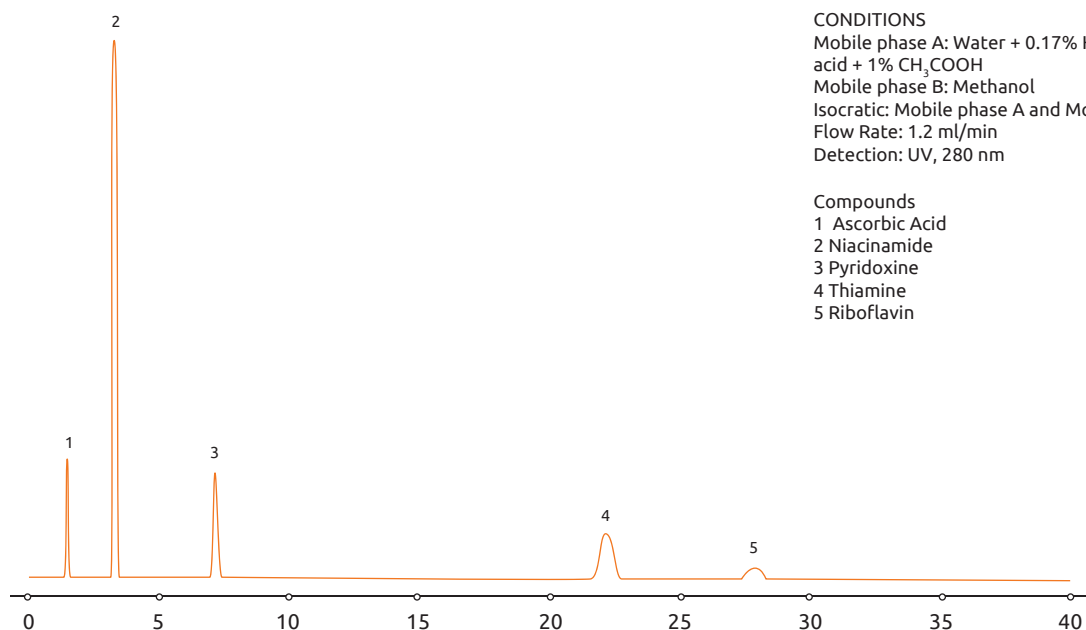
Mobile phase A: 1.74g/L of K_2HPO_4 (pH 7.0)
Mobile phase B: ACN
Gradient: 20% B in 0min, 20-80% B in 0-40 min, 80-20% B in 40-45 min, 20% B in 45-55 min
Temperature: 40°C
Flow Rate: 1.0 ml/min
Detection: UV, 290 nm

COMPOUNDS

1 Pantoprazole RC- C
2 Pantoprazole N-oxide
3 Pantoprazole RC- A
4 Pantoprazole API
5 Pantoprazole RC- D & F

APPLICATION: WATER SOLUBLE VITAMINS

4.6mm X 250mm, 120Å, 5µm



Chromachemie Proprietary information

CONDITIONS

Mobile phase A: Water + 0.17% Hexane sulphonic acid + 1% CH_3COOH
Mobile phase B: Methanol
Isocratic: Mobile phase A and Mobile phase B (80:20)
Flow Rate: 1.2 ml/min
Detection: UV, 280 nm

Compounds

1 Ascorbic Acid
2 Niacinamide
3 Pyridoxine
4 Thiamine
5 Riboflavin

CONDITIONS

Mobile phase A: 5.0 g/L Solution of Ammonium acetate

Mobile phase B: Methanol

Gradient: 30% B in 0-2min, 30-70% B in 2-17 min, 70% B in 17-22 min

Flow Rate: 1.5 ml/min

Detection: PDA, 260 nm

COMPOUNDS

1. Risperidone Imp A (EP)

2. Risperidone Imp B (EP)

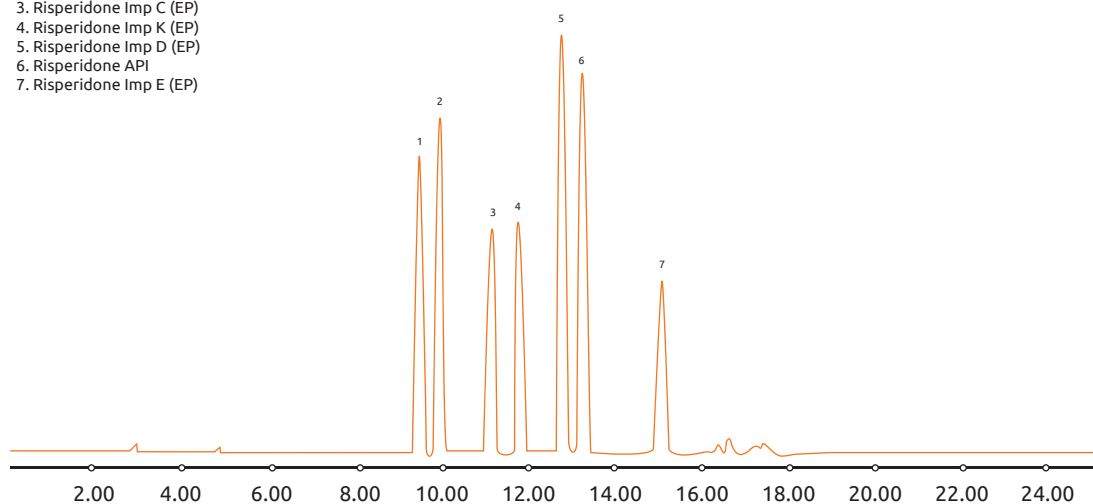
3. Risperidone Imp C (EP)

4. Risperidone Imp K (EP)

5. Risperidone Imp D (EP)

6. Risperidone API

7. Risperidone Imp E (EP)



Chromachemie Proprietary information

CONDITIONS

Mobile phase A: Acetonitrile and 0.05%trifluoroacetic acid (10:90)

Mobile phase B: Acetonitrile and 0.05%trifluoroacetic acid (90:10)

Gradient: 20% B in 0-2 min, 20-35% B in 2-10 min, 35-90% B in 10-20 min, 90% B in 20-25 min, 90-20% B in 25-26 min, 20% B in 26-35 min.

Flow Rate: 1.2 ml/min

Detection: UV, 254 nm

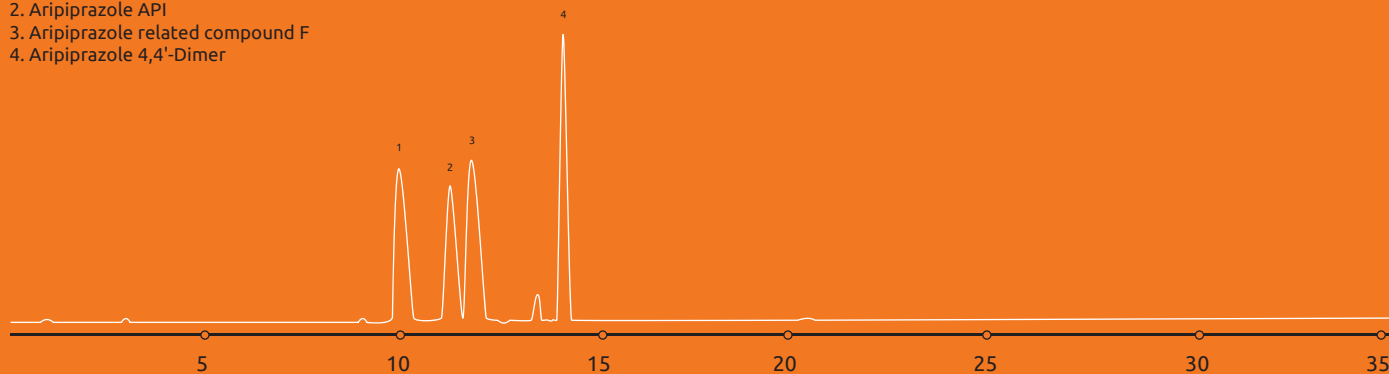
Compounds

1. Aripiprazole related compound G

2. Aripiprazole API

3. Aripiprazole related compound F

4. Aripiprazole 4,4'-Dimer



Chromachemie Proprietary information

PURITAS™ ODS-AQUA 120Å C18

GENERAL INFORMATION

PURITAS™ ODS-AQUA phases are designed to show extended selectivity for hydrophilic and polar compounds which are either not or poorly retained on other phases. A proprietary modification technique avoids the matting-down effect of the C18 chain which conventional ODS phases show at high water contents in the mobile phases, even if pure water is used. Typical applications are separation of bio molecules and metabolites such as oligo saccharides, amino acids, small peptides, nucleotides and organic Acids.

PURITAS™ ODS-AQUA phases are fully end-capped and show similar selectivity as conventional C18 phases when being used for separations of hydrophobic compounds with typical reverse phase eluents. This phase show stable base lines and high sensitivity even under neutral pH conditions and without buffer or counter ion additives, which makes them appear especially suited for hyphenated technique like LC-MS, where such additives disturb the detection.

KEY FEATURES

- Suitable for hydrophilic and hydrophobic compounds separation.
- Strong retention in aqueous conditions.
- Longer life time in aqueous eluents.
- Different selectivity from PURITAS™ ODS.
- Enhanced mechanical stability.
- Easy to scale up.

APPLICATION: ORGANIC ACIDS

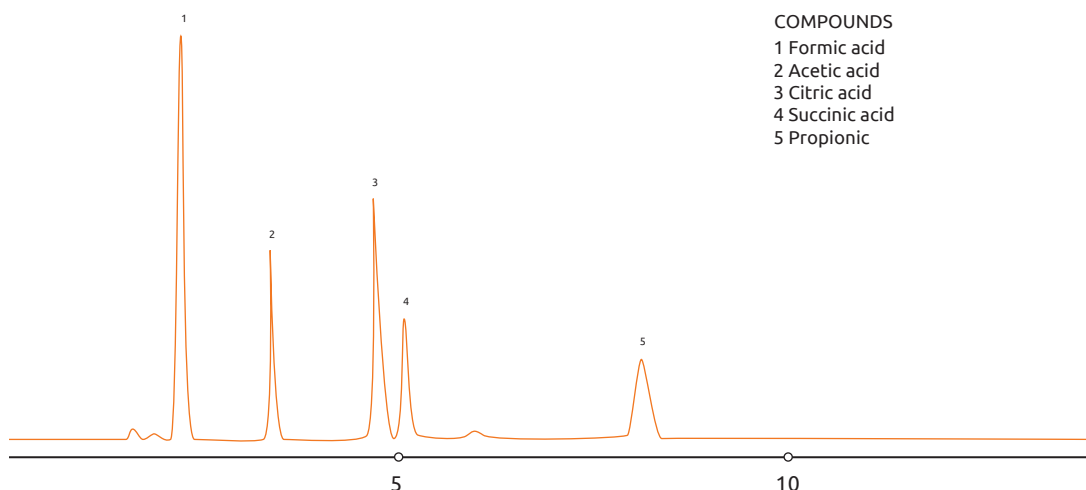
4.6mm X 150mm, 120Å, 5µm

CONDITIONS

Mobile phase: 50 mM Ammonium phosphate dibasic +
Phosphoric acid (pH 2.4)
Temperature: 40°C
Flow Rate: 1.0 ml/min
Detection: UV, 210 nm

COMPOUNDS

1 Formic acid
2 Acetic acid
3 Citric acid
4 Succinic acid
5 Propionic



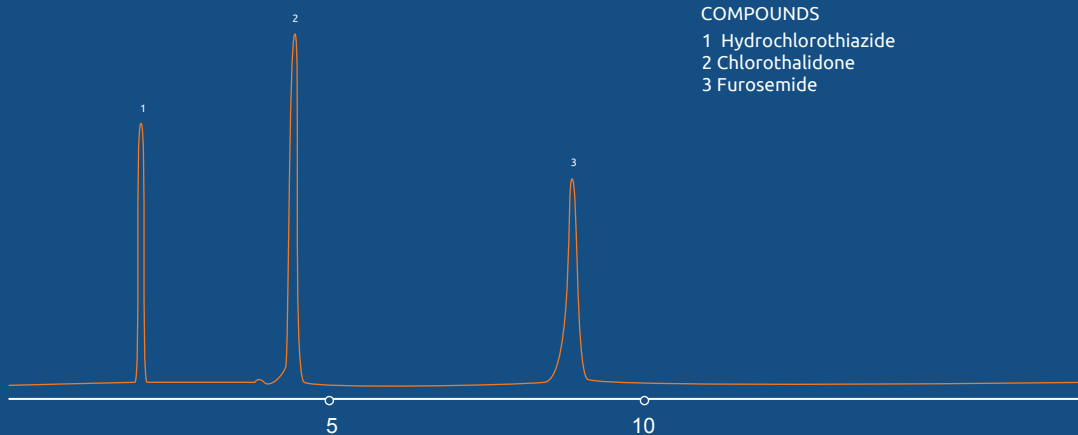
Chromachemie Proprietary information

CONDITIONS

Mobile phase: 20 mM Ammonium Dihydrogen phosphate +
Phosphoric acid (pH 3.2) / Methanol (60/40)
Temperature: 37°C
Flow Rate: 1.0 ml/min
Detection: UV, 280 nm

COMPOUNDS

1 Hydrochlorothiazide
2 Chlorothalidone
3 Furosemide



Chromachemie Proprietary information

TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS		
Average particle size *) (µm)	3µm	5µm	10µm
Average pore size (Å)	120	120	120
Specific surface area (m ² /g)	328	314	300
Average pore volume (ml/g)	1.06	1.04	1.06
Carbon Load (%)	14.4	14.8	14
pH range	2-8	2-8	2-8

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ ODS AQUA ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PN18AQ-03-120-250	250mmx4.6mm	3	ODS(C18)
PN18AQ-03-120-150	150mmx4.6mm	3	ODS(C18)
PN18AQ-03-120-100	100mmx4.6mm	3	ODS(C18)
PN18AQ-03-120-050	50mmx4.6mm	3	ODS(C18)
PN18AQ-05-120-250	250mmx4.6mm	5	ODS(C18)
PN18AQ-05-120-150	150mmx4.6mm	5	ODS(C18)
PN18AQ-05-120-100	100mmx4.6mm	5	ODS(C18)
PN18AQ-05-120-050	50mmx4.6mm	5	ODS(C18)
PN18AQ-10-120-250	250mmx4.6mm	10	ODS(C18)

PURITAS™ 120Å C8

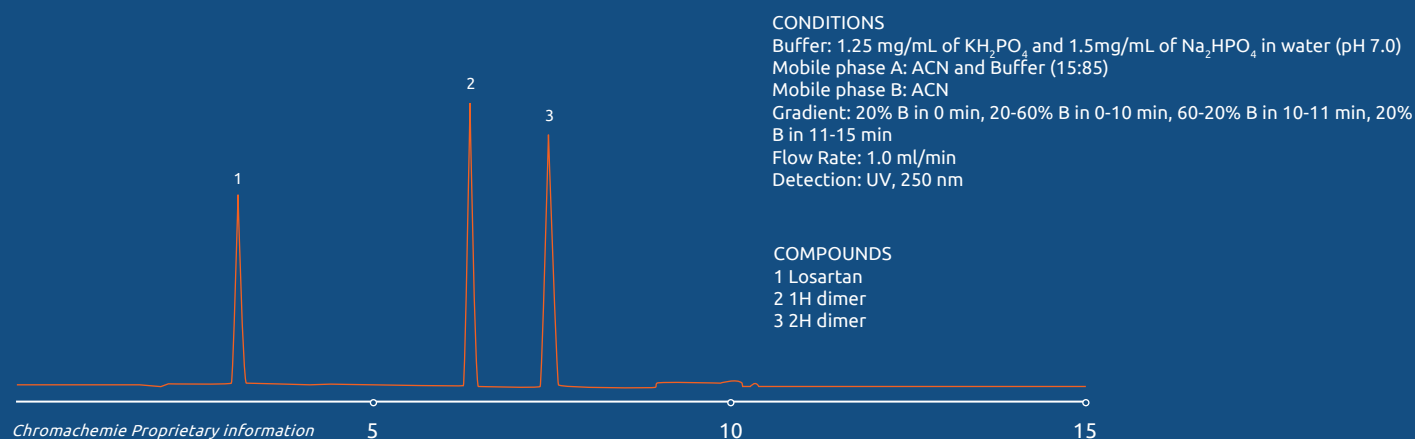
GENERAL INFORMATION

PURITAS™ C8 phases are bonded with octyl groups and are fully end capped. They are recommended for compounds which are too strongly retained on C18 phases. PURITAS™ C8 phases are available in particle sizes of 3, 5, 10 and 15 microns for both analytical as well as preparative applications.

KEY FEATURES

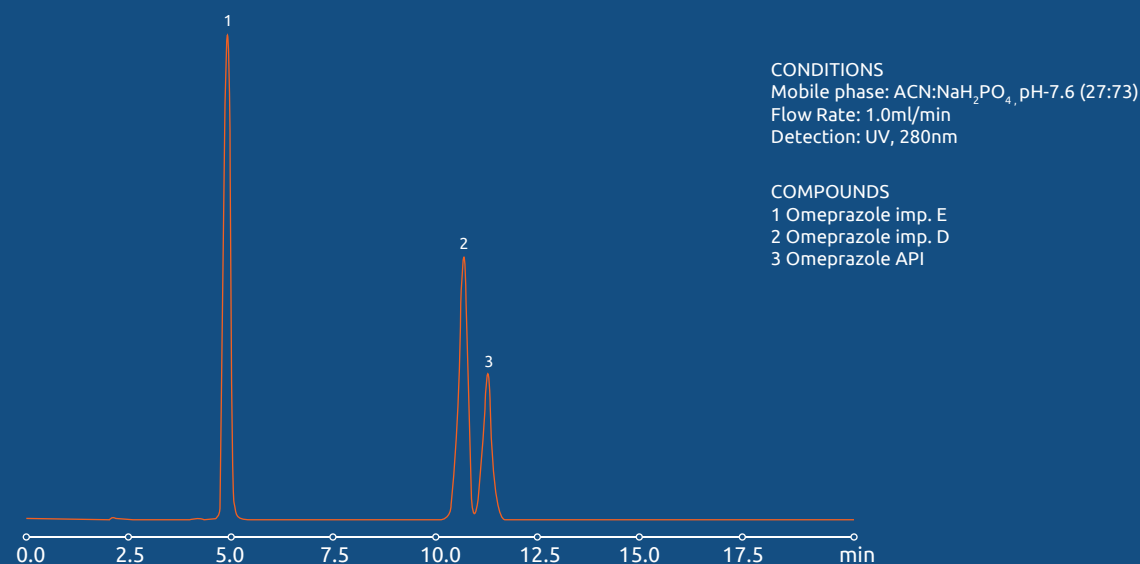
- Recommended for highly hydrophobic samples
- Most versatile reversed phase
- Available in different porosities

APPLICATION: LOSARTAN POTASSIUM AND IMPURITIES AS PER USP 38 4.6mm X 150mm, 120Å, 5µm



APPLICATION: OMEPRAZOLE IMPURITIES

4.6mm X 150mm, 120Å, 5µm



APPLICATION: PARACETAMOL AND IMPURITIES AS PER IP

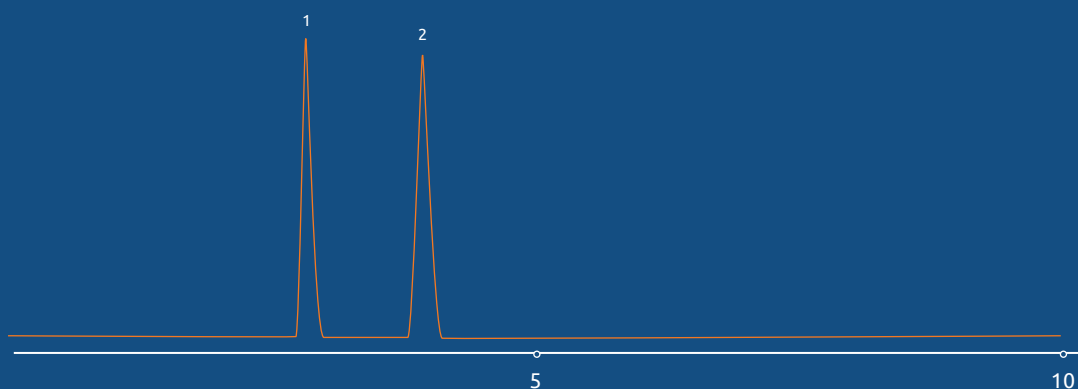
4.6mm X 250mm, 120Å, 5µm

CONDITIONS

Mobile phase: Mixture of 37.5 vol. of 1.79% of Na_2HPO_4 + 37.5 vol. of 0.78% of NaH_2PO_4 + 25 vol. of methanol containing 0.46% tetrabutylammonium hydroxide solution (40%)
 Temperature: 35°C
 Flow Rate: 1.5 ml/min
 Detection: UV, 245 nm

COMPOUNDS

1 4-Aminophenol
 2 Paracetamol API.



Chromachemie Proprietary information

TECHNICAL SPECIFICATIONS AT A GLANCE

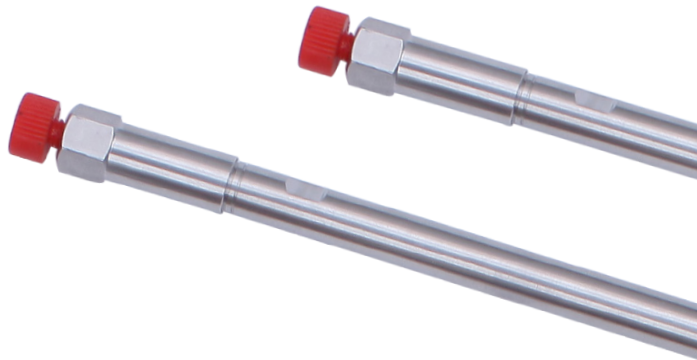
ANALYSIS	SPECIFICATION		
Average particle size *) (µm)	3µm	5µm	10µm
Average pore size (Å)	120	120	120
Specific surface area (m ² /g)	324	308	339
Average pore volume (ml/g)	1.07	1.06	1.09
Carbon Load (%)	12.2	10.5	11
pH range	2-8	2-8	2-8

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ C8 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PN08-03-120-250	250mmx4.6mm	3	C8
PN08-03-120-150	150mmx4.6mm	3	C8
PN08-03-120-100	100mmx4.6mm	3	C8
PN08-03-120-050	50mmx4.6mm	3	C8
PN08-05-120-250	250mmx4.6mm	5	C8
PN08-05-120-150	150mmx4.6mm	5	C8
PN08-05-120-100	100mmx4.6mm	5	C8
PN08-05-120-050	50mmx4.6mm	5	C8
PN08-10-120-250	250mmx4.6mm	10	C8

PURITAS™ 120Å C4



GENERAL INFORMATION

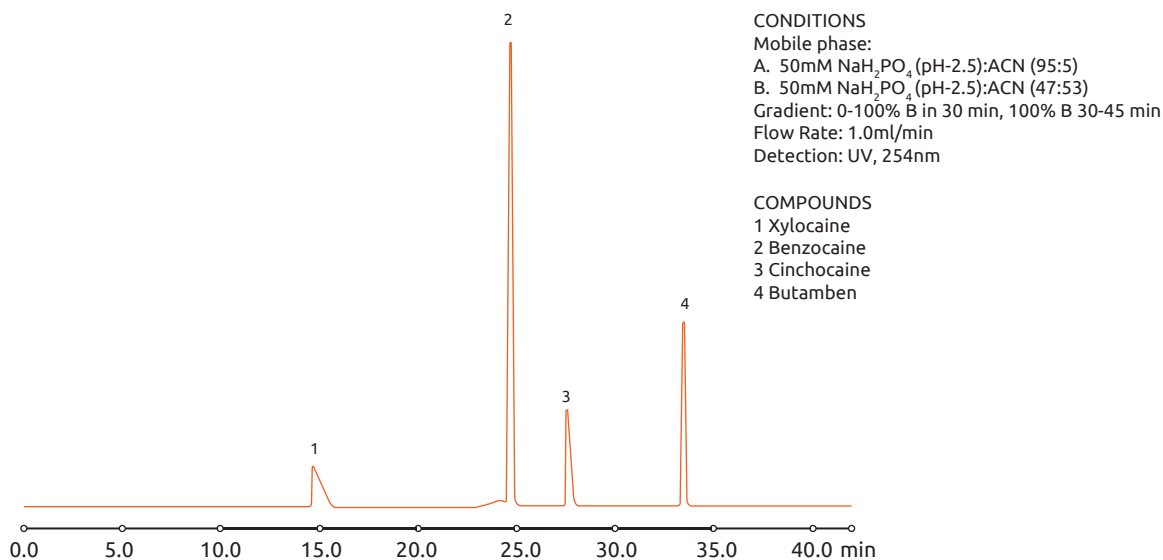
PURITAS™ C4 phases are bonded with butyl groups and show moderate hydrophobicity. They are suited for the separation of peptides and proteins. Especially, larger pore silicas with less surface area are used to avoid denaturation of proteins. The phases are also useful for separating components within a wide range of hydrophobicity in one shot.

KEY FEATURES

- Recommended for biological separations
- Quick separation of samples with wide range of hydrophobicity

APPLICATION: LOCAL ANAESTHETICS

4.6mm X 250mm, 120Å, 5µm



Chromachemie Proprietary information



TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATION	
Average particle size *) (μm)	5 μm	10 μm
Average pore size ($\text{\AA}$)	120	120
Specific surface area (m^2/g)	310	300
Average pore volume (ml/g)	1.0	1.0
Carbon Load (%)	7.1	7
pH range	2-8	2-8

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ C4 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	BONDING PHASE
PN04-05-120-250	250 mm x 4.6 mm	5	C4
PN04-05-120-150	150 mm x 4.6 mm	5	C4
PN04-05-120-100	100 mm x 4.6 mm	5	C4
PN04-05-120-050	50 mm x 4.6 mm	5	C4
PN04-10-120-250	250 mm x 4.6 mm	10	C4

PURITAS™ 120Å C1

GENERAL INFORMATION

PURITAS™ C1 packing materials are bonded with trimethylmonochlorosilane using our ultra pure silica gel as base material. It has the lowest hydrophobicity among alkyl-bonded phases and is suited for the separation of hydrophobic peptides and proteins in reversed phase mode. Highly polar compounds are separated in normal phase mode. The phase is also useful for GPC depending on the choice of the eluent.

KEY FEATURES

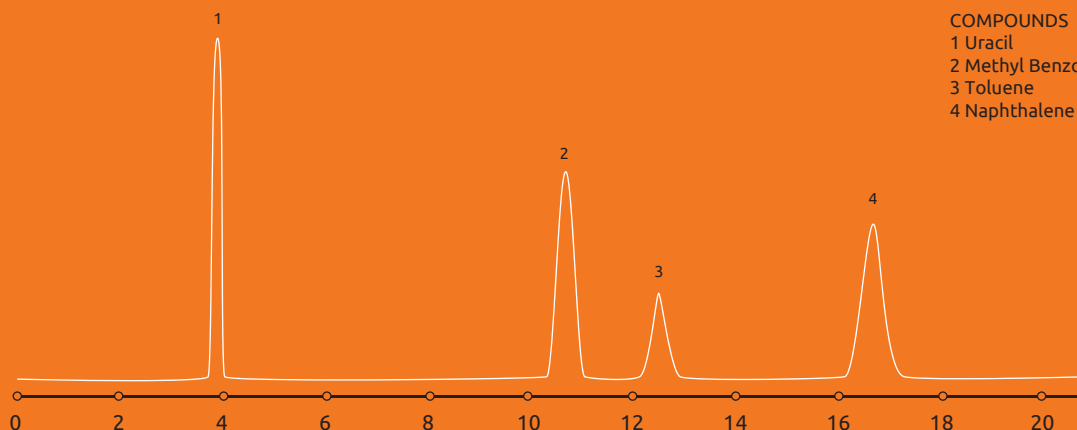
- Lowest hydrophobicity among alkyl-bonded phases
- Suitable for hydrophilic samples separation
- Useful for GPC depending on the eluent

APPLICATION: ORGANIC MIXTURES

10mm X 250mm, 120Å, 10µm

CONDITIONS
Mobile Phase : MeOH / H₂O = 50 / 50
Flow Rate : 4.0 ml / min
Temperature : Ambient
Detector : UV 254 nm

COMPOUNDS
1 Uracil
2 Methyl Benzoate
3 Toluene
4 Naphthalene





TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATION	
Average particle size *) (μm)	5 μm	10 μm
Average pore size ($\text{\AA}$)	120	120
Specific surface area (m^2/g)	300	300
Average pore volume (ml/g)	1	1
Carbon Load (%)	5	5
pH range	2-8	2-8

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ C1 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	BONDING PHASE
PN01-05-120-250	250mmx4.6mm	5	C1
PN01-05-120-150	150mmx4.6mm	5	C1
PN01-05-120-100	100mmx4.6mm	5	C1
PN01-05-120-050	50mmx4.6mm	5	C1
PN01-10-120-250	250mmx4.6mm	10	C1

PURITAS™ 120Å CN

GENERAL INFORMATION

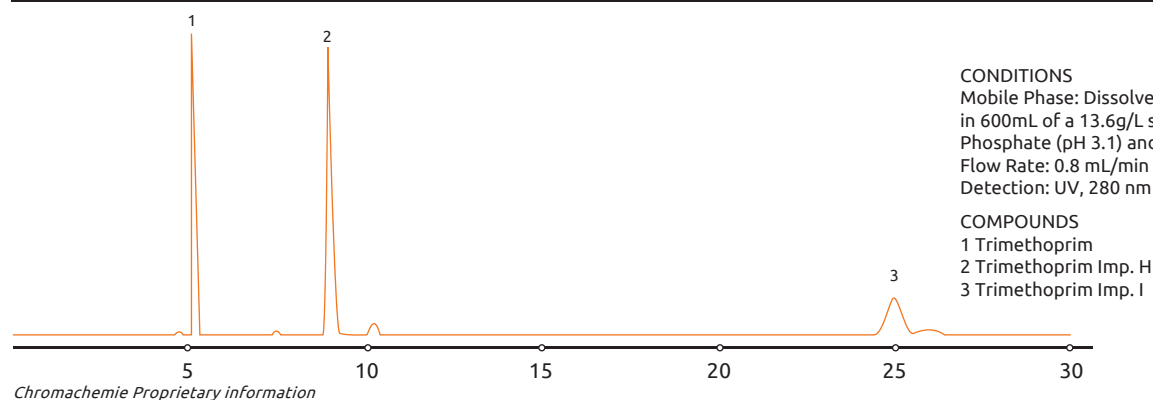
PURITAS™ CN phases are bonded with Cyanopropyl Silane using our ultra pure spherical silica gel as base material. Depending on the choice of the eluent, it can both be used under normal and reversed phase mode. Especially, it is useful for polar compounds separation using methanol / water as mobile phase. The phase is also recommended for the separation of compounds having strong π - π interactions

KEY FEATURES

- Most versatile medium polar phase
- Useful in both normal and reversed phase
- Useful as a support of special modification
- Recommended for separation of basic compounds and for compounds having strong π - π interactions

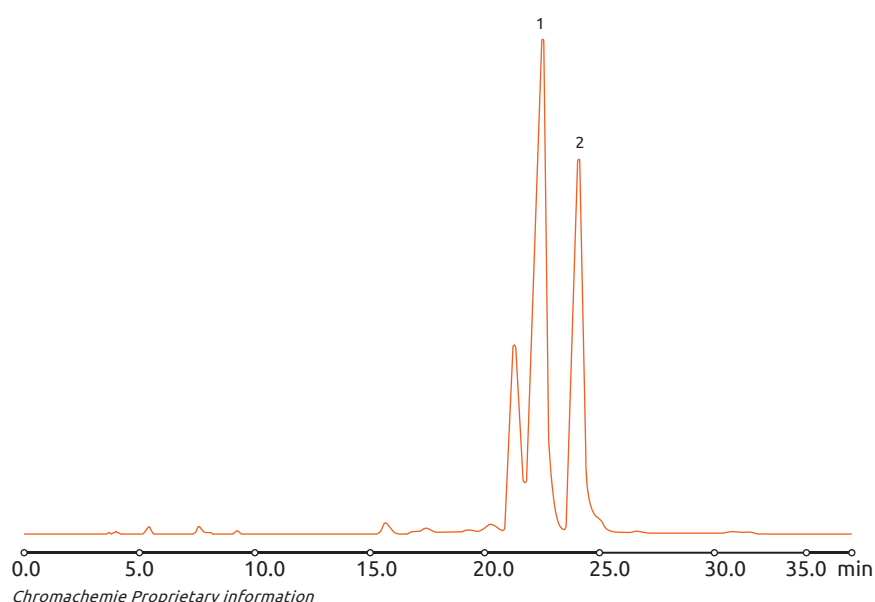
APPLICATION: TRIMETHOPRIM AND IMPURITIES AS PER USP

4.6mm X 250mm, 120Å, 5µm



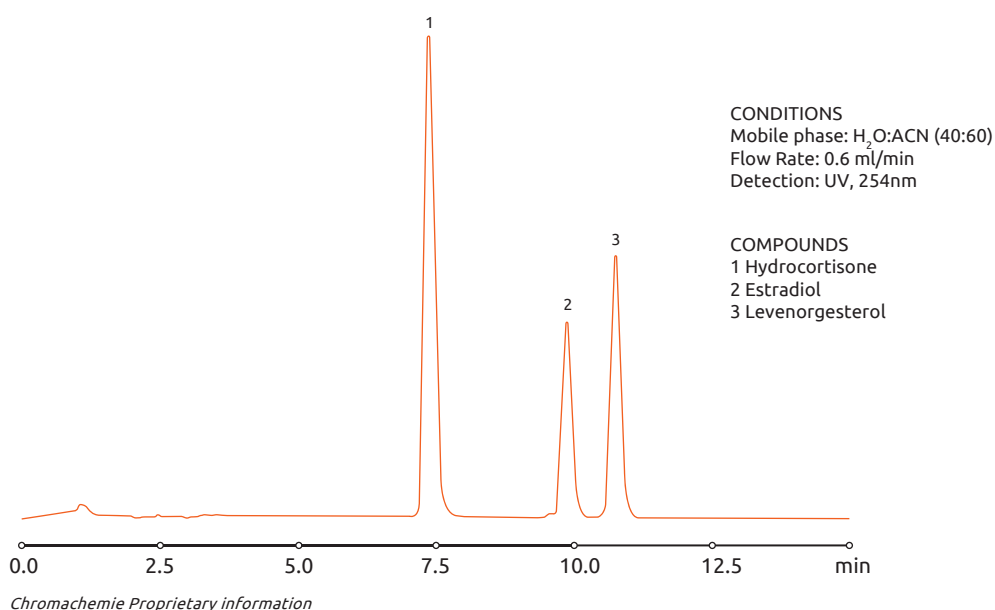
APPLICATION: DIACEREIN IMPURITIES

4.6mm X 250mm, 120Å, 5µm



APPLICATION: STEROIDS

4.6mm X 250mm, 120Å, 5µm



TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS	
Average particle size *) (µm)	5µm	10µm
Average pore size (Å)	120	120
Specific surface area (m ² /g)	287	320
Average pore volume (ml/g)	1.06	1.08
Carbon Load (%)	7.1	7.5
pH range	2-8	2-8

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ CN ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PNCN-05-120-250	250 mm x 4.6 mm	5	CN
PNCN-05-120-150	150 mm x 4.6 mm	5	CN
PNCN-05-120-100	100 mm x 4.6 mm	5	CN
PNCN-05-120-050	50 mm x 4.6 mm	5	CN
PNCN-10-120-250	250 mm x 4.6 mm	10	CN

PURITAS™ PHENYL 120Å PH

GENERAL INFORMATION

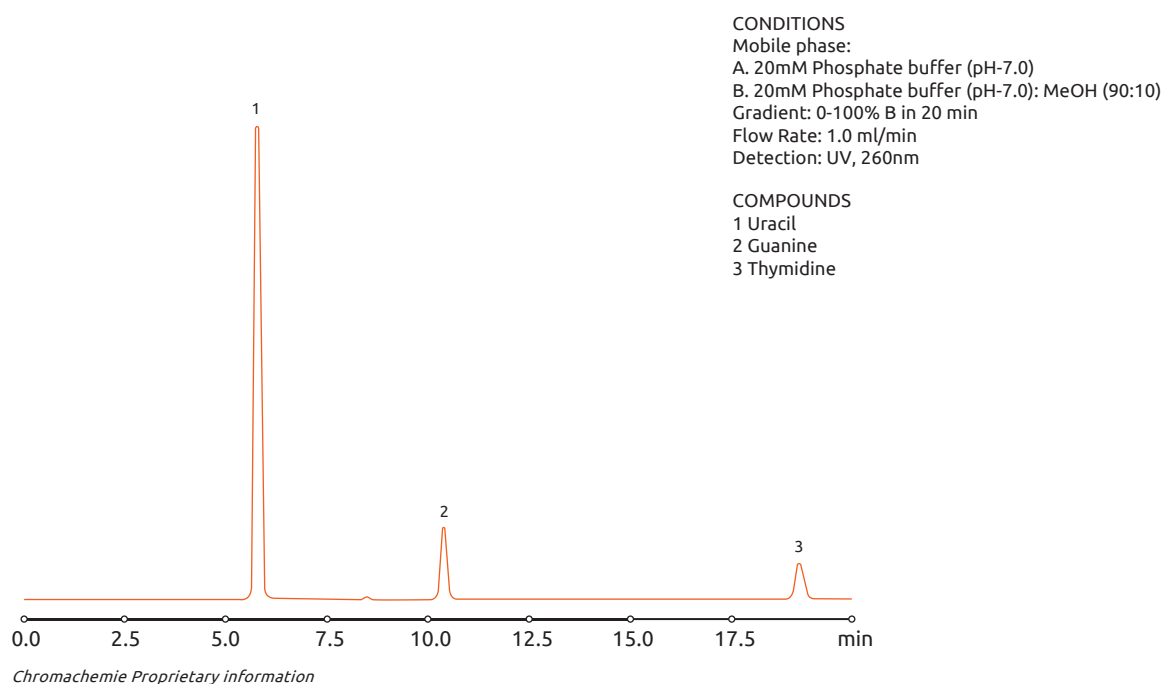
PURITAS™ PHENYL phases are bonded with phenyl ring to offer alternative selectivity for separation of compounds showing weak π - π interactions.

KEY FEATURES

- Most versatile medium polar phase with weak π - π interaction
- Useful as a support of special modification
- Recommended for separation of aromatic compounds and for compounds having weak π - π interactions

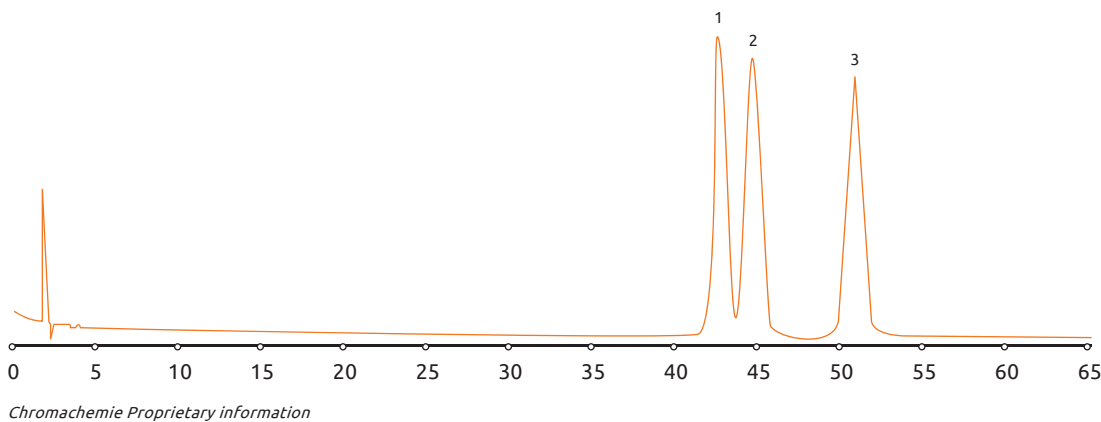
APPLICATION: NUCLEIC ACIDS

4.6mm X 250mm, 120Å, 5 μ m



CONDITIONS
Buffer: 2.7g/L of KH₂PO₄ (pH 3.0)
Mobile phase: Methanol, Acetonitrile and Buffer (3:1:6)
Temperature: 60°C
Flow Rate: 1.5 ml/min
Detection: UV, 215 nm

COMPOUNDS
1 Celecoxib related compound A
2 Celecoxib
3 celecoxib related compound B



TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS	
Average particle size *) (µm)	5µm	10µm
Average pore size (Å)	120	120
Specific surface area (m2/g)	340	309
Average pore volume (ml/g)	1.07	1.08
Carbon Load (%)	8.8	9
pH range	2-8	2-8

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ PHENYL ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PNPH-05-120-250	250 mm x 4.6 mm	5	PH
PNPH-05-120-150	150 mm x 4.6 mm	5	PH
PNPH-05-120-100	100 mm x 4.6 mm	5	PH
PNPH-05-120-050	50 mm x 4.6 mm	5	PH
PNPH-10-120-250	250 mm x 4.6 mm	10	PH

PURITAS™ APS

GENERAL INFORMATION

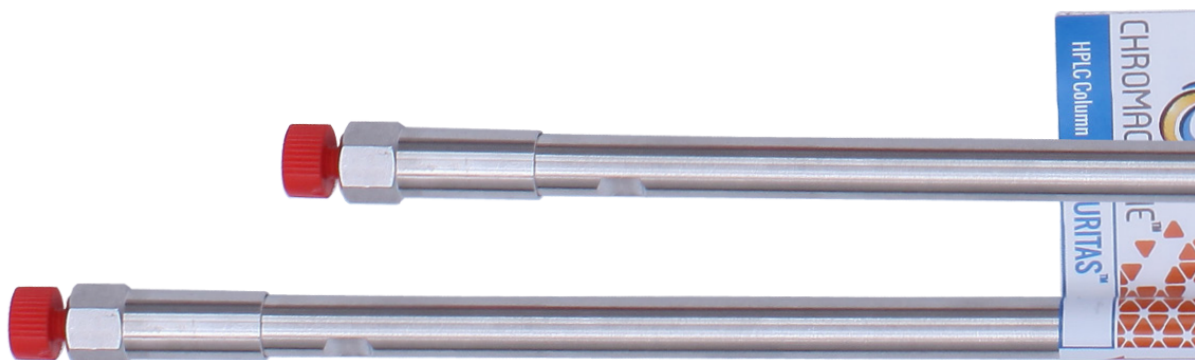
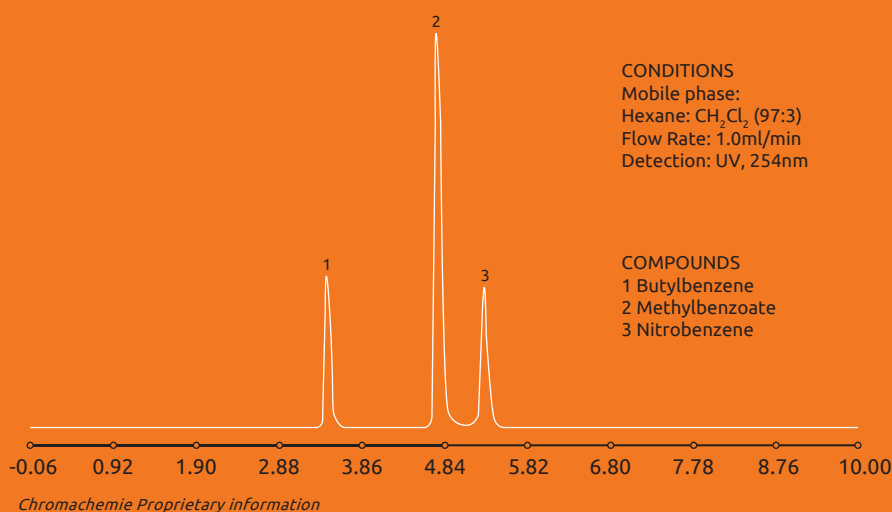
PURITAS™ APS phases are bonded with amino-propyl silane using our ultra pure spherical silica gel as base material. Depending on the choice of the eluent, it can both be used under normal and reversed phase mode. Especially, it is useful for saccharide separation using acetonitrile - water. The phase is also recommended for the separation of basic compounds under normal phase conditions, which could not be separated using unmodified silica gel. Simple eluents such as hexane - ethyl acetate or chloroform / methanol are used for the separation without any polar solvent additives.

KEY FEATURES

- Most versatile medium polar phase
- Useful in both normal and reversed phase
- Useful as a support of special modification
- Recommended for basic compounds separation

APPLICATION: SUBSTITUTED BENZENES

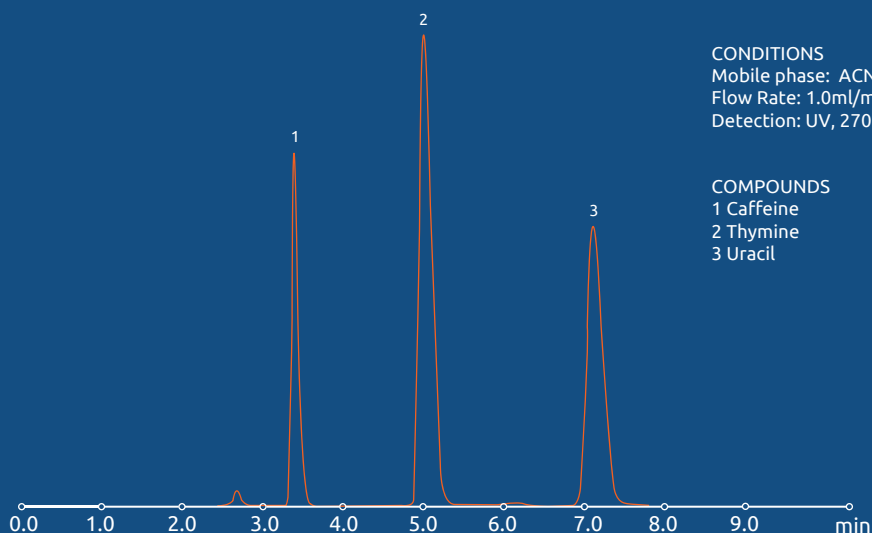
4.6mm X 250mm, 120Å, 5µm



APPLICATION: HETEROCYCLIC COMPOUNDS

4.6mm X 250mm, 120Å, 5µm

10



Chromachemie Proprietary information

CONDITIONS

Mobile phase: ACN:20mM KH₂PO₄, pH-7.8 (80:20)

Flow Rate: 1.0ml/min

Detection: UV, 270nm

COMPOUNDS

1 Caffeine

2 Thymine

3 Uracil

TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS	
Average particle size *) (µm)	5µm	10µm
Average pore size (Å)	120	120
Specific surface area (m ² /g)	312	312
Average pore volume (ml/g)	1.08	1.0
Carbon Load (%)	4.8	4.8
pH range	2-8	2-8

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ APS ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PNAP-05-120-250	250 mm x 4.6 mm	5	APS
PNAP-05-120-150	150 mm x 4.6 mm	5	APS
PNAP-05-120-100	100 mm x 4.6 mm	5	APS
PNAP-05-120-050	50 mm x 4.6 mm	5	APS
PNAP-10-120-250	250 mm x 4.6 mm	10	APS



PURITAS™ DIOL

GENERAL INFORMATION

PURITAS™ DIOL phase is a very versatile phase as it can be used both under 'Normal Phase' and 'Reverse Phase' conditions depending on the mobile phase selection. In the normal Phase mode the retention times are lesser than that of bare silica with good resolution and reproducibility. In the reverse phase mode it offers a unique selectivity for a wide range of compounds. Overall it is a very good phase for the separation of both Non-polar and highly polar compounds.

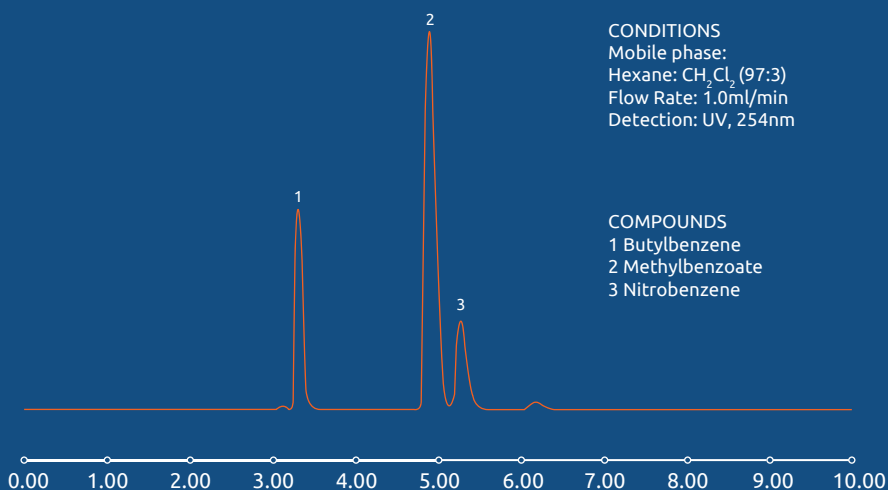
KEY FEATURES

- Suitable for hydrophilic compounds separation
- Strong retention in aqueous condition
- Longer lifetime in aqueous eluents
- Different selectivity from ODS
- Enhanced mechanical stability
- Suitable for easy scale up and preparative analysis

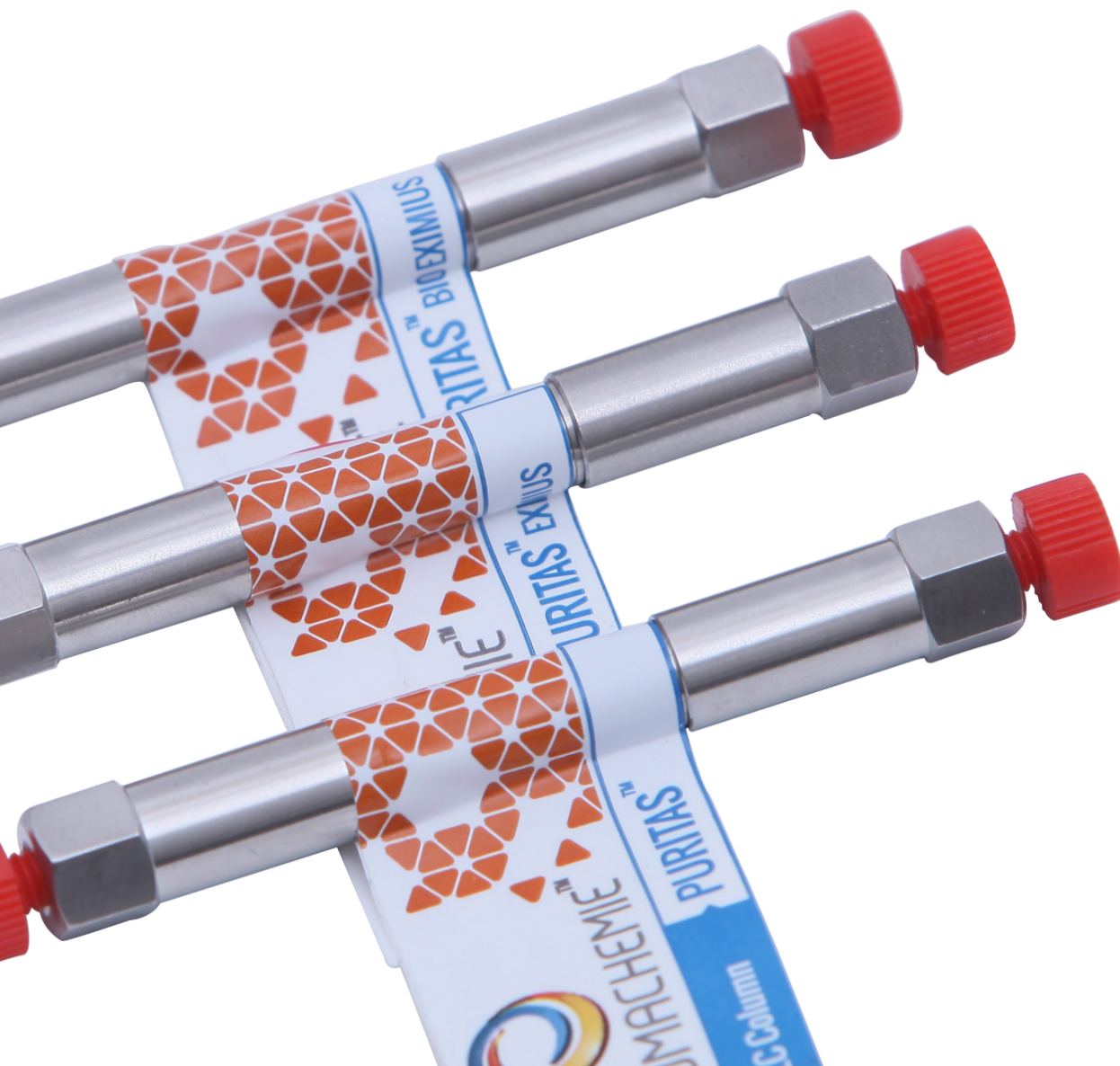


APPLICATION: SUBSTITUTED BENZENES

4.6mm X 250mm, 120Å, 5µm



Chromachemie Proprietary information



TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS	
Average particle size *) (μm)	5 μm	10 μm
Average pore size ($\text{\AA}$)	120	120
Specific surface area (m^2/g)	316	300
Average pore volume (ml/g)	1.00	1.00
Carbon Load (%)	8.2	8.0
pH range	2-8	2-8

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ DIOL ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	BONDING PHASE
PNDL-05-120-250	250 mm x 4.6 mm	5	DIOL
PNDL-05-120-150	150 mm x 4.6 mm	5	DIOL
PNDL-05-120-100	100 mm x 4.6 mm	5	DIOL
PNDL-05-120-050	50 mm x 4.6 mm	5	DIOL
PNDL-10-120-250	250mmx4.6mm	10	DIOL

GENERAL INFORMATION

PURITAS™ SIL (spherical ultra pure) phases are based on spherical and totally porous silica gel with metal impurities specified to be less than 10 ppm each for Al, Fe, Ti and Zr. Its manufacturing process under strictly controlled conditions produces a material with reproducible distribution of particle and pore size and surface area. The presence of performance-degrading small pores is avoided.

PURITAS™ SIL phases for analytical applications are available in 5µm and 10µm particle sizes.

Nowadays, preparative liquid chromatography is used for the purification of a wide range of high value products. PURITAS™ SIL series packing materials for preparative chromatography feature narrow particle size distribution and ultra high silica purity. PURITAS™ SIL scale up is guaranteed by using the same production procedure for all grades.

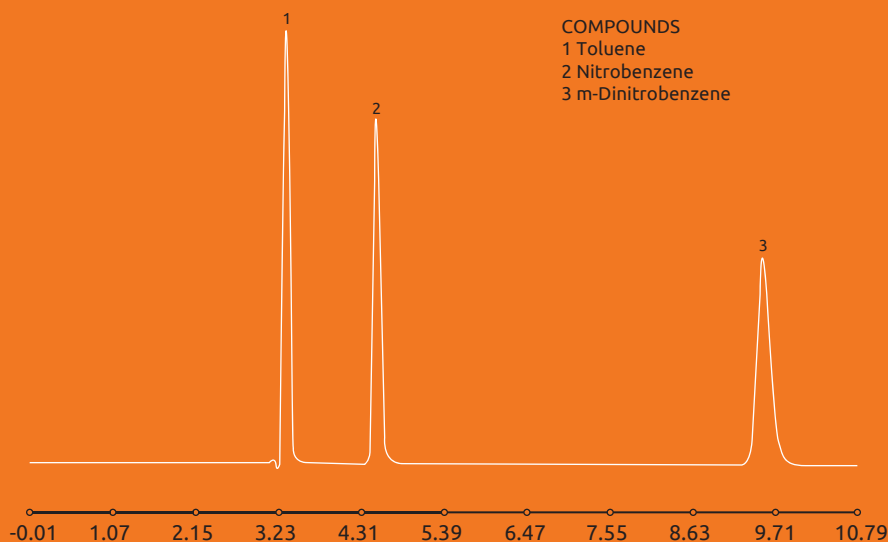
KEY FEATURES

- Ultra high purity silica
- Narrow particle size distribution
- Higher loading capacity
- Enhanced mechanical stability

APPLICATION: SUBSTITUTED BENZENES 4.6mm X 250mm, 5µm

CONDITIONS
Mobile phase:
Hexane: IPA (100:1)
Flow Rate: 1.0ml/min
Detection: UV, 254nm

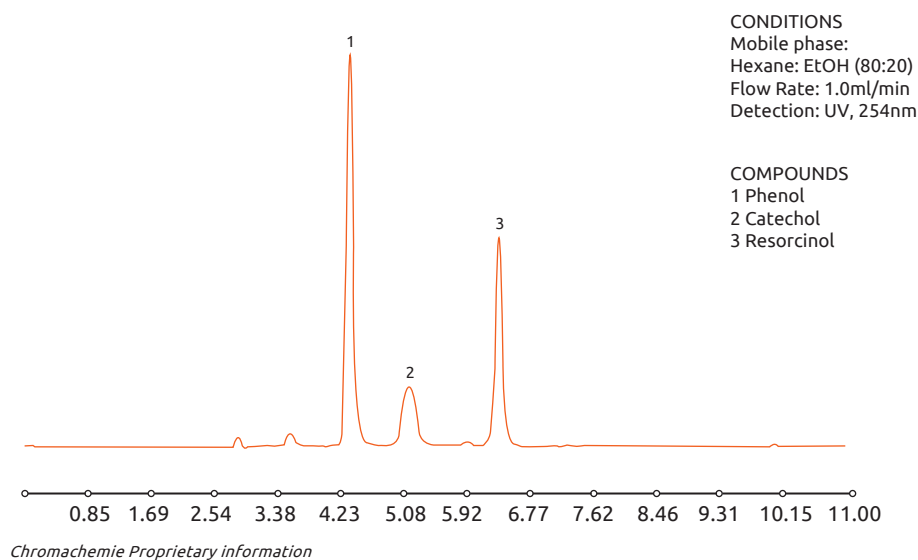
COMPOUNDS
1 Toluene
2 Nitrobenzene
3 m-Dinitrobenzene



Chromachemie Proprietary information

APPLICATION: PHENOLIC COMPOUNDS

4.6mm X 250mm, 100Å, 5µm

**TECHNICAL SPECIFICATIONS AT A GLANCE**

ANALYSIS	SPECIFICATIONS	
Average particle size *) (µm)	5µm	10µm
Average pore size (Å)	100	100
Specific surface area (m ² /g)	466	450
Average pore volume (ml/g)	1.1	1.1

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ SIL ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PNSI-05-100-250	250 mm x 4.6 mm	5	Silica
PNSI-05-100-150	150 mm x 4.6 mm	5	Silica
PNSI-05-100-100	100 mm x 4.6 mm	5	Silica
PNSI-05-100-050	50 mm x 4.6 mm	5	Silica
PNSI-10-100-250	250mmx4.6mm	10	Silica



PURITAS™ BIO 300Å C18

GENERAL INFORMATION

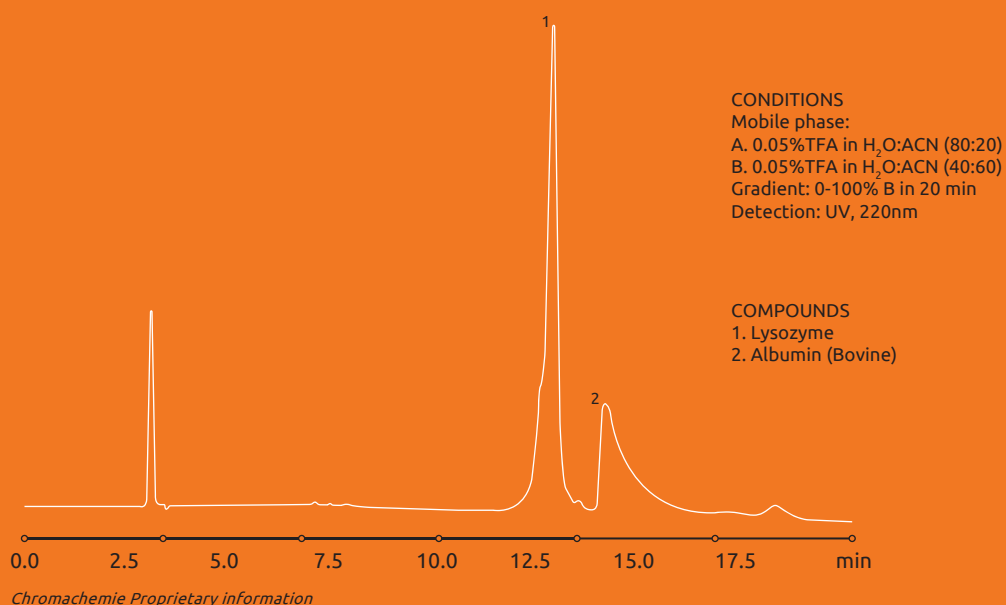
PURITAS™ BIO 300Å C18 phases are bonded with octadecyl groups and are fully end capped. They are recommended for larger molecules such as proteins with higher hydrophobicity and bulky molecules which are too difficult for separations. PURITAS™ BIO 300Å C18 phases are available in particle sizes of 5, 10 and 15 microns for both analytical as well as preparative applications.

KEY FEATURES

- Recommended for highly hydrophobic bulky molecules
- Most versatile wide pore reversed phase with high coverage and exhaustive end capping
- Enhanced Mechanical stability
- Exceptional batch-to-batch reproducibility

APPLICATION: LYSOZYME AND BSA

4.6mm X 250mm, 300Å, 5µm



TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS	
Average particle size *) (µm)	5µm	10µm
Average pore size (Å)	300	300
Specific surface area (m ² /g)	97	101
Average pore volume (ml/g)	0.91	0.87
Carbon Load (%)	6.5	6.5
pH range	1.5-10	1.5-10

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ BIO C18 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PB18-05-300-250	250 mm x 4.6 mm	5	C18
PB18-05-300-150	150 mm x 4.6 mm	5	C18
PB18-05-300-100	100 mm x 4.6 mm	5	C18
PB18-05-300-050	50 mm x 4.6 mm	5	C18
PB18-10-300-250	250 mm x 4.6 mm	10	C18

PURITAS™ BIO 300Å C8

GENERAL INFORMATION

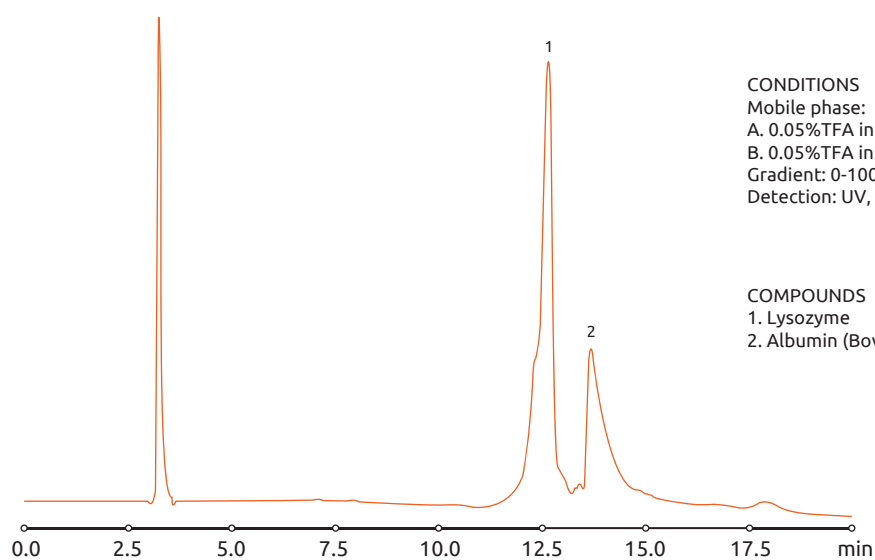
PURITAS™ BIO 300Å C8 phases are bonded with octyl groups and show moderate hydrophobicity. They are suited for the separation of peptides and proteins. Especially, larger pore silicas with less surface area are used to avoid denaturation of proteins. The phases are also useful for separating components within a wide range of hydrophobicity in one shot.

KEY FEATURES

- Recommended for biological separations
- Quick separation of samples with wide range of hydrophobicity

APPLICATION: LYSOZYME AND BSA

4.6mm X 250mm, 300Å, 5µm



CONDITIONS
Mobile phase:
A. 0.05%TFA in H₂O:ACN (80:20)
B. 0.05%TFA in H₂O:ACN (40:60)
Gradient: 0-100% B in 20 min
Detection: UV, 220nm

COMPOUNDS
1. Lysozyme
2. Albumin (Bovine)

Chromachemie Proprietary information



TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS	
Average particle size *) (μm)	5 μm	10 μm
Average pore size ($\text{\AA}$)	300	300
Specific surface area (m^2/g)	107	100
Average pore volume (ml/g)	0.84	0.9
Carbon Load (%)	3.9	4.6
pH range	1.5-10	1.5-10

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ BIO C8 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	BONDING PHASE
PB08-05-300-250	250 mm x 4.6 mm	5	C8
PB08-05-300-150	150 mm x 4.6 mm	5	C8
PB08-05-300-100	100 mm x 4.6 mm	5	C8
PB08-05-300-050	50 mm x 4.6 mm	5	C8
PB08-10-300-250	250 mm x 4.6 mm	10	C8

PURITAS™ BIO 300Å C4

GENERAL INFORMATION

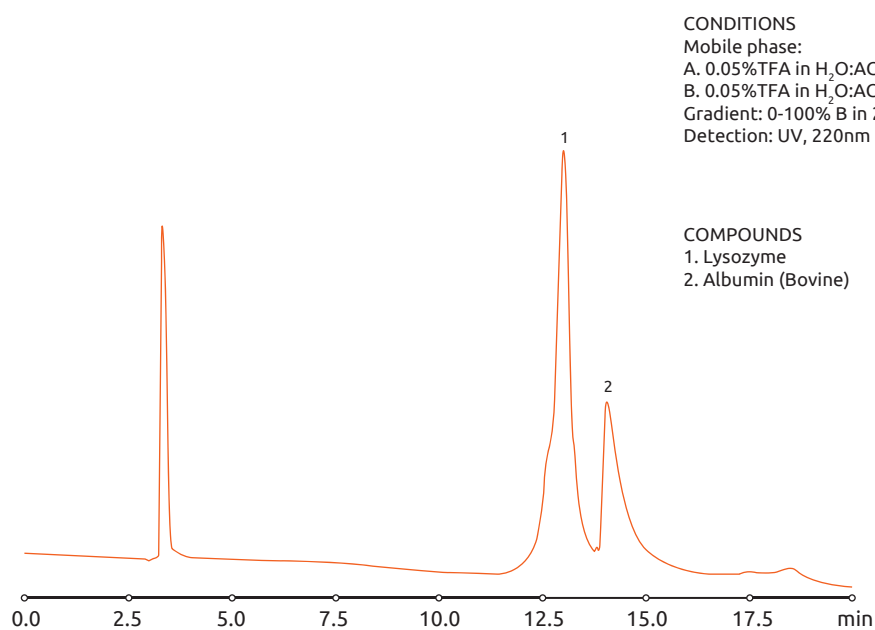
PURITAS™ BIO 300Å C4 phases are bonded with butyl groups and show moderate hydrophobicity. They are suited for the separation of peptides and proteins. Especially, larger pore silicas with less surface area are used to avoid denaturation of proteins. The phases are also useful for separating components within a wide range of hydrophobicity in one shot.

KEY FEATURES

- Recommended for biological separations
- Quick separation of samples with wide range of hydrophobicity

APPLICATION: LYSOZYME AND BSA

4.6mm X 250mm, 300Å, 5µm



Chromachemie Proprietary information



TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS	
Average particle size *) (μm)	5 μm	10 μm
Average pore size ($\text{\AA}$)	300	300
Specific surface area (m^2/g)	105	99
Average pore volume (ml/g)	0.91	0.85
Carbon Load (%)	2.6	2.6
pH range	1.5-10	1.5-10

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ BIO C4 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	BONDING PHASE
PB04-05-300-250	250 mm x 4.6 mm	5	C4
PB04-05-300-150	150 mm x 4.6 mm	5	C4
PB04-05-300-100	100 mm x 4.6 mm	5	C4
PB04-05-300-050	50 mm x 4.6 mm	5	C4
PB04-10-300-250	250 mm x 4.6 mm	10	C4



PURITAS™ BIO EXIMIUS 300Å C18

GENERAL INFORMATION

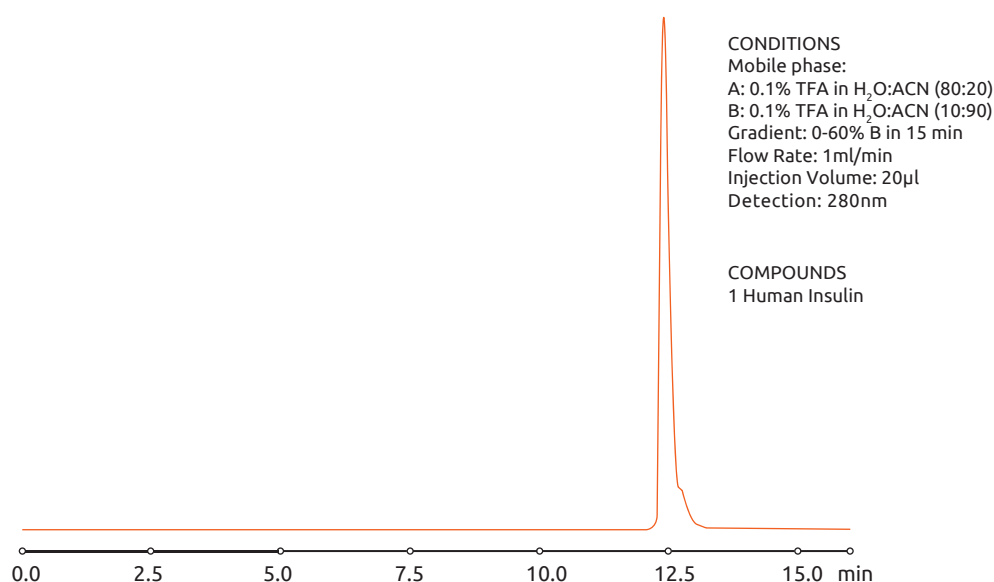
The 21st century is often considered as the era of “protein science”. Peptide and protein research is quickly maturing to be the major driving force for new kinds of pharmaceutical ingredients. For both, the research and the big scale of peptide and protein manufacturing spherical silica must be tailor made, fine tuned. The new line up of PURITAS™ BIO EXIMIUS is designed to serve these needs, featuring extended acidic and alkalic resistance and high loadability combined with exceptional durability.

The improved high density bonding and full end capping makes it very suitable to general use and to separate or purify high molecular weight compounds, especially proteins. Because of the significant improvement in durability and acidic, alkalic resistance it can be used for extended period of time in acidic mobile phase condition and rinsed for recovery with NaOH containing buffer.

KEY FEATURES

- The perfect silica gel for biopharmaceutical applications
- Novel chemical bonding assures stability under severe alkalic and acidic conditions
- Designed for protein purification
- 30 nm pore size, narrow distribution range
- Totally spherical particles made of ultra high purity silica gel
- Featuring extended acidic and alkalic resistance and high durability

APPLICATION: HUMAN INSULIN 4.6mm X 250mm, 300Å, 5µm



Chromachemie Proprietary information

TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS		
Average particle size *) (μm)	3 μm	5 μm	10 μm
Average pore size ($\text{\AA}$)	300	300	300
Specific surface area (m^2/g)	115	97	111
Average pore volume (ml/g)	1.00	0.75	0.95
Carbon Load (%)	9.1	8	8
pH range	1.5-10	1.5-10	1.5-10

*)The Specification of particle size and physical properties are those of base silicagel



PURITAS™ BIO EXIMIUS C18 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	BONDING PHASE
PBE18-03-300-250	250mmx4.6mm	3	C18
PBE18-03-300-150	150mmx4.6mm	3	C18
PBE18-03-300-100	100mmx4.6mm	3	C18
PBE18-03-300-050	50mmx4.6mm	3	C18
PBE18-05-300-250	250mmx4.6mm	5	C18
PBE18-05-300-150	150mmx4.6mm	5	C18
PBE18-05-300-100	100mmx4.6mm	5	C18
PBE18-05-300-050	50mmx4.6mm	5	C18
PBE18-10-300-250	250mmx4.6mm	10	C18

PURITAS™ BIO EXIMIUS 300Å C8



GENERAL INFORMATION

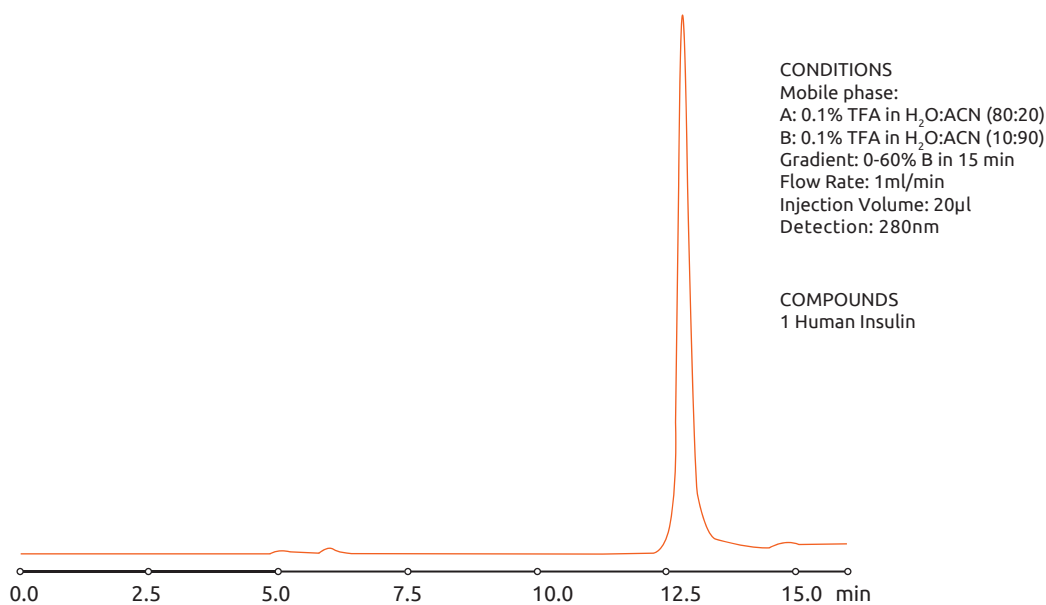
PURITAS™ BIO EXIMIUS C8 phases are bonded with octyl groups and are fully end capped. They are recommended for compounds which are too strongly retained on BIO C18 phases. PURITAS™ BIO EXIMIUS C8 phases are available in particle sizes of 3, 5, 10 and 15 microns for both analytical as well as preparative applications. These phase are widely used for larger molecules such as proteins with higher hydrophobicity.

The improved high density bonding and full end capping makes it very suitable to general use and to separate or purify high molecular weight compounds, especially proteins. Because of the significant improvement in durability and acidic, alkalic resistance it can be used for extended period of time in acidic mobile phase condition and rinsed for recovery with NaOH containing buffer.

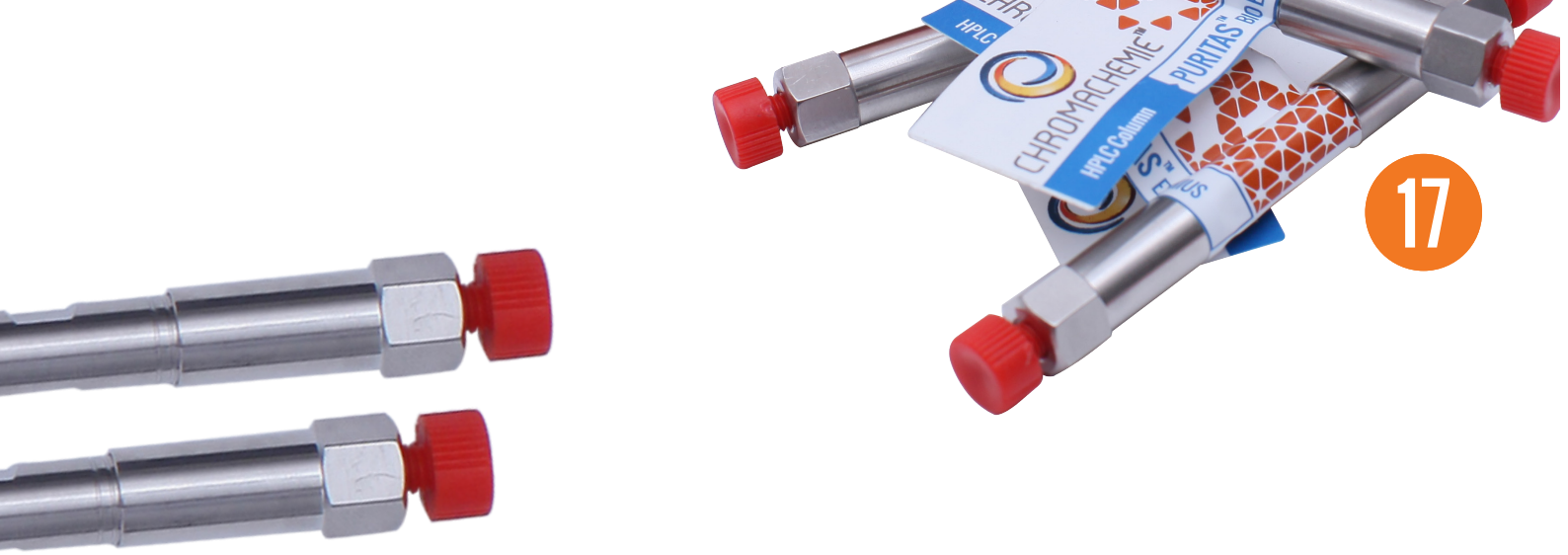
KEY FEATURES

- The perfect silica gel for biopharmaceutical applications
- Novel chemical bonding assures stability under severe alkalic and acidic conditions
- Designed for high molecular weight peptides or smaller proteins purification
- 30 nm pore size with narrow distribution range
- Totally spherical particles made of ultra high purity silica gel
- Featuring extended acidic and alkalic resistance and high durability

APPLICATION: HUMAN INSULIN 4.6mm X 250mm, 300Å, 5µm



Chromachemie Proprietary information



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TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS		
Average particle size *) (μm)	3 μm	5 μm	10 μm
Average pore size ($\text{\AA}$)	300	300	300
Specific surface area (m^2/g)	119	97	108
Average pore volume (ml/g)	0.94	0.75	1.01
Carbon Load (%)	4.8	6	4.6
pH range	1.5-10	1.5-10	1.5-10

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ BIO EXIMIUS C8 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	BONDING PHASE
PBE08-03-300-250	250mmx4.6mm	3	C8
PBE08-03-300-150	150mmx4.6mm	3	C8
PBE08-03-300-100	100mmx4.6mm	3	C8
PBE08-03-300-050	50mmx4.6mm	3	C8
PBE08-05-300-250	250mmx4.6mm	5	C8
PBE08-05-300-150	150mmx4.6mm	5	C8
PBE08-05-300-100	100mmx4.6mm	5	C8
PBE08-05-300-050	50mmx4.6mm	5	C8
PBE08-10-300-250	250mmx4.6mm	10	C8

PURITAS™ BIO EXIMIUS 300Å C4



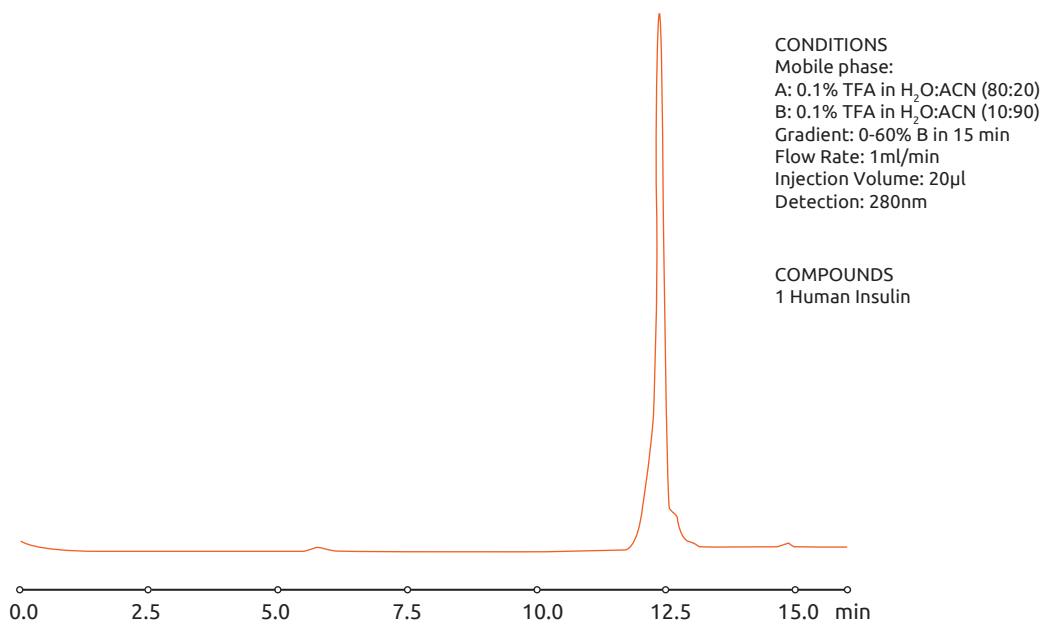
GENERAL INFORMATION

PURITAS™ BIO EXIMIUS C4 phases are bonded with Butyl groups and are fully end capped. They are recommended for compounds which are too strongly retained on C18 and C8 phases. PURITAS™ BIO EXIMIUS C4 phases are available in particle sizes of 5, 10 and 15 microns for both analytical as well as preparative applications. These phase are widely used for larger molecules such as proteins with low to medium hydrophobicity. The improved high density bonding and full end capping makes it very suitable to general use and to separate or purify high molecular weight compounds, especially proteins. Because of the significant improvement in durability and acidic, alkalic resistance it can be used for extended period of time in acidic mobile phase condition and rinsed for recovery with NaOH containing buffer.

KEY FEATURES

- The perfect silica gel for biopharmaceutical applications
- Novel chemical bonding assures stability under severe alkalic and acidic conditions
- Especially designed for protein purification
- 30 nm pore size with narrow distribution range
- Totally spherical particles made of ultra high purity silica gel
- Featuring extended acidic and alkalic resistance and high durability

APPLICATION: HUMAN INSULIN 4.6mm X 250mm, 300Å, 5µm



Chromachemie Proprietary information

TECHNICAL SPECIFICATIONS AT A GLANCE

ANALYSIS	SPECIFICATIONS	
Average particle size *) (µm)	5µm	10µm
Average pore size (Å)	300	300
Specific surface area (m ² /g)	100	100
Average pore volume (ml/g)	0.91	0.9
Carbon Load (%)	3	3
pH range	1.5-10	1.5-10

*)The Specification of particle size and physical properties are those of base silicagel

PURITAS™ BIO EXIMIUS C4 ANALYTICAL HPLC COLUMNS ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	BONDING PHASE
PBE04-05-300-250	250 mm x 4.6 mm	5	C4
PBE04-05-300-150	150 mm x 4.6 mm	5	C4
PBE04-05-300-100	100 mm x 4.6 mm	5	C4
PBE04-05-300-050	50 mm x 4.6 mm	5	C4
PBE04-10-300-250	250 mm x 4.6 mm	10	C4

PURITAS™ PREP

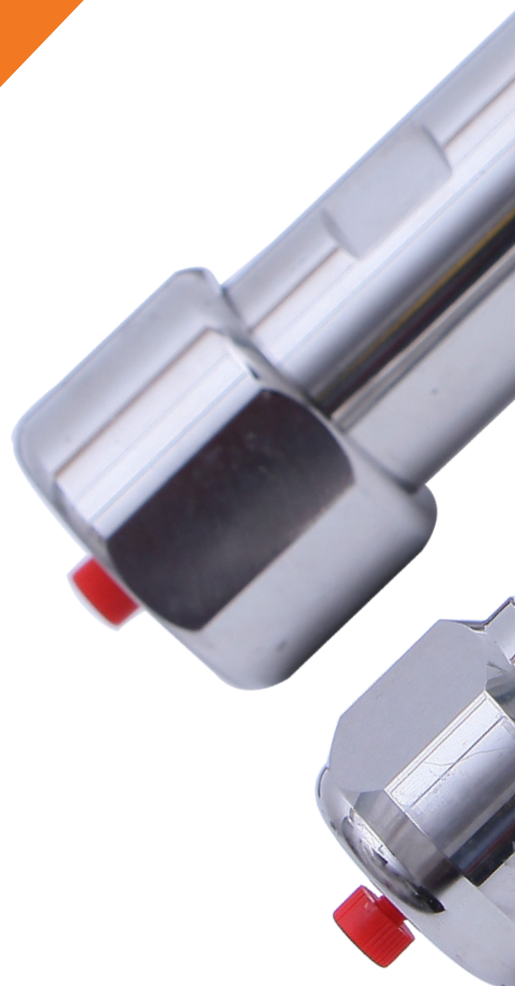
GENERAL INFORMATION

PURITAS™ PREP Range of Columns offers to you an unique advantage of complete scalability for any stationary phase of your choice making it world's First column and stationary phase of its kind to be scalable from Analytical to Prep scale for any chemistry, any particle size and any pore size to suit your customized requirements.

The PURITAS™ PREP range of pre-packed columns is currently available in following chemistry and dimensions for your complete scale up studies.

KEY FEATURES

- Recommended for preparative separations of small molecules and biomolecules
- Quick separation of samples with wide range of hydrophobicity

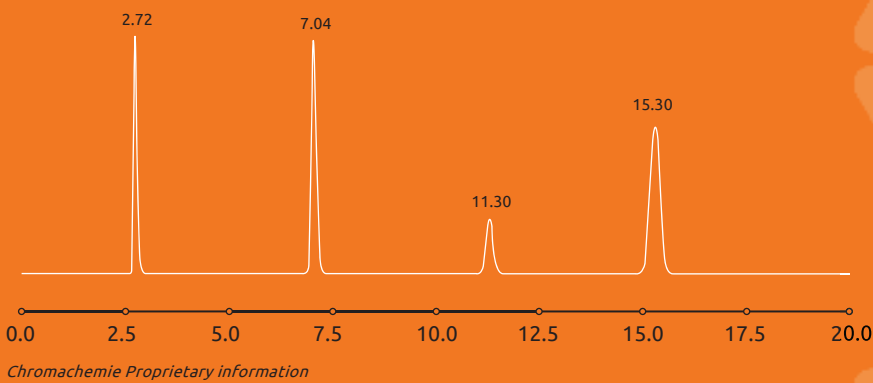




PURITAS™ EXIMIUS PE18-05-100-250

4.6mm X 250mm

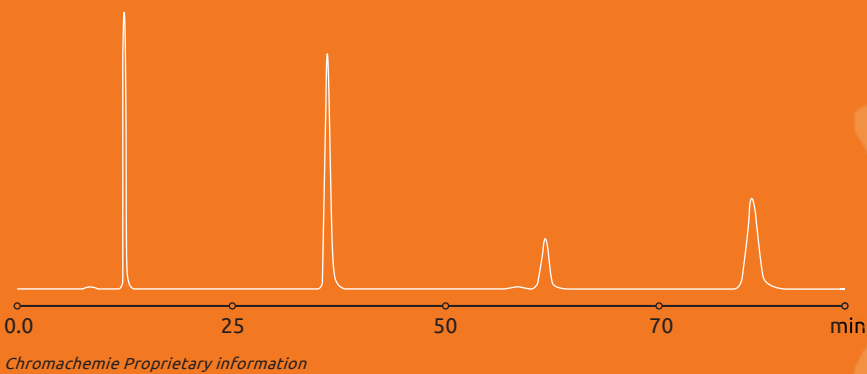
CONDITIONS
Mobile phase: Methanol: Water::70; 30
Injection Volume: 1µl
Flow Rate: 1ml/min.
Detection: UV, 254nm



PURITAS™ PREP PP18-10-100-500B

30mm X 500mm

CONDITIONS
Mobile phase: Methanol: Water::70; 30
Injection Volume: 100µl
Flow Rate: 18ml/min.
Detection: UV, 254nm



PURITAS™ PREP PP18-10-100-250A

21.2mm X 250mm

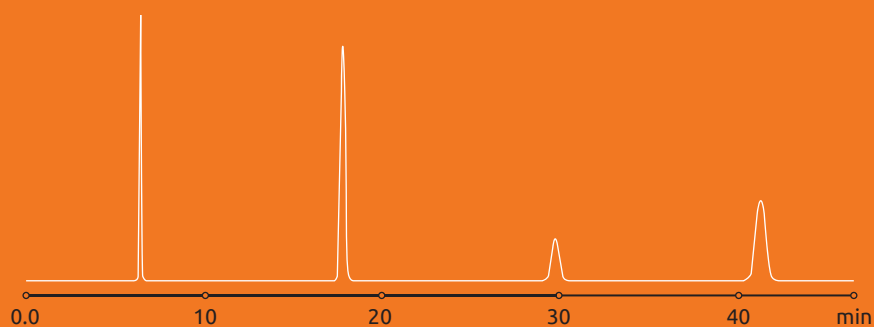
CONDITIONS

Mobile phase: Methanol: Water::70; 30

Injection Volume: 13µl

Flow Rate: 9ml/min.

Detection: UV, 254nm

*Chromachemie Proprietary information***PURITAS™ PREP PP18-10-100-250C**

50mm X 250mm

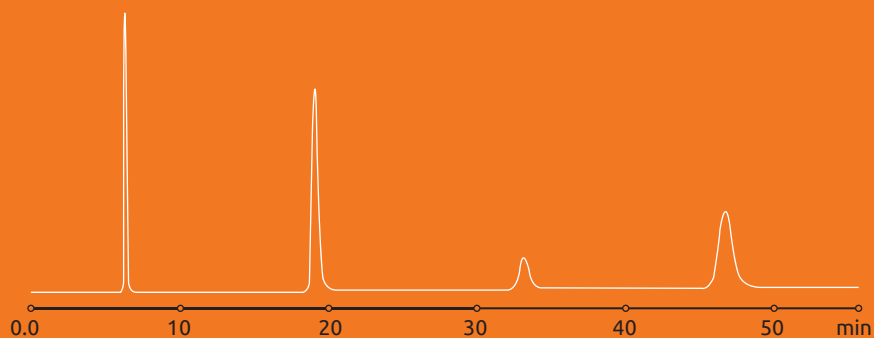
CONDITIONS

Mobile phase: Methanol: Water::70; 30

Injection Volume: 250µl

Flow Rate: 50ml/min.

Detection: UV, 254nm

*Chromachemie Proprietary information*

PURITAS™ PREP COLUMNS RANGE AVAILABLE FOR ORDERING

You can always contact us for our customized column packing services, Technical support and consultancy services on readymade scale up solutions from Analytical to Prep scale.

PURITAS™ PREP HPLC COLUMNS: TECHNICAL SPECIFICATIONS AND ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	PORE SIZE (Å)	BONDING PHASE
PP18-05-100-250A	250 mm x 21.2 mm	5	100	ODS (C18)
PP18-05-100-150A	150 mm x 21.2 mm	5	100	ODS (C18)
PP18-05-100-100A	100 mm x 21.2 mm	5	100	ODS (C18)
PP18-05-100-050A	50 mm x 21.2 mm	5	100	ODS (C18)
PP18-10-100-250A	250 mm x 21.2 mm	10	100	ODS (C18)
PP18-10-100-150A	150 mm x 21.2 mm	10	100	ODS (C18)
PP18-10-100-100A	100 mm x 21.2 mm	10	100	ODS (C18)
PP18-10-100-050A	50 mm x 21.2 mm	10	100	ODS (C18)
PP18-15-100-250A	250 mm x 21.2 mm	15	100	ODS (C18)
PP18-15-100-150A	150 mm x 21.2 mm	15	100	ODS (C18)
PP18-15-100-100A	100 mm x 21.2 mm	15	100	ODS (C18)
PP18-15-100-050A	50 mm x 21.2 mm	15	100	ODS (C18)
PP18-10-100-250B	250 mm x 30 mm	10	100	ODS (C18)
PP18-10-100-150B	150 mm x 30 mm	10	100	ODS (C18)
PP18-10-100-100B	100 mm x 30 mm	10	100	ODS (C18)
PP18-10-100-050B	50 mm x 30 mm	10	100	ODS (C18)
PP18-15-100-250B	250 mm x 30 mm	15	100	ODS (C18)
PP18-15-100-150B	150 mm x 30 mm	15	100	ODS (C18)
PP18-15-100-100B	100 mm x 30 mm	15	100	ODS (C18)
PP18-15-100-050B	50 mm x 30 mm	15	100	ODS (C18)
PP18-10-100-250C	250 mm x 50 mm	10	100	ODS (C18)
PP18-10-100-150C	150 mm x 50 mm	10	100	ODS (C18)
PP18-10-100-100C	100 mm x 50 mm	10	100	ODS (C18)
PP18-10-100-050C	50 mm x 50 mm	10	100	ODS (C18)
PP18-15-100-250C	250 mm x 50 mm	15	100	ODS (C18)
PP18-15-100-150C	150 mm x 50 mm	15	100	ODS (C18)
PP18-15-100-100C	100 mm x 50 mm	15	100	ODS (C18)
PP18-15-100-050C	50 mm x 50 mm	15	100	ODS (C18)
PPCN-10-120-250A	250 mm x 21.2 mm	10	120	CN
PPCN-10-120-150A	150 mm x 21.2 mm	10	120	CN
PPCN-10-120-050A	50 mm x 21.2 mm	10	120	CN
PPCN-10-120-250B	250 mm x 30 mm	10	120	CN
PP08-10-120-250A	250 mm x 21.2 mm	10	120	C8
PP08-10-120-250B	250 mm x 30 mm	10	120	C8
PP08-10-120-250C	250 mm x 50 mm	10	120	C8
PP04-10-120-250A	250 mm x 21.2 mm	10	120	C4
PP04-10-120-250B	250 mm x 30 mm	10	120	C4
PP04-10-120-250C	250 mm x 50 mm	10	120	C4

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	PORE SIZE (Å)	BONDING PHASE
PPPH-10-120-250A	250 mm x 21.2 mm	10	120	PH
PPPH-10-120-250B	250 mm x 30 mm	10	120	PH
PPPH-10-120-250C	250 mm x 50 mm	10	120	PH
PP18-05-300-250A	250 mm x 21.2 mm	5	300	ODS (C18)
PP18-05-300-150A	150 mm x 21.2 mm	5	300	ODS (C18)
PP18-10-300-250A	250 mm x 21.2 mm	10	300	ODS (C18)
PP18-10-300-150A	150 mm x 21.2 mm	10	300	ODS (C18)
PP18-15-300-250A	250 mm x 21.2 mm	15	300	ODS (C18)
PP18-15-300-150A	150 mm x 21.2 mm	15	300	ODS (C18)
PP18-10-300-250B	250 mm x 30 mm	10	300	ODS (C18)
PP18-10-300-150B	150 mm x 30 mm	10	300	ODS (C18)
PP18-15-300-250B	250 mm x 30 mm	15	300	ODS (C18)
PP18-15-300-150B	150 mm x 30 mm	15	300	ODS (C18)
PP18-10-300-250C	250 mm x 50 mm	10	300	ODS (C18)
PP18-10-300-150C	150 mm x 50 mm	10	300	ODS (C18)
PP18-15-300-250C	250 mm x 50 mm	15	300	ODS (C18)
PP18-15-300-150C	150 mm x 50 mm	15	300	ODS (C18)
PP08-05-300-250A	250 mm x 21.2 mm	5	300	C8
PP08-05-300-150A	150 mm x 21.2 mm	5	300	C8
PP08-10-300-250A	250 mm x 21.2 mm	10	300	C8
PP08-10-300-150A	150 mm x 21.2 mm	10	300	C8
PP08-15-300-250A	250 mm x 21.2 mm	15	300	C8
PP08-15-300-150A	150 mm x 21.2 mm	15	300	C8
PP08-10-300-250B	250 mm x 30 mm	10	300	C8
PP08-10-300-150B	150 mm x 30 mm	10	300	C8
PP08-15-300-250B	250 mm x 30 mm	15	300	C8
PP08-15-300-150B	150 mm x 30 mm	15	300	C8
PP08-10-300-250C	250 mm x 50 mm	10	300	C8
PP08-10-300-150C	150 mm x 50 mm	10	300	C8
PP08-15-300-250C	250 mm x 50 mm	15	300	C8
PP08-15-300-150C	150 mm x 50 mm	15	300	C8
PP04-05-300-250A	250 mm x 21.2 mm	5	300	C4
PP04-05-300-150A	150 mm x 21.2 mm	5	300	C4
PP04-10-300-250A	250 mm x 21.2 mm	10	300	C4
PP04-10-300-150A	150 mm x 21.2 mm	10	300	C4
PP04-15-300-250A	250 mm x 21.2 mm	15	300	C4
PP04-15-300-150A	150 mm x 21.2 mm	15	300	C4
PP04-10-300-250B	250 mm x 30 mm	10	300	C4
PP04-10-300-150B	150 mm x 30 mm	10	300	C4
PP04-15-300-250B	250 mm x 30 mm	15	300	C4
PP04-15-300-150B	150 mm x 30 mm	15	300	C4
PP04-10-300-250C	250 mm x 50 mm	10	300	C4
PP04-10-300-150C	150 mm x 50 mm	10	300	C4
PP04-15-300-250C	250 mm x 50 mm	15	300	C4
PP04-15-300-150C	150 mm x 50 mm	15	300	C4

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	PORE SIZE (Å)	BONDING PHASE
PP18-10-120-250A	250 mm x 21.2 mm	10	120	ODS (C18)
PP18-10-120-150A	150 mm x 21.2 mm	10	120	ODS (C18)
PP18-10-120-100A	100 mm x 21.2 mm	10	120	ODS (C18)
PP18-10-120-250B	250 mm x 30 mm	10	120	ODS (C18)
PP18-10-120-150B	150 mm x 30 mm	10	120	ODS (C18)
PP18-10-120-500B	500 mm x 30 mm	10	120	ODS (C18)
PP18-10-120-250C	250 mm x 50 mm	10	120	ODS (C18)
PP18-10-120-150C	150 mm x 50 mm	10	120	ODS (C18)
PP18-05-100-500B	500 mm x 30 mm	5	100	ODS (C18)
PP18-10-100-500B	500 mm x 30 mm	10	100	ODS (C18)
PP18-15-100-500B	500 mm x 30 mm	15	100	ODS (C18)
PP08-10-120-500B	500 mm x 30 mm	10	120	C8
PP04-10-120-500B	500 mm x 30 mm	10	120	C4
PPPH-10-120-500B	500 mm x 30 mm	10	120	PH
PPCN-10-120-500B	500 mm x 30 mm	10	120	CN
PP18-10-300-500B	500 mm x 30 mm	10	300	ODS (C18)
PP08-10-300-500B	500 mm x 30 mm	10	300	C8
PP08-15-300-500B	500 mm x 30 mm	15	300	C8
PP04-10-300-500B	500 mm x 30 mm	10	300	C4
PP18-08-100-250A	250 mm x 21.2 mm	8	100	ODS (C18)
PP18-08-100-150A	150 mm x 21.2 mm	8	100	ODS (C18)
PP18-08-100-100A	100 mm x 21.2 mm	8	100	ODS (C18)
PP18-08-100-250B	250 mm x 30 mm	8	100	ODS (C18)
PP18-08-100-150B	150 mm x 30 mm	8	100	ODS (C18)
PP18-08-100-500B	500 mm x 30 mm	8	100	ODS (C18)
PP18-08-100-250C	250 mm x 50 mm	8	100	ODS (C18)
PP18-08-100-150C	150 mm x 50 mm	8	100	ODS (C18)
PP18AQ-05-120-250A	250 mm x 21.2 mm	5	120	ODS (C18)
PP18AQ-05-120-150A	150 mm x 21.2 mm	5	120	ODS (C18)
PP18AQ-05-120-100A	100 mm x 21.2 mm	5	120	ODS (C18)
PP18AQ-10-120-250A	250 mm x 21.2 mm	10	120	ODS (C18)
PP18AQ-10-120-150A	150 mm x 21.2 mm	10	120	ODS (C18)
PP18AQ-10-120-100A	100 mm x 21.2 mm	10	120	ODS (C18)
PP18AQ-05-120-250B	250 mm x 30 mm	5	120	ODS (C18)
PP18AQ-05-120-150B	150 mm x 30 mm	5	120	ODS (C18)
PP18AQ-05-120-500B	500 mm x 30 mm	5	120	ODS (C18)
PP18AQ-10-120-250B	250 mm x 30 mm	10	120	ODS (C18)
PP18AQ-10-120-150B	150 mm x 30 mm	10	120	ODS (C18)
PP18AQ-10-120-500B	500 mm x 30 mm	10	120	ODS (C18)
PP18AQ-05-120-250C	250 mm x 50 mm	5	120	ODS (C18)
PP18AQ-05-120-150C	150 mm x 50 mm	5	120	ODS (C18)

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (μm)	PORE SIZE (Å)	BONDING PHASE
PP18AQ-10-120-250C	250 mm x 50 mm	10	120	ODS (C18)
PP18AQ-10-120-150C	150 mm x 50 mm	10	120	ODS (C18)
PP08-5-100-250A	250 mm x 21.2 mm	5	100	C8
PP08-5-100-150A	150 mm x 21.2 mm	5	100	C8
PP08-5-100-100A	100 mm x 21.2 mm	5	100	C8
PP08-5-100-250B	250 mm x 30 mm	5	100	C8
PP08-5-100-150B	150 mm x 30 mm	5	100	C8
PP08-5-100-500B	500 mm x 30 mm	5	100	C8
PP08-5-100-250C	250 mm x 50 mm	5	100	C8
PP08-5-100-150C	150 mm x 50 mm	5	100	C8
PP08-10-100-250A	250 mm x 21.2 mm	10	100	C8
PP08-10-100-150A	150 mm x 21.2 mm	10	100	C8
PP08-10-100-100A	100 mm x 21.2 mm	10	100	C8
PP08-10-100-250B	250 mm x 30 mm	10	100	C8
PP08-10-100-150B	150 mm x 30 mm	10	100	C8
PP08-10-100-500B	500 mm x 30 mm	10	100	C8
PP08-10-100-250C	250 mm x 50 mm	10	100	C8
PP08-10-100-150C	150 mm x 50 mm	10	100	C8
PPSI-05-100-250A	250 mm x 21.2 mm	5	100	Silica
PPSI-05-100-150A	150 mm x 21.2 mm	5	100	Silica
PPSI-05-100-100A	100 mm x 21.2 mm	5	100	Silica
PPSI-10-100-250A	250 mm x 21.2 mm	10	100	Silica
PPSI-10-100-150A	150 mm x 21.2 mm	10	100	Silica
PPSI-10-100-100A	100 mm x 21.2 mm	10	100	Silica
PPSI-05-100-250B	250 mm x 30 mm	5	100	Silica
PPSI-05-100-150B	150 mm x 30 mm	5	100	Silica
PPSI-05-100-500B	500 mm x 30 mm	5	100	Silica
PPSI-10-100-250B	250 mm x 30 mm	10	100	Silica
PPSI-10-100-150B	150 mm x 30 mm	10	100	Silica
PPSI-10-100-500B	500 mm x 30 mm	10	100	Silica
PPSI-05-100-250C	250 mm x 50 mm	5	100	Silica
PPSI-05-100-150C	150 mm x 50 mm	5	100	Silica
PPSI-10-100-250C	250 mm x 50 mm	10	100	Silica
PPSI-10-100-150C	150 mm x 50 mm	10	100	Silica
PP18-15-120-250A	250 mm x 21.2 mm	15	120	ODS (C18)
PP18-15-120-150A	150 mm x 21.2 mm	15	120	ODS (C18)
PP18-15-120-100A	100 mm x 21.2 mm	15	120	ODS (C18)
PP18-15-120-250B	250 mm x 30 mm	15	120	ODS (C18)
PP18-15-120-500B	500 mm x 30 mm	15	120	ODS (C18)
PP18-15-120-250C	250 mm x 50 mm	15	120	ODS (C18)
PP18-15-120-150C	150 mm x 50 mm	15	120	ODS (C18)

SAFE GUAARD™

GENERAL INFORMATION

PURITAS™ ready to use SAFE GUAARD™ columns is a novel concept specially designed to protect your high value preparatories and semi-preparatories columns without creating any substantial back pressure due to its novel, innovative design. The SAFE GUAARD™ prep columns can substantially increase the column life time and improve the quality of your chromatography. It can save your prep columns from getting contaminated without disturbing your analysis. For your convenience SAFE GUAARD™ columns are available in almost all chemistries and suitable dimensions to be used along with prep columns as listed in the table below:

SAFE GUAARD™ HPLC GUARD COLUMNS TECHNICAL SPECIFICATIONS AND ORDERING INFORMATION

PRODUCT CODE	COLUMN DIMENSIONS	PARTICLE SIZE (µm)	PORE SIZE (Å)	BONDING PHASE
SG18-10-100-050A	50 mm x 21.2 mm	10	100	ODS (C18)
SG18-15-100-050A	50 mm x 21.2 mm	15	100	ODS (C18)
SG18-10-100-075B	75 mm x 30 mm	10	100	ODS (C18)
SG18-15-100-075B	75 mm x 30 mm	15	100	ODS (C18)
SG18-10-120-050A	50 mm x 21.2 mm	10	120	ODS (C18)
SG18-10-120-075B	75 mm x 30 mm	10	120	ODS (C18)
SG08-10-120-050A	50 mm x 21.2 mm	10	120	C8
SG08-10-120-075B	75 mm x 30 mm	10	120	C8
SG04-10-120-050A	50 mm x 21.2 mm	10	120	C4
SG04-10-120-075B	75 mm x 30 mm	10	120	C4
SGCN-10-120-050A	50 mm x 21.2 mm	10	120	CN
SGCN-10-120-075B	75 mm x 30 mm	10	120	CN
SGPH-10-120-050A	50 mm x 21.2 mm	10	120	PHENYL
SGPH-10-120-075B	75 mm x 30 mm	10	120	PHENYL
SGAP-10-120-050A	50 mm x 21.2 mm	10	120	AMINOPROPYL
SGAP-10-120-075B	75 mm x 30 mm	10	120	AMINOPROPYL
SG18-10-300-050A	50 mm x 21.2 mm	10	300	ODS (C18)
SG18-10-300-075B	75 mm x 30 mm	10	300	ODS (C18)
SG08-10-300-050A	50 mm x 21.2 mm	10	300	C8
SG08-10-300-075B	75 mm x 30 mm	10	300	C8
SG04-10-300-050A	50 mm x 21.2 mm	10	300	C4
SG04-10-300-075B	75 mm x 30 mm	10	300	C4

Kindly contact your local sales representative for all your enquiries for SAFE GUAARD™ columns.





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