

BGB[®]



Universal Guard System (UGS)

- Low Cost Protection for your Analytical & Preparative Column
- Wide Range of Guard Packings
- Standard 10-32 Female Thread
- Can be used in combination with all Column Brands
- Easy-to-Use



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Protect your column with the Universal Guard System (UGS) - a cost-effective way to extend the lifetime of your column

Use the Universal Guard System (UGS) to increase the life time of your column. The UGS is an excellent tool to prevent contamination or clogging of your column.

The Analytical Universal Guard System (UGS) is manufactured for the purpose of protecting analytical columns with a inner diameter between 3.0 and 6.0mm and with particle sizes between 2.5µm and 10µm.

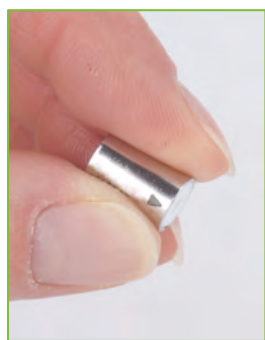
The Preparative Universal Guard System (UGS) is manufactured for the purpose of protecting preparative columns with a inner diameter between 7.8 and 21.2mm and with particle sizes between 5µm and 10µm.

- In-line design installs easily with standard fittings (10-32 thread)
- Cost effective protection of analytical and preparative columns
- Extends column life time
- Easy access and exchange of cartridges

The Universal Guard System (UGS) can be used with almost any HPLC column by connecting it with the Universal Guard System PEEK Coupler or with the Universal Guard System Stainless Steel Coupler (see last page).

How to use the Universal Guard System (UGS):

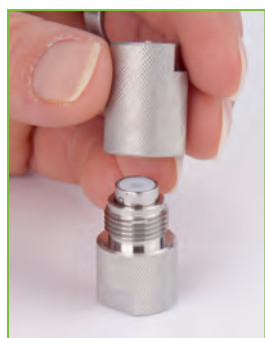
This procedure also applies to the Preparative Universal Guard System (UGS).



Take the guard cartridge and consider the flow direction by checking the arrow (▶).



Insert the guard cartridge into the holder with the arrow (▶) downwards. It is important to insert the cartridge into the holder as shown in the picture.



Put on the other part of the holder and screw the holder together by hand. Only if a leak is still observed after hand-tightening, carefully tight the holder with a wrench.



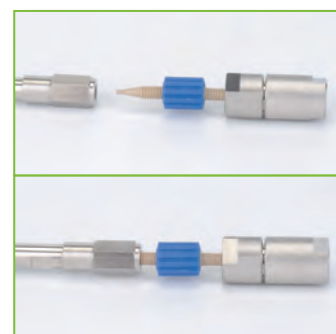
Before connecting the holder to the analytical column, remove the air in the guard cartridge by setting the eluent flow rate to 1ml/min and rinse for five minutes. Please note the flow direction as shown in the picture.

Connect the UGS to the column with the UGS PEEK Coupler:

Connect the Universal Guard System PEEK Coupler with the outlet of the Universal Guard System Holder and fix it lightly by hand. Push the tubing all the way forward into the holder so that it is placed firmly. This is essential for a proper Zero Dead Volume connection.



Connect the UGS PEEK Coupler to the column. Push the tubing all the way forward into the column so that it is placed firmly. Manually tighten the PEEK Coupler until it is finger tight.



It is possible to use the Universal Guard System PEEK Coupler for multiple use. If you change the column, please check the tightness of the assembly and use a new UGS PEEK Coupler if necessary.

Connect the UGS to the column with the UGS Stainless Steel Coupler:

Insert the Universal Guard System Stainless Steel Coupler into the outlet of the Universal Guard System Holder and screw the nut with two or three turns by hand.

Push the tubing all the way forward into the Holder so that it is placed firmly. This is essential for a proper Zero Dead Volume connection. Manually turn the nut into the detail until it is finger tight. Use an appropriate open end wrench, turn the nut 1/4 turn (90°) past the point where the ferrule first starts to grab the tubing. The amount of force required can vary considerably due to the friction between the nut and the threads and the composition and wall thickness of the tubing. Connect the UGS Stainless Steel Coupler to the column in the same way.



Once the stainless steel coupler is connected to a column, don't use this coupler with columns of other manufactures to avoid leaks or dead volumes.



Universal Guard System (UGS)

Reversed Phase

ANALYTICAL

for columns with 3.0 - 6.0mm ID

Typ
A



UGS Starter Kit
Holder & 5 Cartridges

Typ
B



UGS Cartridges
Pack of 10 Cartridges

Typ
C



UGS PREP Starter Kit
Holder & 2 Cartridges

Typ
D



UGS PREP Cartridges
Pack of 2 Cartridges

PREPARATIVE

for columns with 7.8 - 21.2 mm ID

Selectivity	ANALYTICAL		PREPARATIVE	
	Typ	Part No.	Typ	Part No.
C18(ODS) Standard	Typ A	UGKC181	Typ C	UPGKC181
	Typ B	UGCC181	Typ D	UPGCC181
C18 (ODS) High Load	Typ A	UGKC182	Typ C	UPGKC182
	Typ B	UGCC182	Typ D	UPGCC182
C18(ODS) LowLoad-Polar	Typ A	UGKC183	Typ C	UPGKC183
	Typ B	UGCC183	Typ D	UPGCC183
C18(ODS) pH stabile	Typ A	UGKC184	Typ C	UPGKC184
	Typ B	UGCC184	Typ D	UPGCC184
C18(ODS) WidePore 300Å	Typ A	UGKC185	Typ C	UPGKC185
	Typ B	UGCC185	Typ D	UPGCC185
C8 Standard	Typ A	UGKC81	Typ C	UPGKC81
	Typ B	UGCC81	Typ D	UPGCC81
C8 WidePore 300Å	Typ A	UGKC82	Typ C	UPGKC82
	Typ B	UGCC82	Typ D	UPGCC82
C4 Standard	Typ A	UGKC41	Typ C	UPGKC41
	Typ B	UGCC41	Typ D	UPGCC41
C4 WidePore 300Å	Typ A	UGKC42	Typ C	UPGKC42
	Typ B	UGCC42	Typ D	UPGCC42
Phenyl	Typ A	UGKPH	Typ C	UPGKPH
	Typ B	UGCPH	Typ D	UPGCPH

C 18

C 8

C 4

Phenyl

Universal Guard System (UGS)

Description

The Universal Guard Selectivity Standard C18 (ODS) is easy to use with Standard C18 Columns for example ACE C18, Agilent Zorbax Eclipse C18, Alltech Alltima C18, Ceri L-column ODS, Ceri L-column2 ODS, Chemcosorb ODS-H, Chromegabond WR C18, Cosmosil C18-AR-II, Cosmosil C18-MS-II, Epic C18, GraceVisionHT C18 Basic, Grace VisionHT C18 Classic, Hamilton HxSil C18, Hypersil C18, Hypersil Gold C18, Inertsil ODS-2, Inertsil ODS-3, Kromasil C18, LiChrosorb RP-18, LiChrospher C18, Nucleosil C18, Phenomenex Luna C18, Phenomenex Luna C18(2), Restek Ultra C18, Restek Ultra II C18, Restek Pinnacle DB C18, Restek Pinnacle II C18, Spherisorb ODS, Shiseido Capcell C18, Supleco Ascentis C18, Ultrasphere C18, Uptisphere Startegy RP, Waters Sunfire C18, YMC ProC18, YMC ODS-A, and many more.

The Universal Guard Selectivity High Load C18 (ODS) is easy to use with C18 phases that have a higher carbon load than Standard C18 phases, for example ACE C18-HL, Agilent Pursuit XRs C18, Alltech Alltima HP C18 High Load, Alltech Adsorbosphere C18 UHS, Epic C18 SD, Pursuit XRs C18, Grace VisionHT C18 High-Load, Inertsil ODS-P, Phenomenex Ultracarb ODS (30), Reprisil-Pur Basic C18-HD, Restek Allure C18, Uptisphere Strategy C18-3, YMC ProC18RS, YMC J'Sphere H80.

The Universal Guard Selectivity Low Load-Polar C18 (ODS) is compatible with 100% Aqueous Eluents and easy to use with low load and polar modified C18 phases for example ACE C18 AQ, Alltech Alltima HP C18 EPS, Alltech Platinum C18, Alltech Platinum EPS C18, Agilent Zorbax Bonus-RP, Agilent Zorbax SB-AQ, AquaSep, BGB Aquarius RP, Chemcosorb ODS-L, Chromegabond C18, Cosmosil C18-PAQ, Epic Polar, GraceVisionHT C18 Polar, Inertsil ODS-4, Inertsil ODS-EP, Inertsil ODS-Sprint, Jones Genesis AQ C18, Knauer Eurospher II C18A, Phenomenex Aqua C18, Polaris C18-Series, Pronto SIL C18 AQ, YMC Hydrosphere, YMC J'Sphere L80, YMC ODS-AQ.

The Universal Guard Selectivity pH stable C18 (ODS) with a pH range from 1 to 10 is easy to use with pH stable phases for example Agilent Zorbax Stable Bond C18, Agilent Zorbax Extend C18, BGB Scorpio C18, ChromaNik Sunniest C18, GL Sciences InertSustain C18, Kromasil Eternity C18, Phenomenex Gemini C18, Restek pHidelity C18, Restek Pinnacle DB X3 C18, Shiseido CAPCELL PAK C18 MG Series, Waters Xterra C18, YMC Triart C18.

The Universal Guard Selectivity WidePore C18 (ODS) with 300Å for Protein and Peptide analytic is easy to use with WidePore C18 phases for example ACE C18-300, Agilent Poroshell 300 SB C18, Agilent Zorbax Extend 300Å C18, Agilent Zorbax 300Å SBC18, Alltech ProSpher C18, Astec C18, BioBasic C18, Ceri L-column ODS-P, Cosmosil C18-AR-300, Cosmosil Protein-R, Dionex Acclaim 300 C18, Inertsil WP300 C18, Jones Genesis 300 C18, Kromasil 300 C18, LiChrospher WP300 RP-18, MacroSep C18, Nucleosil 300 C18, Phenomenex Jupiter 300 C18, ProntoSil 300 H C18, Vydac 218TP, Vydac 218MS, Vydac 238TP, Restek Viva Wide Pore C18, Sepax Bio-C18-300, Shiseido Capcell PAK SG C18 300, Supleco Discovery Bio Wide Pore C18, Uptisphere 300A C18, Waters Symmetry 300Å C18, YMC ODS-A 300.

The Universal Guard Selectivity C8 Standard is easy to use with standard pore size C8 phases for example ACE C8, Agilent Zorbax Eclipse XDB C8, Agilent Zorbax C8, Alltech Alltima C8, Alltech Platinum C8, Alltech Platinum C8 EPS, BGB Scorpio C8, Ceri L-column C8, Cosmosil C8-MS, Chromegabond C8, Daisogel SP-120-C8-BIO, Dionex Acclaim 120 C8, Epic C8, Grom-SIL Octyl, Hamilton HxSil C8, Hypersil C8, Hypersil Gold C8, Inertsil C8, Inertsil C8-3, Inertsil C8-4, InertSustain C8, Jones Genesis C8, Knauer Eurospher II C8, Kromasil C8, LiChrospher 100 RP-8, Nucleosil C8, Partisphere C8, Phenomenex Luna C8, Phenomenex Luna C8(2), Pursuit XRs C8, Restek Ultra C8, Uptisphere C8, Ultraspher C8, Waters Symmetry C8, Waters Sunfire C8, Waters Spherisorb C8, Shiseido Capcell PAK C8, Supleco Ascentis C8, TSKgel Octyl, YMC Pro C8, YMC C8.

The Universal Guard Selectivity WidePore C8 with 300Å for Protein and Peptide analytic is easy to use with WidePore C8 phases for example ACE C8-300, Agilent Zorbax 300 SB C8, Astec C8, BioBasic C8, Cosmosil C8-AR-300, Daisogel SP-300-C8-BIO, Inertsil WP300 C8, Kromasil 300 C8, MacroSep C8, Nucleosil 300 C8, Restek Viva Wide Pore C8, Sepax Bio-C8 300, Supelco Discovery Bio Wide Pore C8, Uptisphere 300A WC8, Vydac 208TP, Vydac 208MS, YMC C8 300.

The Universal Guard Selectivity C4 Standard is easy to use with standard pore size C4 phases for example ACE C4, Chromegabond C4, Cosmosil C4-MS, Daisogel SP-120-C4-BIO, Epic C4 SD, Inertsil C4, Jones Genesis C4, Knauer Eurospher II C4, Kromasil C4, Nucleosil C4, ProntoSIL C4, Restek Ultra C4, Uptisphere C4, YMC C4, YMC Pro C4.

The Universal Guard Selectivity WidePore C4 with 300Å for Protein and Peptide analytic is easy to use with WidePore C4 phases for example ACE C4-300, Alltech ProSphere C4, Astec C4, BioBasic C4, Cosmosil C4-AR-300, Daisogel SP-300-C4-BIO, Dionex Acclaim PepMap300 C4, Inertsil WP300 C4, Jones Genesis 300 C4, Kromasil 300 C4, Knauer Eurosil C4 300, MacroSep C4, Nucleosil 300 C4, Phenomenex Jupiter 300 C4, ProntoSIL C4 300, Restek Viva Wide Pore C4, Sepax Bio-C4 300, Shiseido Proteonavi C4, Uptisphere 300A WC4, Vydac 214TP, Vydac 214ATP, Vydac 214 MS, Waters Symmetry 300 C4, YMC C4 300, YMC Protein RP.

The Universal Guard Selectivity Phenyl is easy to use with standard Phenyl phases for example ACE Phenyl, Agilent Zorbax Eclipse Phenyl, Alltech Alltima Phenyl, Alltech Platinum Phenyl, BGB Scorpio Phenyl, ChromaNik Sunniest PhE, Chromegabond AP, Chromegabond Phenyl, Cosmosil PE-MS, Hypersil Phenyl, Inertsil Ph, Inertsil Ph-3, InertSustain Phenyl, Jones Genesis Phenyl, Knauer Eurospher II Phenyl, Uptisphere Phenyl, ProntoSil Phenyl, NUCLEOSIL 100 C6H5, Phenomenex Prodigy Phenyl-3, Phenomenex Luna Phenyl-Hexyl, Restek Allure Biphenyl, Restek Pinnacle DB Biphenyl, Restek Pinnacle II Phenyl, Restek Ultra Phenyl, Restek Ultra II Biphenyl, Shiseido CAPCELL PAK Ph Series, Supelco Ascentis Phenyl, TSKgel Super-Phenyl, Waters Spherisorb Phenyl, YMC Phenyl.

Universal Guard System (UGS)

ANALYTICAL

for columns with 3.0 - 6.0mm ID

Typ
A



UGS Starter Kit
Holder & 5 Cartridges

Typ
B



UGS Cartridges
Pack of 10 Cartridges

Typ
C



UGS PREP Starter Kit
Holder & 2 Cartridges

Typ
D



UGS PREP Cartridges
Pack of 2 Cartridges

PREPARATIVE

for columns with 7.8 - 21.2 mm ID

ANALYTICAL

PREPARATIVE

Normal Phase

Ion Exchange

HILIC

Chiral

SEC

Selectivity	Typ	Part No.	Typ	Part No.
Amino (NH ₂)	Typ A	UGKNH	Typ C	UPGKNH
	Typ B	UGC�H	Typ D	UPGC�H
Cyano (CN)	Typ A	UGKCN	Typ C	UPGKCN
	Typ B	UGCCN	Typ D	UPGCCN
Diol	Typ A	UGKDL	Typ C	UPGKDL
	Typ B	UGCDL	Typ D	UPGCDL
Silica (Si)	Typ A	UGKSI	Typ C	UPGKSI
	Typ B	UGCSI	Typ D	UPGCSI
Anion Exchanger (AX)	Typ A	UGKAX		
	Typ B	UGCAX		
Cation Exchanger (CX)	Typ A	UGKCX		
	Typ B	UGCCX		
HILIC	Typ A	UGKHILIC	Typ C	UPGKHILIC
	Typ B	UGCHILIC	Typ D	UPGCHILIC
Chiral	Typ A	UGKCHIRAL	Typ C	UPGKCHIRAL
	Typ B	UGCCHIRAL	Typ D	UPGCCHIRAL
SEC (Size Exclusion Chrom.)	Typ A	UGKSEC	Typ C	UPGKSEC
	Typ B	UGCSEC	Typ D	UPGCSEC

Description

The Universal Guard Selectivity Amino (NH₂) is easy to use with silica based Amino Phase for example Agilent Zorbax NH₂, Alltech Alltima Amino, Alltech Platinum Amino, Cosmosil NH₂-MS, Cosmosil Sugar-D, Develosil NH₂, Grom-SIL Amino, Hypersil NH, Inertsil NH₂, InertSustain NH₂, Jones Apex Amino, Jones Genesis Amino, Knauer Eurospher II NH₂, Kromasil Amino, LiChrospher NH₂, Nucleodur NH₂, Nucleosil NH₂, Phenomenex Luna NH₂, ProntoSil Amino, Restek Ultra Amino, Restek Pinnacle II Amino, Sepax HP-Amino, Supelcosil LC-NH₂, Uptisphere NH₂, YMC Amino.

The Universal Guard Selectivity Cyano (CN) is easy to use with silica based Cyano phases for example ACE CN, Agilent Zorbax Eclipse CN, Agilent Zorbax SB CN, Alltech Alltima Cyano, Alltech Platinum Cyano, Chromegabond Cyano, Cosmosil CN-MS, Develosil CN, Hypersil CN, Inertsil CN-3, Jones Genesis CN, Jones Apex CN, Knauer Eurospher II CN, LiChrospher CN, Nucleodur CN, Nucleosil CN, Phenomenex Luna CN, ProntoSil CN, Restek Ultra Cyano, Restek Pinnacle DB Cyano, Restek Pinnacle II Cyano, Ultraspher CN, Uptisphere CN, Sepax HP-Cyano, Shiseido Capcell PAK CN, Supelcosil LC-CN, TSKgel CN, Waters Spherisorb Nitrile, YMC Cyano.

The Universal Guard Selectivity Diol is easy to use with silica based Diol phases for example Betasil Diol, Chromegapore MSE-DIOL, Cosmosil Diol-120, Inertsil Diol, Jones Apex Diol, Knauer Eurospher II Diol, LiChrospher Diol, Nucleosil OH (Diol), ProntoSIL OH, Sepax HP-Diol, YMC Diol.

The Universal Guard Selectivity Silica (Si) is easy to use with Silica phases for example ACE SIL, Agilent Pursuit XRs Si, Agilent Zorbax Rx SIL, Alltech Alltima Si, Alltech Platinum Si, Cosmosil SL-II, Develosil Si, Grace VisionHT Si, Grom-SIL Si, Hypersil Si, Inertsil SIL, Jones Apex Si, Jones Genesis Si, Knauer Eurospher Si, Kromasil Si, LiChrospher Si, Nucleosil Si, Nucleodur Si, Partisil Si, Phenomenex Luna Si(2), Phenomenex Prodigy Si, ProntoSil Si, Restek Pinnacle DB Si, Restek Pinnacle II Si, Restek Allure Si, Restek Ultra Shiseido Silica, Silica, Restek Ultra II Si, Sepax-HP Si, Supelco Ascentis Si, Ultraspher Si, Uptisphere Si, Waters Sunfire Si, YMC SIL.

The Universal Guard Selectivity Anion Exchanger (AX) is easy to use for silica based Ion Exchanger with USP Classification L9 or Diethylaminoalkyl based Ion Exchanger.

The Universal Guard Selectivity Cation Exchanger (CX) is easy to use for silica based sulfonic acid based Ion Exchanger for example Epic SCX, Inertsil CX.

The Universal Guard Selectivity HILIC is easy to use with silica based HILIC phases for example Agilent Zorbax HILIC Plus, Alltech Alltima HP HILIC, Cosmosil HILIC, Dionex Acclaim HILIC, Epic Diol HILIC, Epic HILIC Series, Fortis HILIC, Grace VisionHT HILIC, Inertsil HILIC, Inertsil Amide, Neptune HILIC, Merck SeQuant ZIC-HILIC, Phenomenex Luna HILIC, Shiseido PC HILIC, SiliaChrom HILIC, TSKgel Amide-80, Waters Atlantis HILIC.

The Universal Guard Selectivity Chiral is easy to use with silica based Chiral phases for example Agela Chiral Series, Astec Cyclobond Series, ChromegaChiral Series, Daicel Chiralcel Series, Daicel Chiralpak Series, Knauer Eurocell, Kromasil Amycoat, Kromasil Cellucoat, Phenomenex Lux Cellulose Series, Phenomenex Lux Amylose, RegisCell, RegisPack, Reprosil Chiral Series, Shiseido Chiral CD-Ph, Sumichiral OA 7000 Series.

The Universal Guard Selectivity SEC (Size Exclusion Chromatography) is easy to use with silica based SEC phases for example Agilent Bio SEC Series, Agilent Zorbax GF Series, Alltech Macrosphere GPC Series, Alltech ProSphere SEC Series, Bio-Rad Bio-Sil SEC, Bio-Rad Bio-Silect SEC Series, ChromaNik Sun SEC, Chromegapore MSE-Diol Series, Cosmosil Diol-II Series, Inertsil DIOL, Inertsil WP300 DIOL, Reprosil SEC Series, Sepax SRT SEC Series, Tskgel SWxl Series, TSKgel SuperSW Series, YMC Diol Series.

Universal Guard System (UGS)



Universal Guard System (UGS) Holder

ANALYTICAL	Part No.	Qty.	PREPARATIVE	Part No.	Qty.
	UGH	ea.		UPGH	ea.

Universal Guard System (UGS) Coupler, PEEK

ANALYTICAL 0.25mm ID	Part No.	Qty.	PREPARATIVE 0.5mm ID	Part No.	Qty.
	UGC	ea.		UGCPREP	ea.

Universal Guard System (UGS) Coupler, Stainless Steel

ANALYTICAL 0.18mm ID	Part No.	Qty.	PREPARATIVE 0.75mm ID	Part No.	Qty.
	UGCSS	ea.		UGCSSPREP	ea.

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