Barcelona-Allee 17
D-55129 Mainz

Tel. +49-6131/880 96-0
Fax +49-6131/880 96-20

USt. Id.-Nr.: DE 149057837
e-mail: info@mz-at.de

MZ ANALYSENTECHNIK

Chromatography-Columns & Accessories

01/2024

Survey: Product Range

HPLC-columns

Accessories

GPC-/SEC-Columns

2024

Qualitätsmanagement GZQ CERTIFICATION ISO 9001:2015

MZ ANALYSENTECHNIK

MZ-Analysentechnik: Developments and Trademarks

- PerfectSil® Target
- PerfectChrom®
- PerfectBond®
- PerfectSil®
- MZ-AquaPerfect
- MZ-PAH
- MZ-PBM
- Orbit
- MZ-Gel SDplus
- MZ Super-FG

Manufacturing of HPLC-Columns: Available Packings

- MZ-AquaPerfect®
- PerfectSil®
- PerfectChrom®
- PerfectBond®
- PerfectSil® Target
- Orbit®
- Hypersil®
- Inertsil®
- Kromasil®
- LiChrosorb®
- LiChrospher®
- Nucleosil®
- Superspher®
- µBondapak®
- Spherisorb®

Product Range HPLC-Products - Sales & Service

SURVEY PRODUCT RANGE

Nouryon / eka
Kromasil® Classic · Kromasil® Eternity
Kromasil® Chiral · Kromasil® SFC

TOSOH BIOSCIENCE
Toyopearl® · TSKgel® · SkillPak®

RESTEK Freude an Chromatografie
Raptor® · Ultra® · Allure® · Rtx® · Rxi® · Pinnacle® · Viva® · Stabilwax®

Shodex CAPTURE THE ESSENCE
ASAHIPAK® · SUGAR-SERIES · HILICPAK®

ChromaNik Technologies Inc.
Sunniest® · SunShell® · Sunrise® · SunArmor®

advancedmaterialstechnology
HALO® HALO 5®

GL Sciences Inc.
Inertsil® · Titansphere® · Bioptic® · InertSustain®

Daicel
Chiralcel® · Chiralpak® · Chromopak® · Crownpak®

Imtakt
Unison® · Cadenza® · Scherzo® · Intrada®

OSAKA SODA
Capcell® · Proteonavi® · Ceramospher® · Sucrebead®

SHINWA CHEMICAL INDUSTRIES
Ultron™ ES-OVM / -PEPSIN

avantor ACE
Ace AQ® · Ace C18-HL® · Ace Capillary® · Ace C18-AR®

MERCK
LiChrospher® · LiChrosorb® · Purospher® · Chromolith® · ZIC®-pHILIC · ZIC®-HILIC

PerkinElmer
Chromegabond® · Aquasep® · FluoroSep® (Perfluorophenyl)

TRAJAN
ProteCol® · PEEKSil® · eVol®

MACHEREY-NAGEL
Nucleosil® · NucleoDur®

MEGA
Ultra-FAST® · MEGA-DEX® · Heliflex AT® · Econo-Cap EC®

United Chemical Technologies
Selectra® Columns · Quick QuEChERS®

Waters
µBondapak® · Acquity® · Xbridge® · Proteinpak® · Symmetry®

CHROM avantor
Partisil® · PartiSphere® · Beckmann Ultrasphere®

Thermo SCIENTIFIC
Hypersil® Gold · Hypercarb® · Syncronis® · BioBasic® · BDS®

MERCK SUPELCO Analytical
Supelcosil® · Discovery® · Astec®

sePax
Antibodix® · Proteomix® · Zenix® · Srt® · Carbomix®

S*PURE
Etract-Clean® · GacePure® · SECLute® · UltraClean®

Accessories + Consumables

MZ-Analysentechnik delivers quick and reliably all kind of accessories for LC and GC. We handpick our suppliers for best quality at reasonable prices

VICI® EXMIRE RESTEK Freude an Chromatografie IDEX HEALTH & SCIENCE

Price List HPLC-Columns

January 1st 2024

Column dimension** Length x ID	Price Groups											
	D		E		E2		F		G		H	
	New	Refill*	New	Refill*	New	Refill*	New	Refill*	New	Refill*	New	Refill*
50 x 2.1 mm	280.--	243.--	287.--	250.--	326.--	289.--	367.--	330.--	403.--	366.--	429.--	392.--
100 x 2.1 mm	306.--	269.--	312.--	275.--	354.--	317.--	398.--	361.--	438.--	401.--	466.--	429.--
125 x 2.1 mm	318.--	281.--	324.--	287.--	370.--	333.--	415.--	378.--	454.--	417.--	483.--	446.--
150 x 2.1 mm	326.--	289.--	333.--	296.--	378.--	341.--	427.--	390.--	468.--	431.--	498.--	461.--
200 x 2.1 mm	345.--	308.--	350.--	313.--	400.--	363.--	451.--	414.--	496.--	459.--	528.--	491.--
250 x 2.1 mm	345.--	317.--	362.--	325.--	412.--	375.--	464.--	427.--	510.--	473.--	543.--	506.--
50 x 3.0 mm	247.--	224.--	278.--	255.--	318.--	295.--	337.--	314.--	373.--	350.--	397.--	374.--
100 x 3.0 mm	269.--	244.--	304.--	279.--	348.--	323.--	368.--	343.--	383.--	358.--	408.--	383.--
125 x 3.0 mm	279.--	253.--	316.--	290.--	360.--	334.--	383.--	357.--	429.--	403.--	457.--	431.--
150 x 3.0 mm	288.--	261.--	325.--	298.--	370.--	343.--	394.--	367.--	435.--	408.--	463.--	436.--
200 x 3.0 mm	303.--	276.--	344.--	317.--	391.--	364.--	415.--	388.--	458.--	431.--	488.--	461.--
250 x 3.0 mm	311.--	284.--	353.--	326.--	404.--	377.--	427.--	400.--	472.--	445.--	503.--	476.--
20 x 4.0 mm	242.--	222.--	274.--	254.--	313.--	293.--	331.--	311.--	367.--	347.--	391.--	371.--
33 x 4.0 mm	242.--	222.--	274.--	254.--	313.--	293.--	331.--	311.--	367.--	347.--	391.--	371.--
40 x 4.0 mm	242.--	222.--	274.--	254.--	313.--	293.--	331.--	311.--	367.--	347.--	391.--	371.--
50 x 4.0 mm	247.--	224.--	278.--	255.--	318.--	295.--	337.--	314.--	373.--	350.--	397.--	374.--
60 x 4.0 mm	249.--	226.--	283.--	260.--	324.--	301.--	342.--	319.--	378.--	355.--	403.--	380.--
75 x 4.0 mm	252.--	229.--	287.--	264.--	327.--	304.--	347.--	324.--	383.--	360.--	408.--	385.--
100 x 4.0 mm	269.--	244.--	304.--	279.--	348.--	323.--	368.--	343.--	383.--	358.--	408.--	383.--
125 x 4.0 mm	279.--	253.--	316.--	290.--	360.--	334.--	383.--	357.--	406.--	380.--	432.--	406.--
150 x 4.0 mm	288.--	261.--	325.--	298.--	370.--	343.--	394.--	367.--	429.--	402.--	457.--	430.--
200 x 4.0 mm	303.--	276.--	344.--	317.--	391.--	364.--	415.--	388.--	458.--	431.--	488.--	461.--
250 x 4.0 mm	311.--	284.--	353.--	326.--	404.--	377.--	427.--	400.--	472.--	445.--	503.--	476.--
300 x 4.0 mm	352.--	314.--	389.--	351.--	445.--	407.--	471.--	433.--	519.--	481.--	553.--	515.--
20 x 4.6 mm	242.--	222.--	274.--	254.--	313.--	293.--	331.--	311.--	367.--	347.--	391.--	371.--
33 x 4.6 mm	242.--	222.--	274.--	254.--	313.--	293.--	331.--	311.--	367.--	347.--	391.--	371.--
40 x 4.6 mm	242.--	222.--	274.--	254.--	313.--	293.--	331.--	311.--	367.--	347.--	391.--	371.--
50 x 4.6 mm	247.--	224.--	278.--	255.--	318.--	295.--	337.--	314.--	373.--	350.--	397.--	374.--
60 x 4.6 mm	249.--	226.--	283.--	260.--	324.--	301.--	342.--	319.--	378.--	355.--	403.--	380.--
75 x 4.6 mm	252.--	229.--	287.--	264.--	327.--	304.--	347.--	324.--	383.--	360.--	408.--	385.--
100 x 4.6 mm	269.--	244.--	304.--	279.--	348.--	323.--	368.--	343.--	383.--	358.--	408.--	383.--
125 x 4.6 mm	279.--	253.--	316.--	290.--	360.--	334.--	383.--	357.--	406.--	380.--	432.--	406.--
150 x 4.6 mm	288.--	261.--	325.--	298.--	370.--	343.--	394.--	367.--	429.--	402.--	457.--	430.--
200 x 4.6 mm	303.--	276.--	344.--	317.--	391.--	364.--	415.--	388.--	458.--	431.--	488.--	461.--
250 x 4.6 mm	311.--	284.--	353.--	326.--	404.--	377.--	427.--	400.--	472.--	445.--	503.--	476.--
300 x 4.6 mm	352.--	314.--	389.--	351.--	445.--	407.--	471.--	433.--	519.--	481.--	553.--	515.--

* Please ask for availability of refill-service in your area - further details on request.
**All packings are available in semiprep and prep dimensions with 8, 10, 20, 30, 40 mm ID, please request your quote.

Part-No. HPLC-Columns

MZ CODE – LEN IDØ

four-digit Materialcode | length in mm | ID in 1/10 mm

Please check the following pages for materialcode & price group of your desired packing media. Please inquire for availability and details of refill service. The part-no. for ordering is a combination of materialcode and column dimension as shown in the following example:

Example: PerfectSil 120 ODS-2 5 µm (Materialcode **1425** / Price group D)
HPLC-Column **250** x **4.0** mm
=> Part-No.: MZ1425-250040

all prices in EUR excluding VAT

Available HPLC-Packings

Available HPLC-Packings

January 2024

In addition to HPLC-Columns for analytical purposes we pack columns in prep- and semi-prep dimensions with 8 - 40 mm ID. All preparative columns are individually manufactured to meet the same quality standards as analytical columns as for each packing media we use an especially optimized packing protocol.

Please ask for a quotation - we offer very competitive prices.

Hypersil™ — Thermo Scientific

spherical • 120 Å / 170 m^2g^{-1} (BDS C18 130 Å)

	size	ec	carbon-content	USP	code	price-group
Hypersil SAS C1	3 µm	-	2.5 %	L13	**6023**	**H**
Hypersil SAS C1	5 µm	-	2.5 %	L13	**6025**	**F**
Hypersil SAS C1	10 µm	-	2.5 %	L13	**6020**	**F**
Hypersil MOS C8	3 µm	-	6.5 %	L7	**6033**	**H**
Hypersil MOS C8	5 µm	-	6.5 %	L7	**6035**	**F**
Hypersil ODS C18	3 µm	+	10 %	L1	**6043**	**H**
Hypersil ODS C18	5 µm	+	10 %	L1	**6045**	**F**
Hypersil ODS C18	10 µm	+	10 %	L1	**6040**	**F**
Hypersil CPS -CN	5 µm	-	4 %	L10	**6055**	**F**
Hypersil CPS -CN	10 µm	-	4 %	L10	**6050**	**F**
Hypersil APS -NH2	3 µm	-	1.9 %	L8	**6063**	**H**
Hypersil APS -NH2	5 µm	-	1.9 %	L8	**6065**	**F**
Hypersil APS-2	3 µm	-	1.9 %	L8	**6083**	**H**
Hypersil APS-2	5 µm	-	1.9 %	L8	**6085**	**F**
Hypersil APS-2	10 µm	-	1.9 %	L8	**6080**	**F**
Hypersil -Phenyl	5 µm	-	5 %	L11	**6075**	**F**

Complete range of columns by Thermo Scientific available: www.mz-at.de

LiChrosorb™ — Merck / EMD

irregularly shaped • 60 Å / 550 m^2g^{-1} • 100 Å / 300 m^2g^{-1}

LiChrosorb Si 60	5 µm	-	-	L3	**0015**	**F**
LiChrosorb Si 60	7 µm	-	-	L3	**0017**	**F**
LiChrosorb Si 60	10 µm	-	-	L3	**0010**	**F**
LiChrosorb Si 100	5 µm	-	-	L3	**0025**	**F**
LiChrosorb Si 100	7 µm	-	-	L3	**0027**	**F**
LiChrosorb Si 100	10 µm	-	-	L3	**0020**	**F**
LiChrosorb RP-8	5 µm	-	9.5 %	L7	**0045**	**F**
LiChrosorb RP-8	7 µm	-	9.5 %	L7	**0047**	**F**
LiChrosorb RP-8	10 µm	-	9.5 %	L7	**0040**	**F**
LiChrosorb RP-18	5 µm	-	17 %	L1	**0055**	**F**
LiChrosorb RP-18	7 µm	-	17 %	L1	**0057**	**F**
LiChrosorb RP-18	10 µm	-	17 %	L1	**0050**	**F**
LiChrosorb-NH2	5 µm	-	4 %	L8	**0065**	**F**
LiChrosorb-NH2	7 µm	-	4 %	L8	**0067**	**F**
LiChrosorb-NH2	10 µm	-	4 %	L8	**0060**	**F**
LiChrosorb-CN	5 µm	-	7 %	L10	**0075**	**F**
LiChrosorb-CN	7 µm	-	7 %	L10	**0077**	**F**
LiChrosorb-CN	10 µm	-	7 %	L10	**0070**	**F**
LiChrosorb DIOL	5 µm	-	8 %	L20	**0085**	**F**
LiChrosorb DIOL	7 µm	-	8 %	L20	**0087**	**F**
LiChrosorb DIOL	10 µm	-	8 %	L20	**0080**	**F**

Complete range of columns by MERCK / EMD available: www.mz-at.de

µBondapak™ — Waters

irregularly shaped • 125 Å / 300 m^2g^{-1}

	size	ec	carbon-content	USP	code	price-group
µBondapak C18	10 µm	-	10.0 %	L1	**8100**	**H**

Complete range of columns by Waters available: www.mz-at.de

Inertsil™ — GL-Sciences

spherical • 150 Å / 320 m^2g^{-1} • 100 Å / 450 m^2g^{-1}

Inertsil 150 Å ODS-2	5 µm	+	18,5 %	L1	**2010**	**F**
Inertsil 100 Å ODS-3	5 µm	+	15 %	L1	**2050**	**F**
Inertsil 150 Å C8	5 µm	+	10,5 %	L7	**2030**	**F**
Inertsil 150 Å C4	5 µm	+	7,5 %	L26	**2035**	**F**
Inertsil Phenyl	5 µm		10 %	L11	**2040**	**F**

Complete range of columns by GL Sciences available: www.mz-at.de

Kromasil™ — Nouryon

spherical • 80 Å / 540 m^2g^{-1} • 110 Å / 320 m^2g^{-1}

Kromasil 60 SIL	3,5 µm	-	-	L3	**0500**	**E2**
Kromasil 60 SIL	5 µm	-	-	L3	**0501**	**E**
Kromasil 60 SIL	7 µm	-	-	L3	**0502**	**E**
Kromasil 60 SIL	10 µm	-	-	L3	**0503**	**E**
Kromasil 60 SIL	13 µm	-	-		**0504**	**E**
Kromasil 60 SIL	16 µm	-	-		**0505**	**E**
Kromasil 100 SIL	3.5 µm	-	-	L3	**0510**	**E2**
Kromasil 100 SIL	5 µm	-	-	L3	**0511**	**E**
Kromasil 100 SIL	7 µm	-	-	L3	**0512**	**E**
Kromasil 100 SIL	10 µm	-	-	L3	**0513**	**E**
Kromasil 100 SIL	13 µm	-	-		**0514**	**E**
Kromasil 100 SIL	16 µm	-	-		**0515**	**E**
Kromasil 100 C1	5 µm	-	4,7 %	L13	**0521**	**E**
Kromasil 100 C1	7 µm	-	4,7 %	L13	**0522**	**E**
Kromasil 100 C1	10 µm	-	4,7 %	L13	**0523**	**E**
Kromasil 100 C1	13 µm	-	4,7 %		**0524**	**E**
Kromasil 100 C1	16 µm	-	4,7 %		**0525**	**E**
Kromasil 100 C4	3.5 µm	+	8,0 %	L26	**0530**	**E2**
Kromasil 100 C4	5 µm	+	8,0 %	L26	**0531**	**E**
Kromasil 100 C4	7 µm	+	8,0 %	L26	**0532**	**E**
Kromasil 100 C4	10 µm	+	8,0 %	L26	**0533**	**E**
Kromasil 100 C4	13 µm	+	8,0 %		**0534**	**E**
Kromasil 100 C4	16 µm	+	8,0 %		**0535**	**E**
Kromasil 100 C8	3.5 µm	+	12,0 %	L7	**0540**	**E2**
Kromasil 100 C8	5 µm	+	12,0 %	L7	**0541**	**E**
Kromasil 100 C8	7 µm	+	12,0 %	L7	**0542**	**E**
Kromasil 100 C8	10 µm	+	12,0 %	L7	**0543**	**E**
Kromasil 100 C8	13 µm	+	12,0 %		**0544**	**E**
Kromasil 100 C8	16 µm	+	12,0 %		**0545**	**E**
Kromasil 100 C18	3.5 µm	+	19,0 %	L1	**0550**	**E2**
Kromasil 100 C18	5 µm	+	19,0 %	L1	**0551**	**E**
Kromasil 100 C18	7 µm	+	19,0 %	L1	**0552**	**E**
Kromasil 100 C18	10 µm	+	19,0 %	L1	**0553**	**E**
Kromasil 100 C18	13 µm	+	19,0 %		**0554**	**E**
Kromasil 100 C18	16 µm	+	19,0 %		**0555**	**E**
Kromasil 100 NH2	5 µm	+	1,5 %	L8	**0561**	**E**
Kromasil 100 NH2	7 µm	+	1,5 %	L8	**0562**	**E**
Kromasil 100 NH2	10 µm	+	1,5 %	L8	**0563**	**E**
Kromasil 100 NH2	13 µm	+	1,5 %		**0564**	**E**
Kromasil 100 NH2	16 µm	+	1,5 %		**0565**	**E**

Complete range of columns by Nouryon available: www.mz-at.de

Available HPLC-Packings

LiChrospher™ — Merck / EMD

spherical • 60 Å / 650 m^2g^{-1} • 100 Å / 420 m^2g^{-1}

LiChrospher Si 60	5 µm	-	-	L3	**0115**	**G**
LiChrospher Si 60	10 µm	-	-	L3	**0110**	**G**
LiChrospher Si 100	5 µm	-	-	L3	**0125**	**G**
LiChrospher Si 100	10 µm	-	-	L3	**0120**	**G**
LiChrospher 100RP-8	5 µm	-	12.5 %	L7	**0135**	**G**
LiChrospher 100RP-8	10 µm	-	12.5 %	L7	**0130**	**G**
... 100RP-8 endc.	5 µm	+	13.0 %	L7	**0136**	**G**
... 100RP-8 endc.	10 µm	+	13.0 %	L7	**0131**	**G**
... 100RP-18	5 µm	-	21.0 %	L1	**0145**	**G**
... 100RP-18	10 µm	-	21.0 %	L1	**0140**	**G**
... 100RP-18 endc.	5 µm	+	21.5 %	L1	**0146**	**G**
... 100RP-18 endc.	10 µm	+	21.5 %	L1	**0141**	**G**
LiChrospher 100-NH2	5 µm	-	46 %	L8	**0155**	**G**
LiChrospher 100-NH2	10 µm	-	4.6 %	L8	**0150**	**G**
LiChrospher 100-CN	5 µm	-	6.6 %	L10	**0165**	**G**
LiChrospher 100-CN	10 µm	-	6.6 %	L10	**0160**	**G**
LiChrospher 100 DIOL	5 µm	-	8.0 %	L20	**0175**	**G**
LiChrospher 100 DIOL	10 µm	-	8.0 %	L20	**0170**	**G**
... 60 RP-Select B	5 µm	+	11.5 %	L7	**0185**	**G**
... 60 RP-Select B	10 µm	+	11.5 %	L7	**0180**	**G**

Complete range of columns by MERCK / EMD available: www.mz-at.de

Nucleosil™ 100 — Macherey-Nagel

spherical • 100 Å / 350 m^2g^{-1}

Nucleosil Si 100	3 µm	-	-	L3	**3013**	**F**
Nucleosil Si 100	5 µm	-	-	L3	**3015**	**E**
Nucleosil Si 100	7 µm	-	-	L3	**3017**	**E**
Nucleosil Si 100	10 µm	-	-	L3	**3010**	**E**
Nucleosil 100 C8	3 µm	-	8.5 %	L7	**3023**	**F**
Nucleosil 100 C8	5 µm	-	8.5 %	L7	**3025**	**E**
Nucleosil 100 C8	7 µm	-	8.5 %	L7	**3027**	**E**
Nucleosil 100 C8	10 µm	-	8.5 %	L7	**3020**	**E**
Nucleosil 100 C18	3 µm	+	15 %	L1	**3033**	**F**
Nucleosil 100 C18	5 µm	+	15 %	L1	**3035**	**E**
Nucleosil 100 C18	7 µm	+	15 %	L1	**3037**	**E**
Nucleosil 100 C18	10 µm	+	15 %	L1	**3030**	**E**
Nucleosil 100 C6H5	5 µm	-	8 %	L11	**3045**	**E**
Nucleosil 100 C6H5	7 µm	-	8 %	L11	**3047**	**E**
Nucleosil 100 -NH2	5 µm	-	3.5 %	L8	**3055**	**E**
Nucleosil 100 -NH2	10 µm	-	3.5 %	L8	**3050**	**E**
Nucleosil 100 -CN	5 µm	-	5 %	L10	**3065**	**E**
Nucleosil 100 -CN	10 µm	-	5 %	L10	**3060**	**E**
Nucleosil 100 -OH	5 µm	-	5 %	L20	**3075**	**E**
Nucleosil 100 -OH	7 µm	-	5 %	L20	**3077**	**E**

Complete range of columns by Macherey-Nagel available: www.mz-at.de

Nucleosil™ 300 — Macherey-Nagel

spherical • 300 Å / 100 m^2g^{-1}

Nucleosil 300 C4	5 µm	+	2 %	L26	**3305**	**E2**
Nucleosil 300 C4	7 µm	+	2 %	L26	**3307**	**E2**
Nucleosil 300 C4	10 µm	+	2 %	L26	**3310**	**E2**
Nucleosil 300 C8	5 µm	-	3 %	L7	**3325**	**E2**
Nucleosil 300 C8	7 µm	-	3 %	L7	**3327**	**E2**
Nucleosil 300 C8	10 µm	-	3 %	L7	**3320**	**E2**
Nucleosil 300 C18	5 µm	+	6.5 %	L1	**3335**	**E2**
Nucleosil 300 C18	7 µm	+	6.5 %	L1	**3337**	**E2**
Nucleosil 300 C18	10 µm	+	6.5 %	L1	**3330**	**E2**
Nucleosil 300 OH	7 µm	-	1.5 %	L20	**3357**	**E2**

Complete range of columns by Macherey-Nagel available: www.mz-at.de

MZ-Aqua Perfect™ — MZ-AT

spherical • 120 Å / 310 m^2g^{-1} • 200 Å / 220 m^2g^{-1}

MZ-Aqua Perfect C18	3 µm	+	15 %	L1	**0610**	**F**
MZ-Aqua Perfect C18	5 µm	+	15 %	L1	**0612**	**E**
MZ-Aqua Perfect C18	7 µm	+	15 %	L1	**0613**	**E**
MZ-Aqua Perfect C18	10 µm	+	15 %	L1	**0614**	**E**
... 200 C18	3 µm	+	11 %	L1	**0620**	**F**
... 200 C18	5 µm	+	11 %	L1	**0622**	**E**

Orbit™ 100 — MZ-AT

spherical • 100 Å / 340 m^2g^{-1}

Orbit 100 C18	3.5 µm	+	19 %	L1	**0902**	**E2**
Orbit 100 C18	4 µm	+	19 %	L1	**0904**	**E2**
Orbit 100 C18	5 µm	+	19 %	L1	**0901**	**D**
Orbit 100 C18	10 µm	+	19 %	L1	**0906**	**D**
Orbit 100 C8	3.5 µm	+	12 %	L7	**0912**	**E2**
Orbit 100 C8	5 µm	+	12 %	L7	**0911**	**D**
Orbit 100 C8	7 µm	+	12 %	L7	**0915**	**D**
Orbit 100 C8	10 µm	+	12 %	L7	**0916**	**D**
Orbit 100 C4	3.5 µm	+	7 %	L26	**0922**	**E2**
Orbit 100 C4	5 µm	+	7 %	L26	**0921**	**D**
Orbit 100 C4	10 µm	+	7 %	L26	**0926**	**D**
Orbit 100 CN	3.5 µm		6.5 %	L10	**0879**	**E2**
Orbit 100 CN	5 µm		6.5 %	L10	**0875**	**D**
Orbit 100 Sil	3.5 µm	-	0 %	L3	**0931**	**E2**
Orbit 100 Sil	5 µm	-	0 %	L3	**0930**	**D**
Orbit 100 Sil	10 µm	-	0 %	L3	**0932**	**D**

PerfectChrom™ — MZ-AT

spherical • 60 Å / 550 m^2g^{-1} • 100 Å / 350 m^2g^{-1}

PerfectChrom 60 Sil	5 µm	-	-	L3	**1575**	**D**
PerfectChrom 60 Sil	10 µm	-	-	L3	**1577**	**D**
PerfectChrom 100 Sil	5 µm	-	-	L3	**1525**	**D**
PerfectChrom 100 Sil	10 µm	-	-	L3	**1527**	**D**
PerfectChrom 100 C18	3 µm	+	17 %	L1	**1503**	**F**
PerfectChrom 100 C18	5 µm	+	17 %	L1	**1505**	**D**
PerfectChrom 100 C18	10 µm	+	17 %	L1	**1500**	**D**
PerfectChrom 100 C18	15 µm	+	17 %		**1506**	**D**
PerfectChrom 100 C18L	5 µm	+	8.5 %	L1	**1494**	**D**
PerfectChrom 100 C18L	10 µm	+	8.5 %	L1	**1496**	**D**
PerfectChrom 100 C18M	5 µm	+	12 %	L1	**1504**	**D**
PerfectChrom 100 C8	3 µm	+	8 %	L7	**1513**	**F**
PerfectChrom 100 C8	5 µm	+	8 %	L7	**1515**	**D**
PerfectChrom 100 C8	10 µm	+	8 %	L7	**1510**	**D**
PerfectChrom 100 C8M	5 µm	+	6 %	L7	**1514**	**D**
PerfectChrom 100 C1	5 µm	-	4 %	L13	**1535**	**D**
PerfectChrom 100 C4	5 µm	+	6 %	L26	**1539**	**D**
PerfectChrom 100 C6	5 µm	+	7 %	L15	**1543**	**D**
PerfectChrom 100 CN	5 µm	-	6 %	L10	**1555**	**D**
PerfectChrom 100 CN	7 µm	-	6 %	L10	**1556**	**D**
PerfectChrom 100 CN	10 µm	-	6 %	L10	**1557**	**D**
PerfectChrom 100 CN-M	10 µm	-		L10	**1584**	**D**
PerfectChrom 100 Diol	5 µm	-	5 %	L20	**1559**	**D**
PerfectChrom 100 Diol	10 µm	-	5 %	L20	**1560**	**D**
PerfectChrom 100 NH2	5 µm	-	3.5 %	L8	**1551**	**D**
PerfectChrom 100 NH2	10 µm	-	3.5 %	L8	**1552**	**D**
... 100 Phenyl	3 µm	-	11.5 %	L11	**1545**	**F**
... 100 Phenyl	5 µm	-	11.5 %	L11	**1547**	**D**
... 100 Phenyl	10 µm	-	11.5 %	L11	**1549**	**D**
... 100 Phenyl M	5 µm	-	8.5 %	L11	**1531**	**D**
... 100 Phenyl M	10 µm	-	8.5 %	L11	**1550**	**D**
... 100 Phenyl L	5 µm	-	6 %	L11	**1532**	**D**

MZ ANALYSENTECHNIK

Available HPLC-Packings

PerfectBond™ — MZ-AT

spherical • technical data & details: check page 16

PerfectBond ODS-H	3 µm	+	10.0 %	L1	**1194**	**F**
PerfectBond ODS-H	5 µm	+	10.0 %	L1	**1195**	**E**
PerfectBond ODS-HD	3 µm	+	18.5 %	L1	**1200**	**G**
PerfectBond ODS-HD	5 µm	+	18.5 %	L1	**1198**	**F**
PerfectBond C18 ODS	5 µm	+	10.0 %	L1	**1190**	**E2**
PerfectBond C18	10 µm	+	10.0 %	L1	**1011**	**E2**
PerfectBond C8-HD	3 µm	+	10.5 %	L7	**1202**	**G**
PerfectBond C8-HD	5 µm	+	10.5 %	L7	**1204**	**F**
PerfectBond C8-H	3 µm	+	6.5 %	L7	**1193**	**F**
PerfectBond C8-H	5 µm	+	6.5 %	L7	**1192**	**E**
PerfectBond C8	5 µm	+	7.0 %	L7	**1018**	**E2**
PerfectBond C1	3 µm	-	5.0 %	L13	**1180**	**F**
PerfectBond C1	5 µm	-	5.0 %	L13	**1182**	**E2**
PerfectBond NH2	5 µm	-		L7	**1240**	**E2**
PerfectBond Ph	5 µm	+	6.0 %	L11	**1220**	**E2**
PerfectBond Ph-H	5 µm	+	5.0 %	L11	**1222**	**E2**
PerfectBond Si	30-50 µm	-	-	L27	**1027**	**D**
PerfectBond C30	3 µm	+			**1253**	**H**
PerfectBond C30	5 µm	+			**1255**	**G**

PerfectSil™ — MZ-AT

spherical • 80Å/220 m^2g^{-1} • 100Å/450 m^2g^{-1} • 120Å/300 m^2g^{-1} • 300Å/100 m^2g^{-1}

PerfectSil 80 ODS-2	3 µm			L1	**1663**	**F**
PerfectSil 80 ODS-2	5 µm			L1	**1660**	**D**
PerfectSil 100 Sil	5 µm	-	-	L3	**0705**	**D**
PerfectSil 100 ODS-3	3 µm	+	15,0 %	L1	**0708**	**F**
PerfectSil 100 ODS-3	4 µm	+	15,0 %	L1	**0709**	**E2**
PerfectSil 100 ODS-3	5 µm	+	15,0 %	L1	**0710**	**D**
PerfectSil 100 C8-3	5 µm	+	9,0 %	L7	**0715**	**D**
PerfectSil 100 Phenyl-3	5 µm	-	9,5 %	L11	**0735**	**D**
PerfectSil 100 NH2	5 µm	-	8,0 %	L8	**0720**	**D**
PerfectSil 100 CN-3	5 µm	-	4,0 %	L10	**0725**	**D**
PerfectSil 100 Diol	5 µm	-		L20	**0730**	**D**
PerfectSil 120 Sil	5 µm	-	-	L3	**1410**	**D**
PerfectSil 120 Sil	10 µm	-	-	L3	**1412**	**D**
PerfectSil 120 ODS	3 µm	+	15,0 %	L1	**1421**	**F**
PerfectSil 120 ODS	5 µm	+	15,0 %	L1	**1420**	**D**
PerfectSil 120 ODS	7 µm	+	15,0 %	L1	**1398**	**D**
PerfectSil 120 ODS	10 µm	+	15,0 %	L1	**1400**	**D**
PerfectSil 120 ODS-L	3 µm	+	13,0 %	L1	**1675**	**F**
PerfectSil 120 ODS-L	5 µm	+	13,0 %	L1	**1680**	**E**
PerfectSil 120 ODS-2	3 µm	+	17,0 %	L1	**1424**	**F**
PerfectSil 120 ODS-2	5 µm	+	17,0 %	L1	**1425**	**D**
PerfectSil 120 C1	3 µm	-	5,0 %	L13	**1429**	**F**
PerfectSil 120 C1	5 µm	-	5,0 %	L13	**1430**	**D**
PerfectSil 120 C4	3 µm	+	8,0 %	L26	**1433**	**F**
PerfectSil 120 C4	5 µm	+	8,0 %	L26	**1435**	**D**
PerfectSil 120 C8	3 µm	+	11,0 %	L7	**1441**	**F**
PerfectSil 120 C8	5 µm	+	11,0 %	L7	**1440**	**D**
PerfectSil 120 C8	10 µm	+	11,0 %	L7	**1442**	**D**
PerfectSil 120 CN	3 µm	-	7,5 %	L10	**1379**	**F**
PerfectSil 120 CN	5 µm	-	7,5 %	L10	**1380**	**D**
PerfectSil 120 Diol	10 µm			L20	**1340**	**D**
PerfectSil 120 NH2	3 µm	-	4,0 %	L8	**1446**	**F**
PerfectSil 120 NH2	4 µm	-	4,0 %	L8	**1444**	**F**
PerfectSil 120 NH2	5 µm	-	4,0 %	L8	**1445**	**D**
PerfectSil 120 Phenyl	3 µm	-	9,5 %	L11	**1447**	**F**
PerfectSil 120 Phenyl	4 µm	-	9,5 %	L11	**2446**	**F**
PerfectSil 120 Phenyl	5 µm	-	9,5 %	L11	**1448**	**D**
PerfectSil 120 Phenyl-M	5 µm	-	6,0 %	L11	**1449**	**D**
PerfectSil 120 Phenyl-L	5 µm	-	4,0 %	L11	**2448**	**D**
PerfectSil 200 ODS	5 µm	+	12,0 %	L1	**1418**	**E**
PerfectSil 300 Sil	5 µm	-	-	L3	**1450**	**E**
PerfectSil 300 Sil	10 µm	-	-	L3	**1840**	**D**
PerfectSil 300 Sil	15-20 µm	-	-		**1845**	**D**
PerfectSil 300 ODS C18	5 µm	+	9,0 %	L1	**1455**	**F**
... 300 ODS C18	10 µm	+	9,0 %	L1	**1805**	**E2**
... 300 ODS C18	15-20 µm	+	9,0 %		**1810**	**D**
PerfectSil 300 C4	5 µm	+	3,0 %	L26	**1460**	**F**
PerfectSil 300 C4	10 µm	+	3,0 %	L26	**1830**	**E2**
PerfectSil 300 C4	15-20 µm	+	3,0 %		**1835**	**D**
PerfectSil 300 C8	5 µm	+	5,0 %	L7	**1465**	**F**
PerfectSil 300 C8	10 µm	+	5,0 %	L7	**1820**	**E2**
PerfectSil 300 C8	15-20 µm	+	5,0 %		**1825**	**D**
PerfectSil 300 Diol	5 µm	-	5,0 %	L20	**1858**	**F**
PerfectSil 1000 Sil	5 µm	-	-	L3	**1475**	**D**

PerfectSil™ Target — MZ-AT

spherical • 100 Å / 450 m^2g^{-1}

PerfectSil Target Sil 100	3 µm	-	-	L3	**0803**	**F**
PerfectSil Target Sil 100	5 µm	-	-	L3	**0800**	**E**
PerfectSil Target ODS-3	3 µm	+	17 %	L1	**0802**	**F**
PerfectSil Target ODS-3	5 µm	+	17 %	L1	**0801**	**E**
PerfectSil Target ODS-3	10 µm	+	17 %	L1	**0806**	**E**
PerfectSil Target C8-3	3 µm	+	9 %	L7	**0812**	**F**
PerfectSil Target C8-3	5 µm	+	9 %	L7	**0811**	**E**
PerfectSil Target CN-3	5 µm	-	7 %	L10	**0818**	**E**

PerfectSil™ Target HD — MZ-AT

spherical • 100 Å / 450 m^2g^{-1}

PerfectSil Target ODS-3 HD	3 µm	+	25 %	L1	**0833**	**F**
PerfectSil Target ODS-3 HD	5 µm	+	25 %	L1	**0831**	**E2**
PerfectSil Target ODS-3 HD	10 µm	+	25 %	L1	**0830**	**E2**
PerfectSil Target C8 HD	3 µm	+	15 %	L7	**0843**	**F**
PerfectSil Target C8 HD	5 µm	+	15 %	L7	**0845**	**E2**

Spherisorb™ — Waters

spherical • 80 Å / 220 m^2g^{-1}

Spherisorb Si	5 µm	-	-	L3	**7015**	**F**
Spherisorb Si	10 µm	-	-	L3	**7010**	**F**
Spherisorb C1	3 µm	-	2,2 %	L13	**7023**	**F**
Spherisorb C1	5 µm	-	2,2 %	L13	**7025**	**F**
Spherisorb C1	10 µm	-	2,2 %	L13	**7020**	**F**
Spherisorb C6	3 µm	+	4,7 %	L15	**7033**	**F**
Spherisorb C6	5 µm	+	4,7 %	L15	**7035**	**F**
Spherisorb C6	10 µm	+	4,7 %	L15	**7030**	**F**
Spherisorb C8	3 µm	+	5,8 %	L7	**7043**	**F**
Spherisorb C8	5 µm	+	5,8 %	L7	**7045**	**F**
Spherisorb C8	10 µm	+	5,8 %	L7	**7040**	**F**
Spherisorb ODS-1 C18	3 µm	+/-	6,2 %	L1	**7053**	**G**
Spherisorb ODS-1 C18	5 µm	+/-	6,2 %	L1	**7055**	**F**
Spherisorb ODS-1 C18	10 µm	+/-	6,2 %	L1	**7050**	**F**
Spherisorb ODS-2 C18	3 µm	+	11,5 %	L1	**7063**	**F**
Spherisorb ODS-2 C18	5 µm	+	11,5 %	L1	**7065**	**F**
Spherisorb ODS-2 C18	10 µm	+	11,5 %	L1	**7060**	**F**
Spherisorb -CN	3 µm	-	3,1 %	L10	**7073**	**F**
Spherisorb -CN	5 µm	-	3,1 %	L10	**7075**	**F**
Spherisorb -CN	10 µm	-	3,1 %	L10	**7070**	**F**
Spherisorb -NH2	3 µm	-	1,9 %	L8	**7083**	**F**
Spherisorb -NH2	5 µm	-	1,9 %	L8	**7085**	**F**
Spherisorb -Phenyl	3 µm	-	2,5 %	L11	**7093**	**F**
Spherisorb -Phenyl	5 µm	-	2,5 %	L11	**7095**	**F**
Spherisorb -Phenyl	10 µm	-	2,5 %	L11	**7090**	**F**

Complete range of columns by Waters available:
www.mz-at.de

Superspher™ — Merck / EMD

spherical • 60 Å / 700 m^2g^{-1} • 100 Å / 350 m^2g^{-1}

Superspher Si 60	4 µm	-	-	L3	**0214**	**H**
Superspher 60 RP-8	4 µm	-	12.5 %	L7	**0224**	**H**
Superspher 60 RP-8 (e)	4 µm	+	13 %	L7	**0234**	**H**
Superspher 100 RP-18	4 µm	-	21 %	L1	**0254**	**H**
... 100 RP-18 (e)	4 µm	+	21.6 %	L1	**0264**	**H**
... 60 RP-Select B	4 µm	+	11.5 %	L7	**0244**	**H**

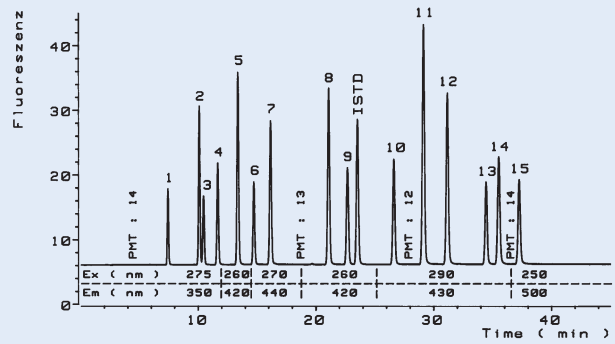
Complete range of columns by MERCK / EMD available:
www.mz-at.de

MZ-PAH: Separation of Polyaromatic Hydrocarbons

Especially developed for the separation of Polyaromatic Hydrocarbons: MZ-PAH Columns by MZ-Analysentechnik.
MZ-PAH-Columns are well-known for their outstanding performance:

- Excellent selectivity
- Guaranteed separation of 6 PAK (DIN 38407-F8) and 16 PAK (EPA Method 610)
- High efficiency: > 75,000 m^{-1}
- High reproducibility between column-to-column
- Long lifetime
- Refillable stainless steel column

Separation of 16 PAK / EPA-Method



Column: MZ-PAH C18 5 µm 250 x 3.0 mm (LxID)

MZ-PAH 3 µm

Length x ID	Part-No.	€
150 x 3.0 mm	MZ1100-150030	396.--
Refill-Service		
150 x 3.0 mm	MZ1100-150030R	356.--
Guard Cartridges		
10x3.0 mm 5pc	MZ1100-VK1030	215.--
20x3.0 mm 5pc	MZ1100-VK2030	215.--

MZ-PAH 5 µm

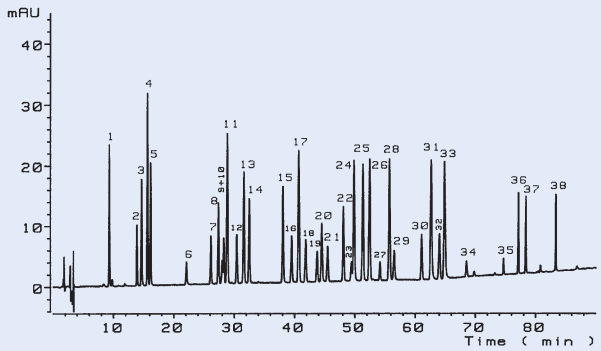
Length x ID	Part-No.	€
250 x 2.1 mm	MZ1111-250021	351.--
250 x 3.0 mm	MZ1111-250030	351.--
250 x 4.0 mm	MZ1111-250040	404.--
Refill-Service		
250 x 2.1 mm	MZ1111-250021R*	297.--
250 x 3.0 mm	MZ1111-250030R*	297.--
250 x 4.0 mm	MZ1111-250040R*	356.--
Guard Cartridges		
10x2.1 mm 5pc	MZ1111-VK1021	215.-
20x2.1 mm 5pc	MZ1111-VK2021	215.--
10x3.0 mm 5pc	MZ1111-VK1030	215.--
20x3.0 mm 5pc	MZ1111-VK2030	215.--
10x4.0 mm 5pc	MZ1111-VK1040	215.--
20x4.0 mm 5pc	MZ1111-VK2040	215.--

MZ-PBM: Separation of Pesticides

Especially developed for the separation of nitrogen-containing pesticides: MZ-PBM - proven by being part of DIN 38407-F12.

- Outstanding selectivity for nitrogen-containing pesticides
- High efficiency: > 110.000 m^{-1}
- High reproducibility from batch-to-batch thanks to a unique functionalization procedure
- Long lifetime
- Refillable stainless steel column

Separation of 38 Pesticides



Column: MZ-PBM C18 3 µm 250 x 3.0 mm (LxID)

MZ-PBM 3 µm

Length x ID	Part-No.	€
250 x 2.1 mm	MZ1122-250021	351.--
250 x 3.0 mm	MZ1122-250030	351.--
250 x 4.0 mm	MZ1122-250040	404.--
Refill-Service		
250 x 2.1 mm	MZ1122-250021R	297.--
250 x 3.0 mm	MZ1122-250030R	297.--
250 x 4.0 mm	MZ1122-250040R	356.--
Guard Cartridges		
10x2.1 mm 5pc	MZ1122-VK1021	215.--
20x2.1 mm 5pc	MZ1122-VK2021	215.--
10x3.0 mm 5pc	MZ1122-VK1030	215.--
20x3.0 mm 5pc	MZ1122-VK2030	215.--
10x4.0 mm 5pc	MZ1122-VK1040	215.--
20x4.0 mm 5pc	MZ1122-VK2040	215.--

all prices in EUR excluding VAT

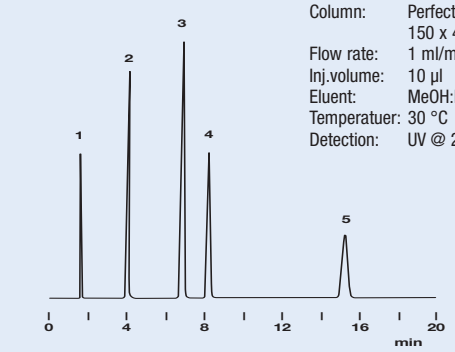
MZ ANALYSENTECHNIK

PerfectChrom®

The Perfect Choice for Reliable Routine Analytics

- Complex range of chemistries
- Each column tested individually
- Manufacturing process ISO 9001-certified
- Available as bulk media
- Refillable stainless steel column
- Best value for your money

Polar Compounds



Column: PerfectChrom 100 C18 150 x 4.6 mm
Flow rate: 1 ml/min
Inj.volume: 10 µl
Eluent: MeOH:H_2O 55:45
Temperatuer: 30 °C
Detection: UV @ 254 nm

Analytes:
1 uracil
2 acetophenone
3 methylbenzoate
4 benzene
5 toluene

PerfectChrom™ Technical Data

Material	Particle Size	ec	C-Content	USP	Surface Area	Pore Size	Code
PerfectChrom 60 Sil	5 µm	-	-	L3	550 m²/g	60 Å	**1575**
PerfectChrom 60 Sil	10 µm	-	-	L3	550 m²/g	60 Å	**1577**
PerfectChrom 100 Sil	5 µm	-	-	L3	350 m²/g	100 Å	**1525**
PerfectChrom 100 Sil	10 µm	-	-	L3	350 m²/g	100 Å	**1527**
PerfectChrom 100 C18	3 µm	+	17 %	L1	350 m²/g	100 Å	**1503**
PerfectChrom 100 C18	5 µm	+	17 %	L1	350 m²/g	100 Å	**1505**
PerfectChrom 100 C18	10 µm	+	17 %	L1	350 m²/g	100 Å	**1500**
PerfectChrom 100 C18	15 µm	+	17 %		350 m²/g	100 Å	**1506**
PerfectChrom 100 C18L	5 µm	+	8.5 %	L1	350 m²/g	100 Å	**1494**
PerfectChrom 100 C18L	10 µm	+	8.5 %	L1	350 m²/g	100 Å	**1496**
PerfectChrom 100 C18M	5 µm	+	12 %	L1	350 m²/g	100 Å	**1504**
PerfectChrom 100 C8	3 µm	+	8 %	L7	350 m²/g	100 Å	**1513**
PerfectChrom 100 C8	5 µm	+	8 %	L7	350 m²/g	100 Å	**1515**
PerfectChrom 100 C8	10 µm	+	8 %	L7	350 m²/g	100 Å	**1510**
PerfectChrom 100 C8M	5 µm	+	6 %	L7	350 m²/g	100 Å	**1514**
PerfectChrom 100 C1	5 µm	-	4 %	L13	350 m²/g	100 Å	**1535**
PerfectChrom 100 C4	5 µm	+	6 %	L26	350 m²/g	100 Å	**1539**
PerfectChrom 100 C6	5 µm	+	7 %	L15	350 m²/g	100 Å	**1543**
PerfectChrom 100 CN	5 µm	-	6 %	L10	350 m²/g	100 Å	**1555**
PerfectChrom 100 CN	7 µm	-	6 %	L10	350 m²/g	100 Å	**1556**
PerfectChrom 100 CN	10 µm	-	6 %	L10	350 m²/g	100 Å	**1557**
PerfectChrom 100 CN-M	10 µm	-		L10	350 m²/g	100 Å	**1584**
PerfectChrom 100 Diol	5 µm	-	5 %	L20	350 m²/g	100 Å	**1559**
PerfectChrom 100 Diol	10 µm	-	5 %	L20	350 m²/g	100 Å	**1560**
PerfectChrom 100 NH2	5 µm	-	3.5 %	L8	350 m²/g	100 Å	**1551**
PerfectChrom 100 NH2	10 µm	-	3.5 %	L8	350 m²/g	100 Å	**1552**
PerfectChrom 100 Phenyl	3 µm	-	11.5 %	L11	350 m²/g	100 Å	**1545**
PerfectChrom 100 Phenyl	5 µm	-	11.5 %	L11	350 m²/g	100 Å	**1547**
PerfectChrom 100 Phenyl	10 µm	-	11.5 %	L11	350 m²/g	100 Å	**1549**
PerfectChrom 100 Phenyl M	5 µm	-	8.5 %	L11	350 m²/g	100 Å	**1531**
PerfectChrom 100 Phenyl M	10 µm	-	8.5 %	L11	350 m²/g	100 Å	**1550**
PerfectChrom 100 Phenyl L	5 µm	-	6 %	L11	350 m²/g	100 Å	**1532**

Dimension L x ID	3 µm New	3 µm Refill	5/10/15 µm New	5/10/15 µm Refill
50 x 2,1 mm	348.--	311.--	266.--	229.--
100 x 2,1 mm	378.--	341.--	290.--	253.--
125 x 2,1 mm	394.--	357.--	302.--	265.--
150 x 2,1 mm	405.--	368.--	309.--	272.--
200 x 2,1 mm	428.--	391.--	327.--	290.--
250 x 2,1 mm	440.--	403.--	336.--	299.--
50 x 3,0 mm	320.--	297.--	234.--	211.--
100 x 3,0 mm	349.--	324.--	255.--	230.--
125 x 3,0 mm	363.--	337.--	265.--	239.--
150 x 3,0 mm	374.--	347.--	273.--	246.--
200 x 3,0 mm	394.--	367.--	287.--	260.--
250 x 3,0 mm.--	405.--	378.--	295.--	268.--
20 x 4,0 mm	314.--	294.--	229.--	209.--
33 x 4,0 mm	314.--	294.--	229.--	209.--
40 x 4,0 mm	314.--	294.--	229.--	209.--
50 x 4,0 mm	320.--	297.--	234.--	211.--
60 x 4,0 mm	324.--	301.--	236.--	213.--
75 x 4,0 mm	329.--	306.--	239.--	216.--
100 x 4,0 mm	349.--	324.--	255.--	230.--
125 x 4,0 mm	363.--	337.--	265.--	239.--
150 x 4,0 mm	374.--	347.--	273.--	246.--
200 x 4,0 mm	394.--	367.--	287.--	260.--
250 x 4,0 mm	405.--	378.--	295.--	268.--
300 x 4,0 mm	447.--	409.--	334.--	296.--
20 x 4,6 mm	314.--	294.--	229.--	209.--
33 x 4,6 mm	314.--	294.--	229.--	209.--
40 x 4,6 mm	314.--	294.--	229.--	209.--
50 x 4,6 mm	320.--	297.--	234.--	211.--
60 x 4,6 mm	324.--	301.--	236.--	213.--
75 x 4,6 mm	329.--	306.--	239.--	216.--
100 x 4,6 mm	349.--	324.--	255.--	230.--
125 x 4,6 mm	363.--	337.--	265.--	239.--
150 x 4,6 mm	374.--	347.--	273.--	246.--
200 x 4,6 mm	394.--	367.--	287.--	260.--
250 x 4,6 mm	405.--	378.--	295.--	268.--
300 x 4,6 mm	447.--	409.--	334.--	296.--

Part-No.

MZ CODE – LEN IDØ

- CODE: four-digit Materialcode
- LEN: length in mm
- IDØ: ID in 1/10 mm

Example:
PerfectChrom 100 C18 3 µm (1503)
HPLC-Column 150 x 4.0 mm
=> Part-No.: MZ1503-150040
Please inquire details for Refill-Service

Also available as preparative HPLC-columns with ID 8 - 50 mm, please inquire.

all prices in EUR excluding VAT

Orbit

State-of-the-Art for Routine Analytics

Our completely new-developed product-line Orbit is based on extremely pure and ultra-stable porous silica with 100 Å mean pore size. The State-of-the-Art base silica is especially optimized for the requirements of today's routine analytics. Orbit is as well robust and shows an excellent chromatographic resolution plus it offers a high costefficiency - which may be further increased employing our Refill-service at very reasonable prices.

Customers from routine analytics are thus now enabled to use the latest stationary phase technology without loss in suitability for daily use or a trade-off in chromatographic resolution. Orbit features excellent chromatographic separations with high efficiencies and symmetrical peak shape - while an excellent reproducibility from batch to batch and column to column is given.

Like all HPLC-columns from MZ-Analysentechnik, Orbit HPLC-columns are manufactured under fully ISO9001-certified conditions and ship with a quality certificate including the original test chromatogram.

Orbit can be packed in the full range of column dimensions (also available in semi-prep and preparative scale) and is shipping with 3.5; 5 or 10 µm particle size and typical chemistries needed for standard separation tasks in routine analysis - see table below.

Technical Data	Orbit
Pore size	100 Å
Pore volume	0,9 cm^3/g
Surface area (BET)	340 m^2/g
Morphology	spherical
Silica purity	> 99,999 %
Endcapping	complete
Carbon Contents CN:	6.5 %C
C4:	7 %C
C8:	12 %C
C18:	19 %C

Part-no.

MZ CODE – LEN IDØ

four-digit Materialcode | length in mm | ID in 1/10 mm

Example: Orbit C18 5 µm (0901) 250 x 4.6 mm

=> Part-no.: MZ0901-250046

Please inquire details for Refill-Service

Material-Codes

Orbit 100 C18	3.5 µm =	**0902**
Orbit 100 C18	4 µm =	**0904**
Orbit 100 C18	5 µm =	**0901**
Orbit 100 C18	10 µm =	**0906**
Orbit 100 C8	3.5 µm =	**0912**
Orbit 100 C8	5 µm =	**0911**
Orbit 100 C8	7 µm =	**0913**
Orbit 100 C8	10 µm =	**0916**
Orbit 100 C4	3.5 µm =	**0922**
Orbit 100 C4	5 µm =	**0921**
Orbit 100 C4	10 µm =	**0926**
Orbit 100 CN	3.5 µm =	**0875**
Orbit 100 CN	5 µm =	**0875**
Orbit 100 Sil	3.5 µm =	**0931**
Orbit 100 Sil	5 µm =	**0930**
Orbit 100 Sil	10 µm =	**0932**

L x ID in mm	3.5 & 4 µm New	3.5 & 4 µm Refill	5 & 10 µm New	5 & 10 µm Refill
50 x 2,1	309.--	234.--	266.--	229.--
100 x 2,1	336.--	258.--	290.--	253.--
125 x 2,1	351.--	271.--	302.--	265.--
150 x 2,1	359.--	278.--	309.--	272.--
200 x 2,1	380.--	296.--	327.--	290.--
250 x 2,1	391.--	306.--	336.--	299.--
50 x 3,0	302.--	242.--	234.--	211.--
100 x 3,0	330.--	264.--	255.--	230.--
125 x 3,0	342.--	274.--	265.--	239.--
150 x 3,0	351.--	281.--	273.--	246.--
200 x 3,0	371.--	298.--	287.--	260.--
250 x 3,0	383.--	309.--	295.--	268.--
20 x 4,0	297.--	240.--	229.--	209.--
33 x 4,0	297.--	240.--	229.--	209.--
40 x 4,0	297.--	240.--	229.--	209.--
50 x 4,0	302.--	242.--	234.--	211.--
60 x 4,0	307.--	246.--	236.--	213.--
75 x 4,0	310.--	249.--	239.--	216.--
100 x 4,0	330.--	264.--	255.--	230.--
125 x 4,0	342.--	274.--	265.--	239.--
150 x 4,0	351.--	281.--	273.--	246.--
200 x 4,0	371.--	298.--	287.--	260.--
250 x 4,0	383.--	309.--	295.--	268.--
300 x 4,0	422.--	332.--	334.--	296.--
20 x 4,6	297.--	240.--	229.--	209.--
33 x 4,6	297.--	240.--	229.--	209.--
40 x 4,6	297.--	240.--	229.--	209.--
50 x 4,6	302.--	242.--	234.--	211.--
60 x 4,6	307.--	246.--	236.--	213.--
75 x 4,6	310.--	249.--	239.--	216.--
100 x 4,6	330.--	264.--	255.--	230.--
125 x 4,6	342.--	274.--	265.--	239.--
150 x 4,6	351.--	281.--	273.--	246.--
200 x 4,6	371.--	298.--	287.--	260.--
250 x 4,6	383.--	309.--	295.--	268.--
300 x 4,6	422.--	332.--	334.--	296.--

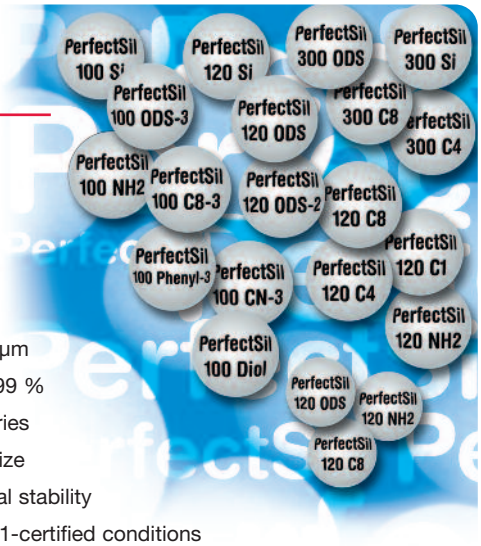
Also available as semi-prep and prep - please inquire.

all prices in EUR excluding VAT

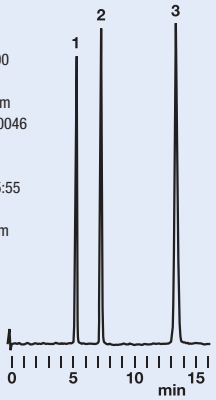
MZ ANALYSENTECHNIK

PerfectSil®

High Quality by MZ-Analysentechnik



Steroids



Column: PerfectSil 100 ODS-3 5 µm 150 x 4.6 mm
Part-No.: MZ0710-150046
Flow rate: 1 ml/min
Inj.volume: 10 µl
Eluent: ACN :H_2O 45:55
Temp.: 40 °C
Detection: UV @ 280 nm

Analytes:
1 beta-Trenbolone
2 beta-Estradiole
3 Diethylstilbestrole

- Well-established in various labs world-wide
- Highly reproducible
- Each column tested individually
- Available particle sizes: 3; 5 & 10 µm
- Highly pure silica skeleton > 99,999 %
- Large variety of available chemistries
- Available in 100 and 120 Å pore size
- Excellent chemical and mechanical stability
- Manufactured under fully ISO 9001-certified conditions
- Refill-service available

PerfectSil™ Technical Data

	material code	particle size	pore size	surface area	pore volume	carbon contents	silica purity	end-capped
PerfectSil 100 Sil	**0705**	5 µm	100 Å	450 m²/g	1.05 ml/g	-	99.999	-
PerfectSil 100 ODS-3	**0708**	3 µm	100 Å	450 m²/g	1.05 ml/g	15.0 %	99.999	+
PerfectSil 100 ODS-3	**0710**	5 µm	100 Å	450 m²/g	1.05 ml/g	15.0 %	99.999	+
PerfectSil 100 C8-3	**0715**	5 µm	100 Å	450 m²/g	1.05 ml/g	9.0 %	99.999	+
PerfectSil 100 Phenyl-3	**0735**	5 µm	100 Å	450 m²/g	1.05 ml/g	9.5 %	99.999	-
PerfectSil 100 NH2	**0720**	5 µm	100 Å	450 m²/g	1.05 ml/g	8.0 %	99.999	-
PerfectSil 100 CN-3	**0725**	5 µm	100 Å	450 m²/g	1.05 ml/g	4.0 %	99.999	-
PerfectSil 100 Diol	**0730**	5 µm	100 Å	450 m²/g	1.05 ml/g	-	99.999	-
PerfectSil 120 Sil	**1410**	5 µm	120 Å	300 m²/g	1.00 ml/g	-	99.999	-
PerfectSil 120 Sil	**1412**	10 µm	120 Å	300 m²/g	1.00 ml/g	-	99.999	-
PerfectSil 120 ODS	**1421**	3 µm	120 Å	300 m²/g	1.00 ml/g	15.0 %	99.999	+
PerfectSil 120 ODS	**1420**	5 µm	120 Å	300 m²/g	1.00 ml/g	15.0 %	99.999	+
PerfectSil 120 ODS	**1398**	7 µm	120 Å	300 m²/g	1.00 ml/g	15.0 %	99.999	+
PerfectSil 120 ODS	**1400**	10 µm	120 Å	300 m²/g	1.00 ml/g	15.0 %	99.999	+
PerfectSil 120 ODS-L	**1675**	3 µm	120 Å	300 m²/g	1.00 ml/g	13.0 %	99.999	+
PerfectSil 120 ODS-L*	**1680**	5 µm	120 Å	300 m²/g	1.00 ml/g	13.0 %	99.999	+
PerfectSil 120 ODS-2	**1424**	3 µm	120 Å	300 m²/g	1.00 ml/g	17.0 %	99.999	+
PerfectSil 120 ODS-2	**1425**	5 µm	120 Å	300 m²/g	1.00 ml/g	17.0 %	99.999	+
PerfectSil 120 C1	**1429**	3 µm	120 Å	300 m²/g	1.00 ml/g	5.0 %	99.999	-
PerfectSil 120 C1	**1430**	5 µm	120 Å	300 m²/g	1.00 ml/g	5.0 %	99.999	-
PerfectSil 120 C4	**1433**	3 µm	120 Å	300 m²/g	1.00 ml/g	8.0 %	99.999	+
PerfectSil 120 C4	**1435**	5 µm	120 Å	300 m²/g	1.00 ml/g	8.0 %	99.999	+
PerfectSil 120 C8	**1441**	3 µm	120 Å	300 m²/g	1.00 ml/g	11.0 %	99.999	+
PerfectSil 120 C8	**1440**	5 µm	120 Å	300 m²/g	1.00 ml/g	11.0 %	99.999	+
PerfectSil 120 C8	**1442**	10 µm	120 Å	300 m²/g	1.00 ml/g	11.0 %	99.999	+
PerfectSil 120 CN	**1379**	3 µm	120 Å	300 m²/g	1.00 ml/g	7.5 %	99.999	-
PerfectSil 120 CN	**1380**	5 µm	120 Å	300 m²/g	1.00 ml/g	7.5 %	99.999	-
PerfectSil 120 NH2	**1446**	3 µm	120 Å	300 m²/g	1.00 ml/g	4.0 %	99.999	-
PerfectSil 120 NH2	**1445**	5 µm	120 Å	300 m²/g	1.00 ml/g	4.0 %	99.999	-
PerfectSil 120 Phenyl	**1447**	3 µm	120 Å	300 m²/g	1.00 ml/g	9.5 %	99.999	-
PerfectSil 120 Phenyl	**1448**	5 µm	120 Å	300 m²/g	1.00 ml/g	9.5 %	99.999	-
PerfectSil 120 Phenyl-M	**1449**	5 µm	120 Å	300 m²/g	1.00 ml/g	6.0 %	99.999	-
PerfectSil 120 Phenyl-L	**2448**	5 µm	120 Å	300 m²/g	1.00 ml/g	4.0 %	99.999	-

Dimension L x ID	3 µm New	3 µm Refill	5/10 µm* New	5/10 µm* Refill
50 x 2,1 mm	348.--	311.--	266.--	229.--
100 x 2,1 mm	378.--	341.--	290.--	253.--
125 x 2,1 mm	394.--	357.--	302.--	265.--
150 x 2,1 mm	405.--	368.--	309.--	272.--
200 x 2,1 mm	428.--	391.--	327.--	290.--
250 x 2,1 mm	440.--	403.--	336.--	299.--
50 x 3,0 mm	320.--	297.--	234.--	211.--
100 x 3,0 mm	349.--	324.--	255.--	230.--
125 x 3,0 mm	363.--	337.--	265.--	239.--
150 x 3,0 mm	374.--	347.--	273.--	246.--
200 x 3,0 mm	394.--	367.--	287.--	260.--
250 x 3,0 mm	405.--	378.--	295.--	268.--
20 x 4,0 mm	314.--	294.--	229.--	209.--
33 x 4,0 mm	314.--	294.--	229.--	209.--
40 x 4,0 mm	314.--	294.--	229.--	209.--
50 x 4,0 mm	320.--	297.--	234.--	211.--
60 x 4,0 mm	324.--	301.--	236.--	213.--
75 x 4,0 mm	329.--	306.--	239.--	216.--
100 x 4,0 mm	349.--	324.--	255.--	230.--
125 x 4,0 mm	363.--	337.--	265.--	239.--
150 x 4,0 mm	374.--	347.--	273.--	246.--
200 x 4,0 mm	394.--	367.--	287.--	260.--
250 x 4,0 mm	405.--	378.--	295.--	268.--
300 x 4,0 mm	447.--	409.--	334.--	296.--
20 x 4,6 mm	314.--	294.--	229.--	209.--
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125 x 4,6 mm	363.--	337.--	265.--	239.--
150 x 4,6 mm	374.--	347.--	273.--	246.--
200 x 4,6 mm	394.--	367.--	287.--	260.--
250 x 4,6 mm	405.--	378.--	295.--	268.--
300 x 4,6 mm	447.--	409.--	334.--	296.--

Also available as preparative HPLC-columns with ID 8 - 50 mm, please inquire.

Part-no.

MZ CODE – LEN IDØ
CODE: four-digit Materialcode
LEN: length in mm
IDØ: ID in 1/10 mm

Example:
PerfectSil 120 ODS 5 µm (1421)
HPLC-Column 250 x 4.6 mm
=> Part-no.: MZ1421-250046

Please inquire details for Refill-Service

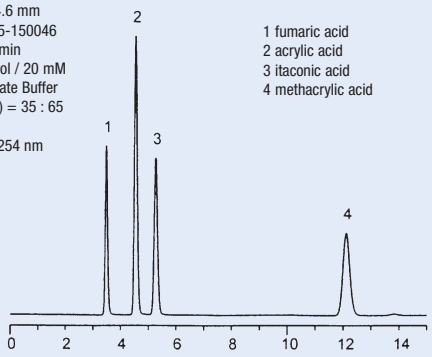
all prices in EUR excluding VAT • **please refer to PerfectSil 300 5 µm for prices of PerfectSil ODS-L 5 µm*

PerfectSil® 100 C8-3

Carboxylic Acids

Column: PerfectSil® 100 C8-3 5 µm 150 x 4.6 mm
Part-No.: MZ0715-150046
Flow rate: 1.0 ml/min
Eluent: Methanol / 20 mM Phosphate Buffer (pH 7.0) = 35 : 65
Temperature: 40 °C
Detection: UV @ 254 nm
Inj.-Volume: 1 µL

1 fumaric acid
2 acrylic acid
3 itaconic acid
4 methacrylic acid

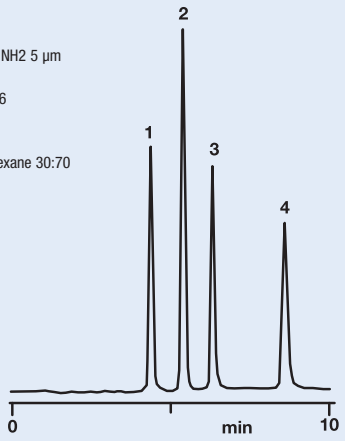


PerfectSil® 100 NH2

Tocopherol

Column: PerfectSil® 100 NH2 5 µm 250 x 4.6 mm
Part-No.: MZ0720-250046
Flow rate: 1 ml/min
Inj.volume: 1 µl
Eluent: ethylacetate : hexane 30:70
Temperature: 30 °C
Detection: UV @ 290 nm

1 α-Tocopherol
2 β-Tocopherol
3 γ-Tocopherol
4 δ-Tocopherol

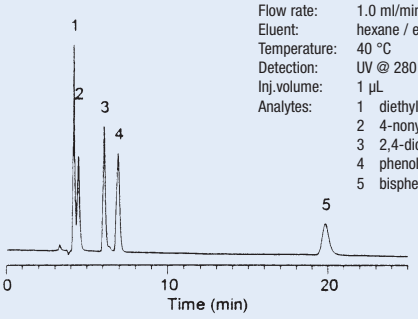


PerfectSil® 100 CN-3

Separation of Phenoles

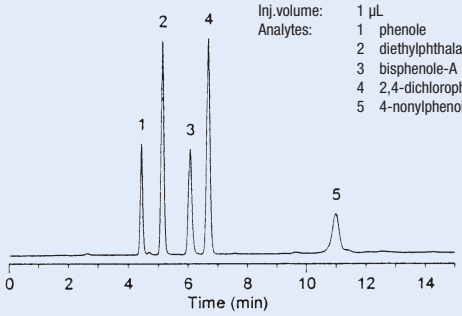
Normal-phase mode

Column: PerfectSil® 100 CN-3 5 µm 250 x 4.6 mm
Part-No.: MZ0725-250046
Flow rate: 1.0 ml/min
Eluent: hexane / ethanol = 90/10
Temperature: 40 °C
Detection: UV @ 280 nm
Inj.volume: 1 µL
Analytes:
1 diethylphthalate
2 4-nonylphenole
3 2,4-dichlorophenole
4 phenole
5 bisphenole-A



RP-Mode

Column: PerfectSil® 100 CN-3 5 µm 250 x 4.6 mm
Part-No.: MZ0725-250046
Flow rate: 1.0 ml/min
Eluent: acetonitrile / 20 mM phosphate-buffer (pH 3.0) = 45/55
Temperature: 40 °C
Detection: UV @ 280 nm
Inj.volume: 1 µL
Analytes:
1 phenole
2 diethylphthalate
3 bisphenole-A
4 2,4-dichlorophenole
5 4-nonylphenole

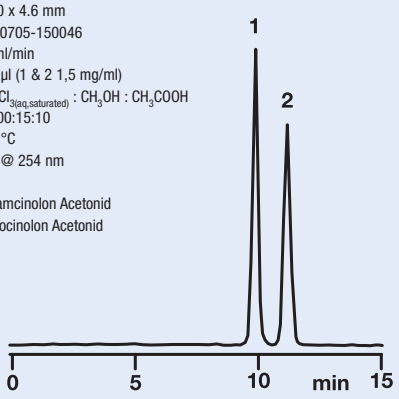


PerfectSil® 100 Si

Fluocinolon Acetonide

Column: PerfectSil® 100 Si 5 µm 150 x 4.6 mm
Part-No.: MZ0705-150046
Flow rate: 1 ml/min
Inj.volume: 20 µl (1 & 2 1,5 mg/ml)
Eluent: $CHCl_{3(aq.saturated)}$: CH_3OH : CH_3COOH 1000:15:10
Temperature: 30 °C
Detection: UV @ 254 nm

1 Triamcinolon Acetonid
2 Fluocinolon Acetonid

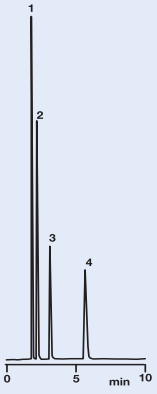


PerfectSil® 120 ODS-2

Nitrosoaminderivates

Column: PerfectSil® 120 ODS-2 5 µm 150 x 4.6 mm
Part-No.: MZ1425-150046
Flow rate: 1 ml/min
Eluent: CH_3CN / 10 mM KH_2PO_4 60 / 40
Temperature: 40 °C
Detection: UV @ 230 nm

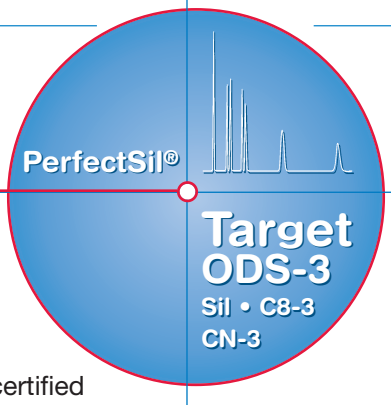
1 N-Nitrosodimethylamine
2 N-Nitrosodiethylamine
3 N-Nitrosodi-n-propylamine
4 N-Nitrosodiphenylamine



MZ ANALYSENTECHNIK

PerfectSil® Target

Excellent Performance + Peak Symmetry = Aim Achieved

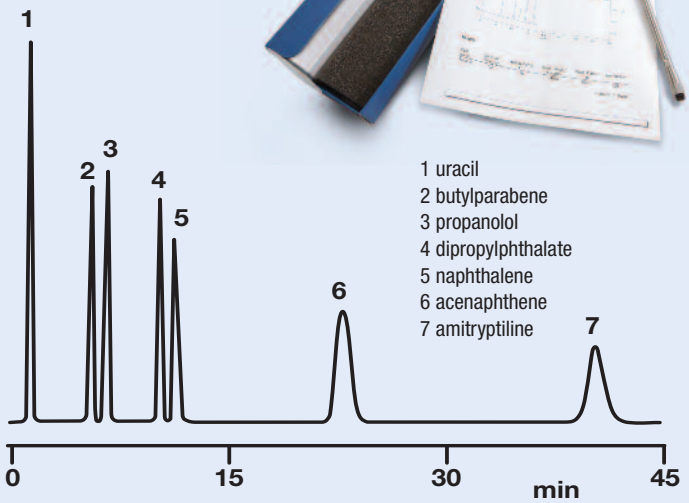


- Chemistries: Sil • ODS-3 • C8-3 • CN-3
- Available particle size: 3 & 5 µm
- Highly pure silica: 99,999 %
- High mechanical & chemical resistibility
- Elaborated endcapping
- Excellent peak symmetry - even for basic compounds
- Exquisite reproducibility
- Each column tested individually
- Particularly suitable for LC/MS
- Manufacturing process ISO 9001-certified
- Ships with HPLC-Column Quality Certificate including authentic test-chromatogram

Technical Data	ODS-3
Pore size	100 Å
Pore volume	1.1 cm^3/g
Surface area (BET)	450 m^2/g
Carbon Contents	17 %
Silica purity	> 99.999 %
Total metal impurities	< 5 ppm

Amitryptilin

PerfectSil Target ODS-3 5 µm 200 x 4.6 mm
Part-No.: MZ0801-200046
Flow rate: 1.5 ml/min
Inj.volume: 5 µl
Eluent: methanol / 20 mM phosphate buffer pH=7.0
Temperature: 40 °C
Detection: UV @ 254 nm



1 uracil
2 butylparabene
3 propanolol
4 dipropylphthalate
5 naphthalene
6 acenaphthene
7 amitryptiline

L x ID in mm	3 µm New	3 µm Refill	5/10 µm New	5/10 µm Refill
50 x 2,1 mm	348.--	311.--	266.--	229.--
100 x 2,1 mm	378.--	341.--	290.--	253.--
125 x 2,1 mm	394.--	357.--	302.--	265.--
150 x 2,1 mm	405.--	368.--	309.--	272.--
200 x 2,1 mm	428.--	391.--	327.--	290.--
250 x 2,1 mm	440.--	403.--	336.--	299.--
50 x 3,0 mm	320.--	297.--	234.--	211.--
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33 x 4,0 mm	314.--	294.--	229.--	209.--
40 x 4,0 mm	314.--	294.--	229.--	209.--
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60 x 4,0 mm	324.--	301.--	236.--	213.--
75 x 4,0 mm	329.--	306.--	239.--	216.--
100 x 4,0 mm	349.--	324.--	255.--	230.--
125 x 4,0 mm	363.--	337.--	265.--	239.--
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200 x 4,0 mm	394.--	367.--	287.--	260.--
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200 x 4,6 mm	394.--	367.--	287.--	260.--
250 x 4,6 mm	405.--	378.--	295.--	268.--
300 x 4,6 mm	447.--	409.--	334.--	296.--

Also available as preparative HPLC-columns with ID 8 - 50 mm, please inquire.

Part-no.

MZ CODE – LEN IDØ

CODE: four-digit Materialcode
LEN: length in mm
IDØ: ID in 1/10 mm

Example: PerfectSil Target ODS-3 5 µm (0801) 200 x 4.6 mm
=> Best.-Nr.: MZ0801-200046
Please inquire for details of Refill-Service

Material-Code
PerfectSil Target...

Sil 100	3 µm =	**0803**
Sil 100	5 µm =	**0800**
ODS-3	3 µm =	**0802**
ODS-3	5 µm =	**0801**
ODS-3	10 µm =	**0806**
C8-3	3 µm =	**0812**
C8-3	5 µm =	**0811**
CN-3	5 µm =	**0818**

all prices in EUR excluding VAT

PerfectSil® Target HD

Reversed-Phase with extended pH-Stability

Some applications in modern reversed-phase-HPLC require extreme pH-conditions, causing most of today's silica-based stationary phase materials to show degradation. With those applications in mind, we developed **PerfectSil® Target HD** to enable permanent operation at a pH-range from pH = 2-11. Without any noticeable loss of performance or sign of degradation, **PerfectSil® Target HD** is based upon the same highly pure silica skeleton as **PerfectSil® Target**.

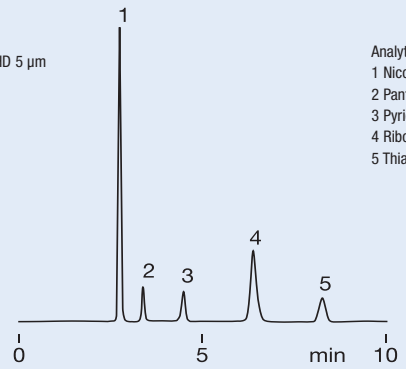
PerfectSil® Target HD is surface-shielded against basic and acidic degradation via application of a special post-treatment procedure after functionaliation with a virtually complete multiple-step endcapping procedure. The uniform reversed-phase chemistry - combined with its fully accessible 100 Å-Poresystem, an optimized packing procedure and our state-of-the-art stainless steel column hardware - enables us to produce and deliver HPLC-columns at the highest level of quality.

- Elaborated endcapping
- Maximum shielding of silica-surface
- pH-Range: pH = 2-11
- Excellent chemical stability
- Extended usability range
- Outstanding reproducibility from batch-to-batch and column-to-column
- Excellent peak symmetries for basic substances
- Enables to employ extremely steep gradients

Technical Data	Target HD
Pore Size	100 Å
Pore Volume	1.1 cm^3/g
Surface Area (BET)	450 m^2/g
Carbon Content	ODS-3 HD: 25.0 %
	C8 HD: 15.0 %
pH-Stability	pH 2-11
Endcapping	complete
Silica Purity	> 99,999 %
Metal Impurities	< 5 ppm

Vitamins

Column: PerfectSil Target ODS-3 HD 5 µm 150 x 4.6 mm
Part-No.: MZ0831-150046
Flow Rate: 1.0 ml/min
Inj.volume: 5 µl
Eluent: ACN : 0,2% H_3PO_4 + 5mM IPCC-06 / 10:90
Temperature: 40 °C
Detection: UV @ 210 nm



Analytes:
1 Nicotinamide
2 Pantothenic acid
3 Pyridoxine
4 Riboflavinphosphate
5 Thiamine

Part.-No.

MZ CODE – LEN IDØ
four-digit Materialcode | length in mm | ID in 1/10 mm

Example:
PerfectSil Target ODS-3 HD 3 µm (**0833**) **150** x **4.0** mm
=> Best.-Nr.: MZ0833-150040

Please inquire for details of Refill-Service

Material-Code
PerfectSil Target...

ODS-3 HD	3 µm = **0833**
ODS-3 HD	5 µm = **0831**
ODS-3 HD	10 µm = **0830**
C8 HD	3 µm = **0843**
C8 HD	5 µm = **0845**

L x ID in mm	3 µm New	3 µm Refill	5/10 µm New	5/10 µm Refill
50 x 2,1 mm	348.--	311.--	266.--	229.--
100 x 2,1 mm	378.--	341.--	290.--	253.--
125 x 2,1 mm	394.--	357.--	302.--	265.--
150 x 2,1 mm	405.--	368.--	309.--	272.--
200 x 2,1 mm	428.--	391.--	327.--	290.--
250 x 2,1 mm	440.--	403.--	336.--	299.--
50 x 3,0 mm	320.--	297.--	234.--	211.--
100 x 3,0 mm	349.--	324.--	255.--	230.--
125 x 3,0 mm	363.--	337.--	265.--	239.--
150 x 3,0 mm	374.--	347.--	273.--	246.--
200 x 3,0 mm	394.--	367.--	287.--	260.--
250 x 3,0 mm.--	405.--	378.--	295.--	268.--
20 x 4,0 mm	314.--	294.--	229.--	209.--
33 x 4,0 mm	314.--	294.--	229.--	209.--
40 x 4,0 mm	314.--	294.--	229.--	209.--
50 x 4,0 mm	320.--	297.--	234.--	211.--
60 x 4,0 mm	324.--	301.--	236.--	213.--
75 x 4,0 mm	329.--	306.--	239.--	216.--
100 x 4,0 mm	349.--	324.--	255.--	230.--
125 x 4,0 mm	363.--	337.--	265.--	239.--
150 x 4,0 mm	374.--	347.--	273.--	246.--
200 x 4,0 mm	394.--	367.--	287.--	260.--
250 x 4,0 mm	405.--	378.--	295.--	268.--
300 x 4,0 mm	447.--	409.--	334.--	296.--
20 x 4,6 mm	314.--	294.--	229.--	209.--
33 x 4,6 mm	314.--	294.--	229.--	209.--
40 x 4,6 mm	314.--	294.--	229.--	209.--
50 x 4,6 mm	320.--	297.--	234.--	211.--
60 x 4,6 mm	324.--	301.--	236.--	213.--
75 x 4,6 mm	329.--	306.--	239.--	216.--
100 x 4,6 mm	349.--	324.--	255.--	230.--
125 x 4,6 mm	363.--	337.--	265.--	239.--
150 x 4,6 mm	374.--	347.--	273.--	246.--
200 x 4,6 mm	394.--	367.--	287.--	260.--
250 x 4,6 mm	405.--	378.--	295.--	268.--
300 x 4,6 mm	447.--	409.--	334.--	296.--

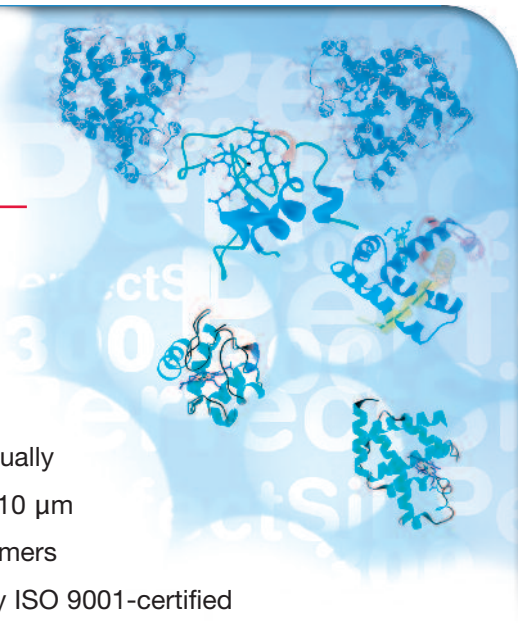
Also available as preparative HPLC-columns with ID 8 - 50 mm, please inquire.

all prices in EUR excluding VAT

MZ ANALYSENTECHNIK

PerfectSil®300

High Quality for Bioseparations

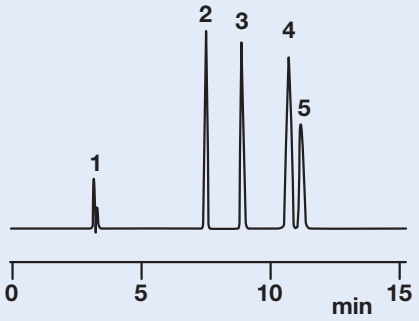


- State-of-the-art technology
- Ultra pure silica 99,999 %
- High-end surface chemistry
- Enables steep gradients
- Very low phase bleeding
- Suitable for LC/MS-applications
- High mechanical stability
- Excellent chemical stability
- Highly reproducible
- Refillable high-quality stainless-steel hardware
- Each column tested individually
- Available particle size: 5 & 10 µm
- 300 Å pore size for biopolymers
- Manufacturing process fully ISO 9001-certified

Peptide Hormones

Column: PerfectSil 300 C4 5 µm 250 x 4.6 mm
Part-No.: MZ1460-250046

Flow rate: 1 ml/min
Inj.volume: 10 µl
Eluent: A: 0.1 % TFA/water
B: 0.09 % TFA in ACN:water 90:10 (v/v)
Gradient: 0 min: A:B 90:10 linear to
8 min: A:B 75:25 linear to
14 min: A:B 70:30 isocratic to
15-20 min recalibration A:B 90:10
Detection: UV @ 215 nm



Analytes:
1 dead time marker / inj.
2 vasotocine
3 vasopressine
4 isotocine
5 oxytocine

PerfectSil™ 300 — Technical Data

	code	particle size	pore-size	surface area	pore volume	carbon contents	silica purity	end-capped	price-group
PerfectSil 300 Sil	**1450**	5 µm	300 Å	100 m²/g	1.05 ml/g	-	99.999	-	E
PerfectSil 300 Sil	**1840**	10 µm	300 Å	100 m²/g	1.05 ml/g	-	99.999	-	D
PerfectSil 300 Sil	**1845**	15-20 µm	300 Å	100 m²/g	1.05 ml/g	-	99.999	-	D
PerfectSil 300 ODS C18	**1455**	5 µm	300 Å	100 m²/g	1.05 ml/g	9.0 %	99.999	+	F
PerfectSil 300 ODS C18	**1805**	10 µm	300 Å	100 m²/g	1.05 ml/g	9.0 %	99.999	+	E2
PerfectSil 300 ODS C18	**1810**	15-20 µm	300 Å	100 m²/g	1.05 ml/g	9.0 %	99.999	+	D
PerfectSil 300 C4	**1460**	5 µm	300 Å	100 m²/g	1.05 ml/g	3.0 %	99.999	+	F
PerfectSil 300 C4	**1830**	10 µm	300 Å	100 m²/g	1.05 ml/g	3.0 %	99.999	+	E2
PerfectSil 300 C4	**1835**	15-20 µm	300 Å	100 m²/g	1.05 ml/g	3.0 %	99.999	+	D
PerfectSil 300 C8	**1465**	5 µm	300 Å	100 m²/g	1.05 ml/g	5.0 %	99.999	+	F
PerfectSil 300 C8	**1820**	10 µm	300 Å	100 m²/g	1.05 ml/g	5.0 %	99.999	+	E2
PerfectSil 300 C8	**1825**	15-20 µm	300 Å	100 m²/g	1.05 ml/g	5.0 %	99.999	+	D
PerfectSil 300 Diol	**1858**	5 µm	300 Å	100 m²/g	1.05 ml/g	5.0 %	99.999	-	F

Part-no.

MZ CODE – LEN IDØ
four-digit Materialcode | length in mm | ID in 1/10 mm

Example:
PerfectSil 300 ODS 5 µm (1455)
HPLC-column 250 x 4.6 mm
=> Part-no.: MZ1455-250046
Please inquire for details of Refill-Service

Please check tables on page 3 of this brochure for information about prices and available column dimensions for analytical HPLC columns. Information about guard cartridges and holders can be found on page 18. All stationary phases are also available as semiprep and preparative HPLC columns with ID from 8 - 40 mm - please inquire.

Each HPLC-column is packed individually upon order in a non-batch process. Upon request – as for example for validation purposes – we pack columns according to specific needs as column-sets, pack columns as batch process on predemand and if needed we may perform customer-specific batch-reservation of packing media. Please inquire for details and conditions.

all prices in EUR excluding VAT

MZ ANALYSENTECHNIK

MZ-Aqua Perfect

C18 for up to 100% Aqueous Applications

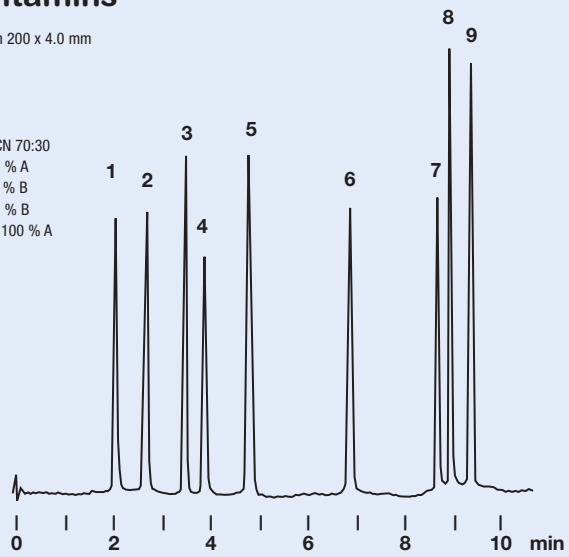
- Elaborate C18-chemistry combined with new hydrophilic endcapping
- Compatible with up to 100% aqueous eluents
- Enables design of extremely steep gradients
- Short recalibration time
- Excellent reproducibility
- Highly pure & totally porous base silica
- Spherical particles with low polydispersity
- High chemical and mechanical resistibility
- Manufacturing process fully ISO 9001-certified
- Low back-pressure
- High durability

Technical Data

particle size	3/5/7/10 µm
morphology	spherical
pore size	120 / 200 Å
surface area (BET)	310 / 220 m^2/g
carbon contents	15 / 11 % C

Water Soluble Vitamins

Column: MZ-Aqua Perfect C18 3 µm 200 x 4.0 mm
Part-No.: MZ0610-200040
Flow rate: 1.25 ml/min
Inj.volume: 10 µl
Eluent: A: 0.05 M H_3PO_4
B: 0.05 M H_3PO_4 in H2O:ACN 70:30
Gradient: 0-3 min isocratic 100 % A
3-6 min linear to 100 % B
6-12 min isocratic 100 % B
12-15 min recalibration 100 % A
Temperature: RT
Detection: UV @ 230 nm



Analytes:
1 thyamin (B1)
2 ascorbic acid (C)
3 nicotinic acid (B)
4 nicotinamide (B3)
5 pyridoxal
6 pyridoxine (B6)
7 folic acid
8 cyanocobalmine (B12)
9 riboflavine (B2)

Applications

tricyclic antidepressants • theophylline • water-soluble vitamins • organic acids • catecholamines • caffeine • all kind of C18 applications

Part-No.

MZ CODE – LEN IDØ
CODE: four-digit Materialcode
LEN: length in mm
IDØ: ID in 1/10 mm

Example: MZ-AquaPerfect 5 µm (0612) 250 x 4.6 mm
=> Part-no.: MZ0612-250040
Please inquire details for Refill-Service

Materialcodes MZ-AquaPerfect

C18	3 µm = 0610
C18	5 µm = 0612
C18	7 µm = 0613
C18	10 µm = 0614
200 C18	3 µm = 0620
200 C18	5 µm = 0622

L x ID in mm	3 µm New	3 µm Refill	5/7/10 µm New	5/7/10 µm Refill
50 x 2,1 mm	348.--	311.--	266.--	229.--
100 x 2,1 mm	378.--	341.--	290.--	253.--
125 x 2,1 mm	394.--	357.--	302.--	265.--
150 x 2,1 mm	405.--	368.--	309.--	272.--
200 x 2,1 mm	428.--	391.--	327.--	290.--
250 x 2,1 mm	440.--	403.--	336.--	299.--
50 x 3,0 mm	320.--	297.--	234.--	211.--
100 x 3,0 mm	349.--	324.--	255.--	230.--
125 x 3,0 mm	363.--	337.--	265.--	239.--
150 x 3,0 mm	374.--	347.--	273.--	246.--
200 x 3,0 mm	394.--	367.--	287.--	260.--
250 x 3,0 mm	405.--	378.--	295.--	268.--
20 x 4,0 mm	314.--	294.--	229.--	209.--
33 x 4,0 mm	314.--	294.--	229.--	209.--
40 x 4,0 mm	314.--	294.--	229.--	209.--
50 x 4,0 mm	320.--	297.--	234.--	211.--
60 x 4,0 mm	324.--	301.--	236.--	213.--
75 x 4,0 mm	329.--	306.--	239.--	216.--
100 x 4,0 mm	349.--	324.--	255.--	230.--
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250 x 4,0 mm	405.--	378.--	295.--	268.--
300 x 4,0 mm	447.--	409.--	334.--	296.--
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33 x 4,6 mm	314.--	294.--	229.--	209.--
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150 x 4,6 mm	374.--	347.--	273.--	246.--
200 x 4,6 mm	394.--	367.--	287.--	260.--
250 x 4,6 mm	405.--	378.--	295.--	268.--
300 x 4,6 mm	447.--	409.--	334.--	296.--

Also available as preparative HPLC-columns with ID 8 - 50 mm, please inquire.

all prices in EUR excluding VAT

MZ-ANALYSENTECHNIK GMBH · Barcelona-Allee 17 · D-55129 Mainz · Tel. ++49-6131/880 96-0 · Fax -20

PerfectBond®

State-of-the-Art- + Best Value-Replacement for Classical Applications

Our recently introduced product-line **PerfectBond™** is based on a series of selected state-of-the-art silica (99.999 % purity), to provide modern replacements for traditional stationary phases. The **PerfectBond™**-product-range is continuously extended, enabling us to offer our customers reliable and cost-effective replacements for various well-known classical stationary phases.

Classical stationary phases like µBondapak™ are still frequently used for many applications. Mainly because of their unique selectivity and retentivity - and despite disadvantages like high back-pressure resulting from the nature of irregularly shaped particle morphology. In case of µBondapak™ we offer **PerfectBond™ C18** as excellent replacement: based on spherical and totally porous base silica, all chromatographic performance values are widely enhanced.

PerfectBond™ is based upon an ultra pure, state-of-the-art-silica, which is absolutely spherical and functionalized under ISO-9001-certified conditions. We carefully select base silica, chemistry and carbon load to get an optimum match of the classical material. This enables us to deliver replacements for traditional stationary phases with the same retentivity and selectivity as the original material. **PerfectBond™**-HPLC-columns feature lower backpressure and enhanced efficiency than the original. Replace your classic column with a **PerfectBond™**-HPLC-Column and note the improved cost-efficiency reslting from longer column-lifetime and possibilities of refill-service.

Our range of **PerfectBond™**-HPLC-columns is continuously growing. Please inquire, if or when we can provide a state-of-the-art replacement for your “classical” HPLC-column.

Technical DataPerfectBond™-Series

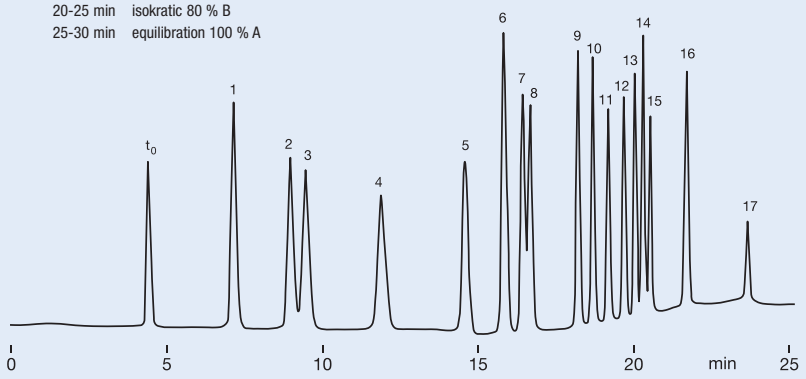
	particle size	code	price group	pore size	surface area	chemistry	carbon contens	endcapping	morphology	silica purity
PerfectBond ODS-H	3 µm	**1194**	**F**	120 Å	170 m²/g	C18	10.0 %	+	spherical	99.999 %
PerfectBond ODS-H	5 µm	**1195**	**F**	120 Å	170 m²/g	C18	10.0 %	+	spherical	99.999 %
PerfectBond ODS-HD	3 µm	**1200**	**G**	150 Å	320 m²/g	C18	18.5 %	+	spherical	99.999 %
PerfectBond ODS-HD	5 µm	**1198**	**F**	150 Å	320 m²/g	C18	18.5 %	+	spherical	99.999 %
PerfectBond BDS 18	5 µm	**1245**	**F**	130 Å	170 m²/g	C18	11.0 %	+	spherical	99.999 %
PerfectBond C18 ODS	5 µm	**1190**	**F**	125 Å	300 m²/g	C18	10.0 %	+	spherical	99.999 %
PerfectBond C18 *Replacement for µBondapak™C18 10 µm*	10 µm	**1011**	**E**	125 Å	300 m²/g	C18	10.0 %	+	spherical	99.999 %
PerfectBond C8-HD	3 µm	**1202**	**G**	150 Å	320 m²/g	C8	10.5 %	+	spherical	99.999 %
PerfectBond C8-HD	5 µm	**1204**	**F**	150 Å	320 m²/g	C8	10.5 %	+	spherical	99.999 %
PerfectBond C8-H	3 µm	**1193**	**F**	120 Å	170 m²/g	C8	6.5 %	+	spherical	99.999 %
PerfectBond C8-H	5 µm	**1192**	**F**	120 Å	170 m²/g	C8	6.5 %	+	spherical	99.999 %
PerfectBond C8	5 µm	**1018**	**F**	125 Å	300 m²/g	C8	7.0 %	+	spherical	99.999 %
PerfectBond C1	3 µm	**1180**	**F**	120 Å	170 m²/g	C1	5.0 %	-	spherical	99.999 %
PerfectBond C1	5 µm	**1182**	**F**	120 Å	170 m²/g	C1	5.0 %	-	spherical	99.999 %
PerfectBond C30	3 µm	**1253**	**H**			C30		+	spherical	99.999 %
PerfectBond C30	5 µm	**1255**	**F**			C30		+	spherical	99.999 %
PerfectBond Ph	5 µm	**1220**	**F**	120 Å	200 m²/g	Phenyl	6.0 %	+	spherical	99.999 %
PerfectBond Ph-H	5 µm	**1222**	**F**	120 Å	170 m²/g	Phenyl	5.0 %	+	spherical	99.999 %
PerfectBond Si	30-50 µm	**1027**	**D**	100 Å	320 m²/g	Si	-	-	spherical	99.999 %

please refer to table and figures on page 3 for part-no. and price

Chlorophenoles

Column: PerfectBond ODS-HD 5 µm 250 x 4.0 mm
Flow rate: 1 ml/min
Temperature: 30 °C
Detection: UV @ 280 nm
Eluent: A: 50 % Methanol/H_2O + 0,1 % H_3PO_4
B: 100 % Methanol
Gradient: 0-10 min isocratic 100 % A
10-20 min linear to 80 % B
20-25 min isokratic 80 % B
25-30 min equilibration 100 % A

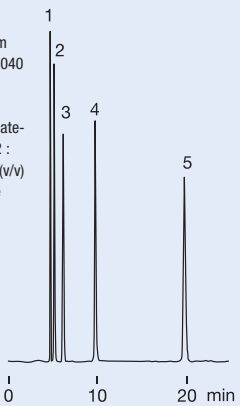
Analytes:
1 2-chlorophenole
2 4-chlorophenole
3 3-chlorophenole
4 2,6-dichlorophenole
5 2,3-dichlorophenole
6 2,5-dichlorophenole
7 2,4-dichlorophenole
8 3,4-dichlorophenole
9 3,5-dichlorophenole
10 2,3,6-trichlorophenole
11 2,3,4-trichlorophenole
12 2,4,6-trichlorophenole
13 2,4,5-trichlorophenole
14 2,3,5-trichlorophenole
15 2,3,5,6-tetrachlorophenole
16 2,3,4,5-tetrachlorophenole
17 pentachlorophenole



Amino Acids / Peptides

Column: PerfectBond C18 10 µm 300 x 4.0 mm
Part-No.: MZ1011-300040
Flow rate: 1.3 ml/min
Inj.volume: 5 µl
Eluent: 0,1M Phosphate-Buffer pH 3,2 : ACN / 89:11 (v/v)
Detection: Fluorescence 385/515 nm

Analytes:
1 Cysteine
2 Cysteinglycine
3 Homocysteine
4 Glutathione
5 N-Acetylcysteine



➠ Please ask us for the optimum **PerfectBond™**-replacement for your classical stationary phase media:

phone +49-6131-88 09 60

all prices in EUR excluding VAT

High Performance Packings by
Nouryon, Separation Products

Nouryon Kromasil®

Best value for your money

Kromasil® is produced in multi-kilogram lots with excellent batch-to-batch reproducibility. Thanks to its outstanding performance combined with great price, **Kromasil®** is first choice for the whole range of applications in modern HPLC.

Kromasil® HPLC-Columns		100 C1 • C4 • C8 • C18 • NH_2				60 SIL • 100 SIL			
		5/7 µm		10/13/16 µm		5/7 µm		10/13/16 µm	
	Dimension	New	Refill	New	Refill	New	Refill	New	Refill
Semiprep & Prep	40 x 8 mm 125 x 8 mm 250 x 8 mm 250 x 10 mm 50 x 20 mm 250 x 20 mm	please inquire				please inquire			

Also available: columns with ID 30 & 40 mm - please inquire

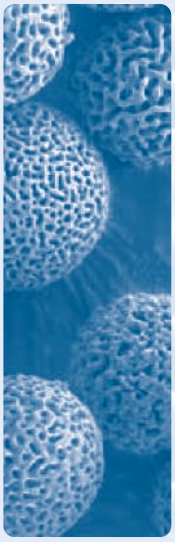
Kromasil®-Bulk Media

60 SIL & 100 SIL	10 g	50 g	100 g	> 100 g	€/g
3.5 µm 5 µm 7 µm 10 µm 13 µm 16 µm	please inquire				

C1 / C4 / C8 / C18 / NH2 / CN / Diol	10 g	50 g	100 g	> 100 g	€/g
7 µm 10 µm 13 µm 16 µm	please inquire				

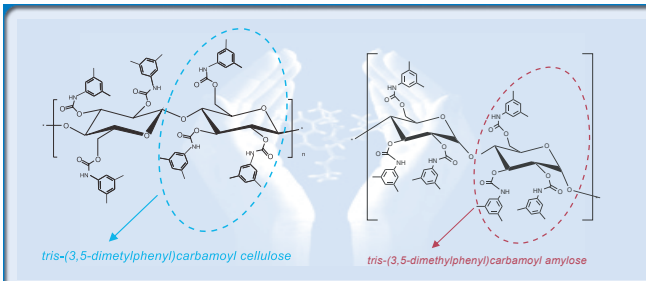
Other chemistries and particle sizes available. Please ask for an individual quotation, if you need larger quantities of Kromasil®-bulk media.

Kromasil® Chiral - CelluCoat™ & AmyCoat™



Kromasil® Chiral is based upon an ultra-stable silica skeleton. CelluCoat™ and AmyCoat™ are chirally-functionalized via covalently-bound polymeric layer of tris-(3,5-dimethylphenyl)carbonyl cellulose (CelluCoat™) respectively tris-(3,5-dimethylphenyl) carbonyl amylose (AmyCoat™). The excellent chemical and mechanical stability of these recently developed materials enables operation at high flow rates in combination with high efficiencies.

NEW! Preconditioned chiral columns CelluCoat™ RP and AmyCoat™ RP ready-to use for reversed-phase-applications.



Kromasil Chiral Test-Kit 50 x 4.6 mm 3 µm	price on request
1 column each: AmyCoat • AmyCoat RP • CelluCoat • CelluCoat RP 3 µm	

Length x ID	3 µm	5 µm	10 µm	25 µm
50 x 4.6 mm 150 x 4.6 mm 250 x 4.6 mm	please inquire			

Chiral Bulk Media & Prep Scale available - please inquire.

GUARD COLUMNS

Guard Columns

Guard Cartridges Analytical / Narrowbore			Part-No.	Price/€
MZ-guard cartridges for analytical/narrow-bore HPLC-columns are available in dimensions with 3 different lengths and 4 different ID´s. Please check below for suitable cartridge holders.				
Guard Cartridges	5 pieces	**see below**	D, E, E2, F	139.--
ID: 2.1 mm, 3.0 mm, 4.0 mm and 4.6 mm Length: 5 mm, 10 mm and 20 mm			G, H	178.--

Die Bestellnummer setzt sich wie folgt zusammen (Materialcodes ab Seite 4ff):

Example: guard cartridges (5 pcs.)
Inertsil ODS-2 5 µm (Materialcode **2010**)
Dimension **20** x **4,0** mm (LxID)
=> Part-No.: MZ2010-VK2040

Cartridge Holder Analytical / Narrowbore	Part-No.		Price/€
suitable for MZ-Columns ID 2.1; 3.0; 4.0 & 4.6 mm			
cartridge holder **integrated** (suitable for cartridges of 20 and 10 mm length)	VI 74000		101.--
cartridge holder **integrated** (suitable for cartridges of 5 mm length)	VI 74005		88.--
cartridge holder **free standing for standard fitting** (suitable for cartridges of 20 mm length)	FG 71020		84.--
cartridge holder **free standing for standard fitting** (suitable for cartridges of 10 mm length)	FG 71010		84.--
cartridge holder **free standing for standard fitting** (suitable for cartridges of 5 mm length)	FG 71005		84.--
Guard column insert, Pk/1	SZ0335		23.--

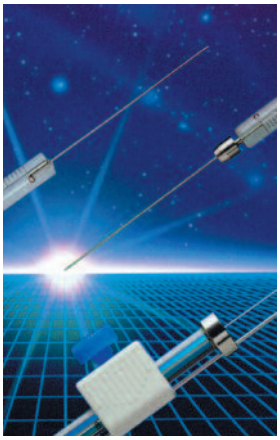
SYRINGES

HPLC-Syringes

EXMIRE

Exmire® HPLC-High Quality Sampling Syringes

Volume	Smallest Amount	Code	Price/€
5 µl	0.1 µl	MSR 05	85.--
10 µl	0.2 µl	MSR 10	66.--
25 µl	0.5 µl	MSR 25	67.--
50 µl	1.0 µl	MSR 50	71.--
100 µl	2.0 µl	MSR 100	74.--
250 µl	5.0 µl	MSR 250	83.--
500 µl	10.0 µl	MSR 500	98.--



all prices in EUR excluding VAT

IDEX HEALTH & SCIENCE

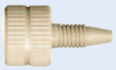
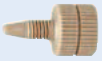
We offer the complete product range from „IDEX Health & Science Valves. The following list includes the most frequently requested parts. Please inquire for prices of parts not listed here.

Part-No.	Product	Price/€
RH7010-039	rotor seal Vespel for 7010/7000/7040	153.--
RH7010-040	stator für 7010/7125	494.--
RH7010-071	rotor seal Tefzel for 7010/7000/7040	163.--
RH7010-999	RheBuild Kit for 7010	164.--
RH7021	sample loop stainless steel 10 µl	73.90
RH7022	sample loop stainless steel 20 µl	66.90
RH7023	sample loop stainless steel 50 µl	77.40
RH7024	sample loop stainless steel 100 µl	74.70
RH7025	sample loop stainless steel 200 µl	inquire
RH7026	sample loop stainless steel 500 µl	89.90
RH7027	sample loop stainless steel 1 ml	148.--
RH7028	sample loop stainless steel 2 ml	259.--
RH7029	sample loop stainless steel 5 ml	250.--
RH7000	switching valve	1,064.--
RH7030	3-way switching valve	1,129.--
RH7060	6-positions switching valve	1,205.--
RH7725	sample injector with MBB *front-loading, follow-up of 7125*	1,665.--
RH7725i	sample injector with position sensing switch and MBB	1,735.--
RH8125	syringe loading injector *front-loading for micro-HPLC*	2,355.--
RH8125-038	rotor seal for 8125/8126	192.--
RH7520-999	RheBuilt Kit for 7520/7526	inquire
RH3725i	sample injector PEEK *front-loading, preparative scale*	2,299.--
RH3725i-038	sample injector stainless steel *front-loading, preparative scale*	2,487.--
RH9010	sample injection valve PEEK *rear-loading, for analytical HPLC*	1,613.--
RH9055-020	sample loop PEEK 5 µl	57.--
RH9055-021	sample loop PEEK 10 µl	70.40
RH9055-022	sample loop PEEK 20 µl	68.90
RH9055-023	sample loop PEEK 50 µl	68.90
RH9055-024	sample loop PEEK 100 µl	68.90
RH9055-025	sample loop PEEK 200 µl	95.10
RH9055-026	sample loop PEEK 500 µl	115.--
RH9055-027	sample loop PEEK 1 ml	129.--
RH9055-028	sample loop PEEK 2 ml	184.--
RH7335	0.5 µm column inlet filter, ID 3.0 mm	inquire
RH7335-010	Replacement filter discs for RH7335 5/pk	inquire

all prices in EUR excluding VAT

Tools & Accessories - PEEK / Biocompatible

HPLC-ACCESSORIES

Part-No.	Product				Price/€
AP0313	PEEK-tubing	AD 1/16“ x 0.13 mm ID		3 m	60.--
AP0317		AD 1/16“ x 0.17 mm ID		3 m	60.--
AP0325		AD 1/16“ x 0.25 mm ID		3 m	60.--
AP0350		AD 1/16“ x 0.50 mm ID		3 m	60.--
AP0375		AD 1/16“ x 0.75 mm ID		3 m	60.--
AP0513	PEEK-tubings kit	AD 1/16“ x 0.13 mm ID		50; 100; 200 mm	inquire
AP0517	- pre-cut -	AD 1/16“ x 0.17 mm ID		50; 100; 200 mm	inquire
AP0525	5 pieces of each length	AD 1/16“ x 0.25 mm ID		50; 100; 200 mm	inquire
AP0550		AD 1/16“ x 0.50 mm ID		50; 100; 200 mm	inquire
AP0575		AD 1/16“ x 0.75 mm ID		50; 100; 200 mm	inquire
AP5001		fingertight-fittings	PEEK	10 pcs	59.--
	coupler universal fingertight PEEK				
AP5103		0.13 mm ID („red“)		1 piece	43.--
AP5108		0.18 mm ID („yellow“)		1 piece	43.--
AP5101		0.25 mm ID („blue“) / universal		1 piece	43.--
AP5105		0.50 mm ID („orange“)		1 piece	43.--
AP5201		union PEEK (incl. 2 fingertight-fittings)	1/16”	1 set	37.--
AP5301		tee-piece PEEK (incl. 3 fingertight-fittings)	1/16”	1 set	120.--
AP5401		cross PEEK (incl. 4 fingertight-fittings)	1/16”	1 set	135.--
AP5601		plug PEEK fingertight	1/16”	1 piece	22.--
AN5701 AN5710		plug Nylon	1/16”	10 pieces 100 pieces	10.-- 52.--

AR6200 38.--
Clean-Cut for cutting polymeric tubings

AR6201 19.--
Replacement blade for Clean-Cut

AR6300 27.--
Guillotine-Cutter

AR6301 22.--
Replacement blade for Guillotine-Cutter

AP7500 52.--
Last-drop mobile phase-filter with 2,5 µm PTFE-Fritt

all prices in EUR excluding VAT.

Tools & Accessories - Stainless Steel

Part-No.	Product			Price/€
AS0301	Stainless Steel tubing	AD 1/16“ x 0.13 mm ID	3 m	125.--
AS0318		AD 1/16“ x 0.18 mm ID	3 m	125.--
AS0325		AD 1/16“ x 0.25 mm ID	3 m	63.--
AS0350		AD 1/16“ x 0.50 mm ID	3 m	63.--
AS0370		AD 1/16“ x 0.75 mm ID	3 m	63.--
AS0310		AD 1/16“ x 1.00 mm ID	3 m	56.--
AS0501	Stainless Steel tubing	AD 1/16“ x 0.13 mm ID	50 mm	25.--
AS0341	- pre-cut -	AD 1/16“ x 0.13 mm ID	100 mm	28.--
AS0201		AD 1/16“ x 0.13 mm ID	200 mm	31.--
AS0525		AD 1/16“ x 0.25 mm ID	50 mm	32.--
AS0125		AD 1/16“ x 0.25 mm ID	100 mm	25.--
AS0225		AD 1/16“ x 0.25 mm ID	200 mm	28.--
AS0550		AD 1/16“ x 0.50 mm ID	50 mm	31.--
AS0150		AD 1/16“ x 0.50 mm ID	100 mm	28.--
AS0250		AD 1/16“ x 0.50 mm ID	200 mm	31.--
AS0570		AD 1/16“ x 0.75 mm ID	50 mm	32.--
AS0170		AD 1/16“ x 0.75 mm ID	100 mm	28.--
AS0270		AD 1/16“ x 0.75 mm ID	200 mm	31.--
AS1001	stainless steel ferrules1/16“		10 piece	28.--
AS1010	stainless steel ferrules1/16“		100 piece	213.--
AR1101	stainless steel ferrules1/16“ Rheodyne		10 piece	28.--
AS2001	fitting screwsstainless steel short		10 piece	37.--
AS2101	fitting screwsstainless steel long		10 piece	37.--
AS2201	fitting screwsstainless steel extra large		10 piece	56.--
AS3301	plug stainless steel	1/16“	1 piece	25.--
AS3001	ZDV-union stainless steel	1/16“	1 piece	47.--
AS3101	tee-piece stainless steel	1/16“	1 piece	194.--
AS3201	cross stainless steel	1/16“	1 piece	213.--

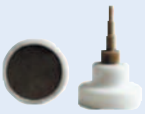
Accessories for HPLC-Columns

AS0110	sieve (glass fibre) analytical	10 piece	9.--
AS0115	PTFE sealing gasket	25 piece	18.--
AS0101	sieve (metal) analytical 5 µm	10 piece	14.--
AS0105	sieve (metal) analytical 3 µm	10 piece	12.--
AS0120	sieve sandwich 3 µm for column end 2.1; 3.0; 4.0 & 4.6 mm ID (2 metal sieves. 3 glass fibre sieves. 1 sealing gasket)	1 set	6.--
AS0121	sieve sandwich 5 µm	1 set	6.--

AS6001 111.--
stainless steel tubing cutter

AS6000 43.--
pliers for stainless steel tubings

AS7500 52.--
Last-drop mobile phase-filter with 2.0 µm stainless steel frit



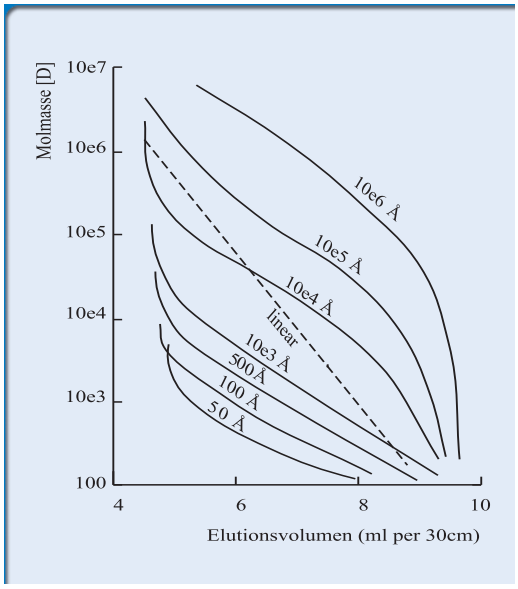
AR6100 inquire
Rheotool

AC7000 inquire
EasyFlange Kit

HPLC-Accessories

MZ-Gel SD*plus* LS - for Detection via Light Scattering

MZ-Gel SD*plus* LS is a proprietary development of MZ-Analysentechnik based on highly-crosslinked and totally porous high-performance styrene-divinyl-benzene copolymer. It is derived from **MZ-Gel SD*plus*** as base material by a special post-treatment to meet the special requirements of detection via light-scattering. Therefore **MZ-Gel SD*plus* LS** features an extremely low phase-bleeding plus the extraordinary capabilities like the HPLC-like separation efficiency of the well-known original material.



Molecular Mass Range & Exclusion Limit

Porosity	Molecular Mass Range			Exclusion Limit
50 Å		<	2,000	3,000
100 Å		<	3,000	5,000
500 Å		<	20,000	20,000
10e3 Å	1,000	-	40,000	70,000
10e4 Å	4,000	-	500,000	700,000
10e5 Å	10,000	-	2,000,000	4,000,000
10e6 Å	200,000	-	10,000,000	> 10,000,000
Linear	1,000	-	1,000,000	> 2,000,000

Materialcodes MZ-Gel SD*plus* LS

Porosity	3 µm	5 µm	10 µm
50 Å	5554	5556	5531
100 Å	5014	5016	5011
500 Å	5054	5056	5051
1,000 Å	5304	5306	5301
10^4 Å	-	5406	5401
10^5 Å	-	5506	5501
10^6 Å	-	5606	5601
Linear	-	5006	5001

Part-No.

MZ CODE – LEN IDØ

MZ CODE: four-digit Materialcode; LEN: length in mm; IDØ: ID in 1/10 mm

Example:

MZ-Gel SD*plus* LS 100 Å 5 µm (5016);
SEC-Column 300 x 8.0 mm

=> Part-no.: MZ5016-300080

Please inquire details for Refill-Service

Analytical 8 mm ID price/€

Length x ID	Particle Size	Porosity	New	Refill
300 x 8 mm	3 µm	50 Å, 100 Å, 500 Å, 10^3 Å	1,341.--	1,219.--
	5 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	1,174.--	1,052.--
	5 µm	linear	1,276.--	1,155.--
	10 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	912.--	790,--
	10 µm	linear	1,040.--	918.--
600 x 8 mm	5 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	1,678.--	1,494.--
	5 µm	linear	1,928.--	1,745.--
	10 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	1,327.--	1,143.--
	10 µm	linear	1,505.--	1,321.--
50 x 8 mm	5 µm	all porosities + linear	409.--	360.--
	10 µm	all porosities + linear	409.--	360.--

Microbore

250 x 3 mm	5 µm	all porosities + linear	800,--	678,--
40 x 3 mm	5 µm	all porosities + linear	299,--	239,--
250 x 2 mm	5 µm	all porosities + linear	800,--	678,--
40 x 2 mm	5 µm	all porosities + linear	299,--	239,--

Narrowbore 4.6 mm ID (saving up to 70 % of solvent)

300 x 4,6 mm	3 µm	50 Å, 100 Å, 500 Å, 10^3 Å	1.345,--	1.223,--
	5 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	1,004.--	882,--
	5 µm	linear	1,107.--	985,--
40 x 4,6 mm	3 µm	50 Å, 100 Å, 500 Å, 10^3 Å	299,--	239,--
	5 µm	all porosities + linear	299,--	239,--
	10 µm	all porosities + linear	299,--	239,--

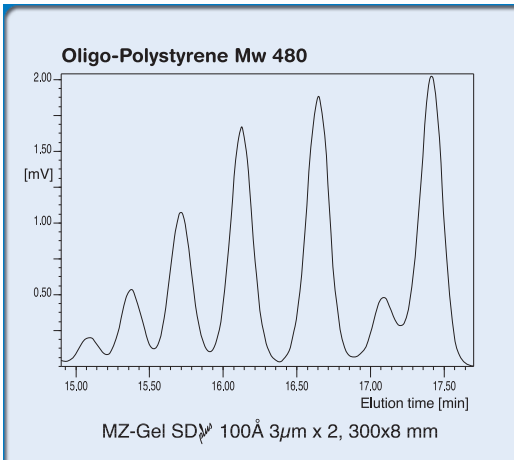
all prices in EUR excl. VAT.

MZ-Gel SD*plus*

Technical Data

MZ-Gel SD*plus*	3 µm	5 µm	10 µm
particle shape	spherical	spherical	spherical
available porosities [Å]	50-10^3 Å	50-10^6 Å + linear	50-10^6 Å + linear
plate numbers: min. guaranteed [m^{-1}]	100,000	60,000	50,000
plate numbers: typical [m^{-1}]	120,000	80,000	60,000
pressure stability [bar]	160	160	160
backpressure per 30 cm [bar]*	40	25	15
max. flow rate analytical 8 mm ID	1.5 ml/min	1.5 ml/min	3 ml/min
max. flow rate narrow bore 4.6 mm ID	0.6 ml/min	0.6 ml/min	0.6 ml/min
max. flow rate preparative 20 mm ID		10 ml/min	20 ml/min
temperature range	max. 100 °C	max. 100 °C	max. 140 °C

* based on column 300 x 8 mm, flow rate 1 ml/min, eluent THF



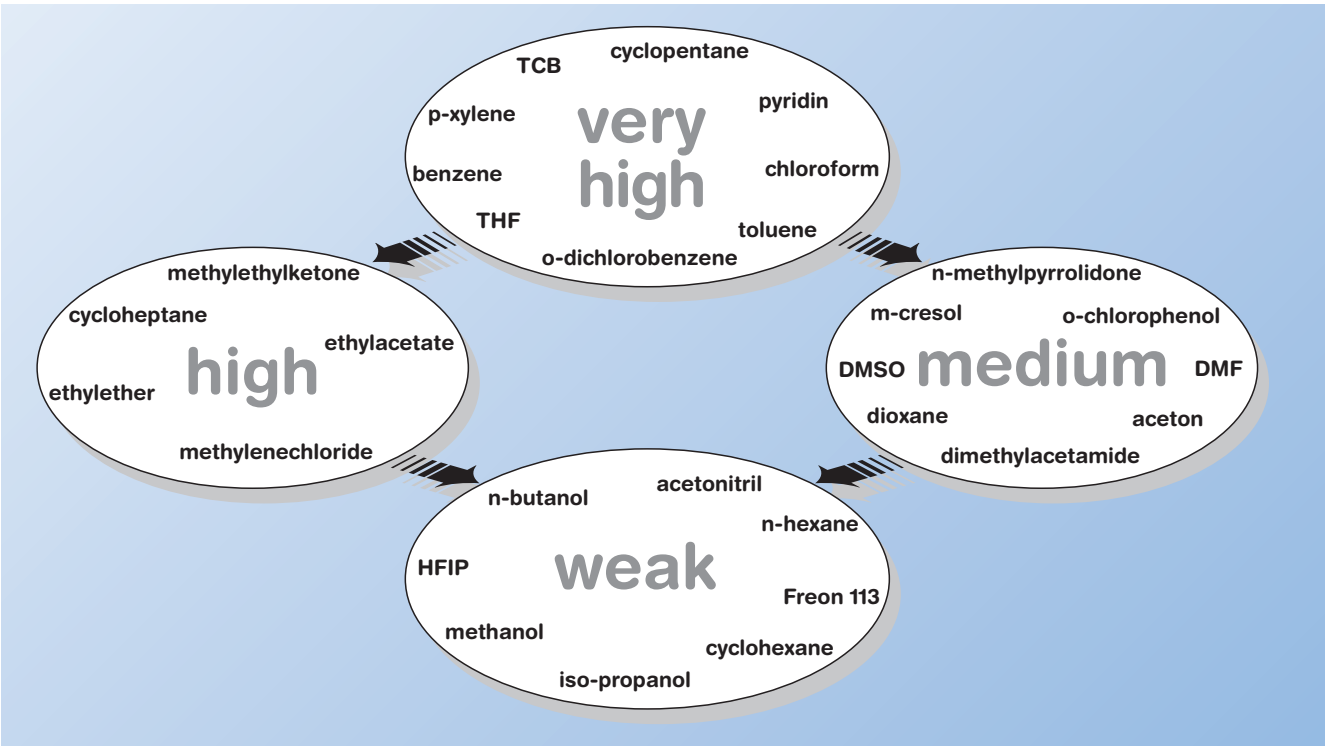
MZ-Gel SD*plus* 100Å 3µm x 2, 300x8 mm

Solvent Compatibility Chart

MZ-Gel SD*plus* GPC-columns are manufactured, tested and shipped by default in THF.

By request we can deliver these columns filled with any other common solvent. Please follow the solvent compatibility chart below if you intend to change the solvent due to the swelling of the polymer.

The swelling capacity of GPC-eluents is classified in four categories from low up to very high. This offers the following possibilities for changing the eluent:



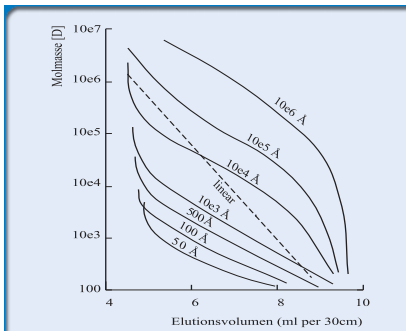
GPC-solvents: swelling capacity and possibilities for changing the eluent

MZ ANALYSENTECHNIK

MZ-Gel SD*plus* - for Organic Media

MZ-Gel SD*plus* by MZ-Analysentechnik is a high-performance styrene-/divinylbenzene-copolymer, tightly classed with a narrow pore size distribution. The excellent quality of this highly cross linked packing media enables us to pack GPC-columns with both a long lifetime and extraordinary high column efficiencies.

For example: columns with 3 µm particle size are delivered with guaranteed theoretical plate-numbers: > 100,000 m^{-1}



Codes MZ-Gel SD*plus*

Porosity	3 µm	5 µm	10 µm
50 Å	5553	5555	5530
100 Å	5013	5015	5010
500 Å	5053	5055	5050
1,000 Å	5303	5305	5300
10^4 Å	-	5405	5400
10^5 Å	-	5505	5500
10^6 Å	-	5605	5600
Linear	-	5005	5000

Part-No.

MZ CODE – LEN IDØ

four-digit Materialcode | length in mm | ID in 1/10 mm

Example:

MZ-Gel SD*plus* 100 Å 5 µm (5015);

SEC-Column 300 x 8.0 mm

=> Part.-No.: MZ5015-300080

Please inquire details for Refill-Service

Analytical 8 mm ID

Length x ID	Particle Size	Porosity	Price/€ New	Price/€ Refill
300 x 8 mm	3 µm	50 Å, 100 Å, 500 Å, 10^3 Å	1,223.--	1,101.--
	5 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	1,070.--	948.--
	5 µm	linear	1,162.--	1,040.--
	10 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	834.--	713.--
	10 µm	linear	950.--	828.--
600 x 8 mm	5 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	1,529.--	1.345.--
	5 µm	linear	1,754.--	1.572.--
	10 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	1,213.--	1,029.--
	10 µm	linear	1,374.--	1.190.--
50 x 8 mm	5 µm	all porosities + linear	373.--	324.--
	10 µm	all porosities + linear	373.--	324.--

Microbore

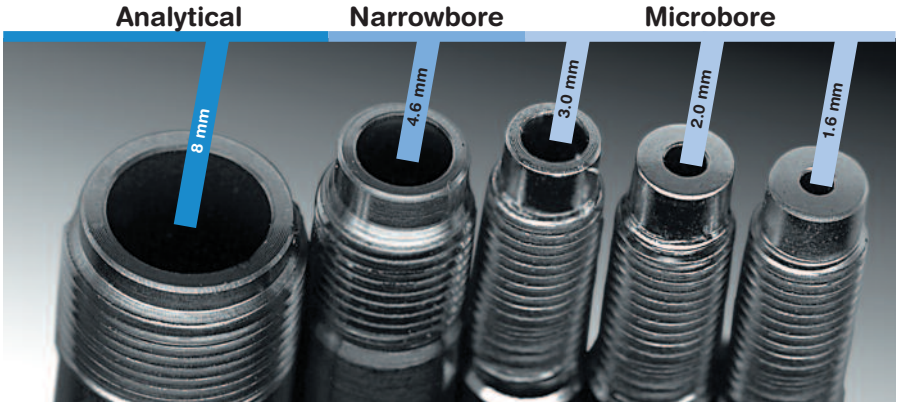
250 x 3 mm	5 µm	all porosities + linear	734.--	613.--
40 x 3 mm	5 µm	all porosities + linear	256.--	196.--
250 x 2 mm	5 µm	all porosities + linear	734.--	613.--
40 x 2 mm	5 µm	all porosities + linear	256.--	196.--

Narrowbore 4.6 mm ID (saving up to 70 % of solvent)

300 x 4,6 mm	3 µm	50 Å, 100 Å, 500 Å, 10^3 Å	˝1,223.--	1,101.--
	5 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	917.--	795.--
	5 µm	linear	1,009.--	887.--
40 x 4,6 mm	3 µm	50 Å, 100 Å, 500 Å, 10^3 Å	256.--	196.--
	5 µm	all porosities + linear	256.--	196.--
	10 µm	all porosities + linear	256.--	196.--

Preparative 20 mm ID

300 x 20 mm	10 µm	50 Å, 100 Å, 500 Å, 10^3 Å, 10^4 Å, 10^5 Å, 10^6 Å	2.434,--	2.130,--
	10 µm	linear	2.754,--	2.450,--
50 x 20 mm	10 µm	all porosities + linear	594,--	417,--



all prices in EUR excluding VAT