

HPLC Column Selection by Ph.Eur. Listing

The European Pharmacopoeia (*Ph. Eur.*), of the Council of Europe is a pharmacopoeia, listing a wide range of active substances and excipients used to prepare pharmaceutical products in Europe. It includes general and specific monographs that give quality standards for all the main medicines used in Europe. All medicines sold in the 38 Member States of the European Pharmacopoeia must comply with these quality standards so that consumers have a guarantee for products obtained from pharmacies and other legal suppliers.

It is widely understood that all HPLC packings are not alike, and no single column can perform a myriad of desired separations. HPLC packings differ in hydrophobicity, surface coverage, surface area, pore size, and particle shape.

For each European Pharmacopoeia (*Ph. Eur.*) description of the HPLC stationary phase, you will find listed the most suitable Phenomenex HPLC column. Other possible columns can also be used for these analyses. Please contact Phenomenex for your specific LC column needs.

Description According to Pharm. Eur. 8.0 4.1.1. Reagents 2013	Number	Recommended Phenomenex Column	Indicated Particle Size (µm)	Page
Silica gel IT-acceptor / IT-Donor for chiral separations (1-(3,5-dinitrobenzamide)-1,2,3,4-tetrahydrophenanthrene).	1160100	Whelk-O 1+2		Inquire
Silica gel AD for chiral separation coated with Amylose tris (3,5-dimethylphenylcarbamate)	1171700		5	
Silica gel AGP for chiral chromatography. (alpha 1-acid glycoprotein)	1148700			
Silica gel BC for chiral chromatography. (Beta-Cyclodextrin)	1161300	Sumichiral OA-7000		338
Silica gel for chromatography.	1076900	Luna Silica(2)	3 to 10	213
Silica gel for chromatography, alkyl bonded for use with highly aqueous mobile phases.	1160200	Synergi Hydro-RP Synergi Fusion-RP Gemini C18 Gemini NX-C18 Kinetex C18 Kinetex XB-C18		265 265 187 187 199 199
Silica gel for chromatography, alkyl bonded for use with highly aqueous mobile phases, endcapped.	1176900	Synergi Hydro-RP Synergi Fusion-RP Gemini C18 Gemini NX-C18 Kinetex C18 Kinetex XB-C18		265 265 187 187 199 199
Silica gel for chromatography, amido-hexadecylsilyl.	1170400			
Silica gel for chromatography, amino-hexadecylsilyl.	1138400		3 to 10	
Silica gel for chromatography, aminopropylmethylsilyl.	1102400	SphereClone NH ₂ (Amino) PhenoSphere NH ₂ (Amino)	3 to 10	262 240
Silica gel for chromatography, aminopropylsilyl.	1077000	SphereClone NH ₂ (Amino) PhenoSphere NH ₂ (Amino)	3 to 10	262 240
Silica gel for chromatography, Amylose derivative of.	1109800	Lux Amylose-2	10	332
Silica gel for chromatography, butylsilyl. Spheroidal 300 Å; pore volume: 0.6 cm ³ /g; area: 80 m ² /g.	1076200	Aeris WIDEPORE C4	3 to 10	295
Silica gel for chromatography, butylsilyl, endcapped.	1170500	Jupiter 300 C4 Aeris WIDEPORE C4	3 to 10	307 295
Silica gel for chromatography, crown-ether.	1178000	Sumichiral OA-8000		338
Silica gel for chromatography, cyanosilyl.	1109900	Luna CN (Cyano) HyperClone CN (Cyano) PhenoSphere CN (Cyano)	3 to 10	213 196 240
Silica gel for chromatography, di-isobutyloctadecylsilyl.	1140000	ZORBAX StableBond C18 Kinetex XB-C18		278 199
Silica gel for chromatography, diisopropylcyanopropylsilyl.	1168100	ZORBAX StableBond CN		278
Silica gel for chromatography, dimethyloctadecylsilyl. irregular; area: 300 m ² /g.	1115100	Bondclone C18	10	182
Silica gel for chromatography, diol dihydroxypropyl, 100 Å.	1110000	Luna HILIC	5	213
Silica gel for chromatography, dodecylsilyl, endcapped.	1179700	Synergi Max-RP		265
Silica gel for chromatography, hexadecylamidylsilyl with hexadecylcarboxamidopropyl-dimethylsilyl groups.	1162500		5	
Silica gel for chromatography, hexadecylamidylsilyl, endcapped with hexadecylcarboxamidopropyl-dimethylsilyl groups.	1172400		5	
Silica gel for chromatography, hexylsilyl.	1077100	SphereClone C6 PhenoSphere C6	3 to 10	262 240
Silica gel for chromatography, hexylsilyl, endcapped.	1174400	SphereClone C6 PhenoSphere C6	3 to 10	262 240
Silica gel for chromatography, human albumin coated.	1138500		3 to 10	
Silica gel for chromatography, hydrophilic surface has been modified to provide hydrophilic characteristics.	1077200	Luna HILIC	3 to 10	213
Silica gel for chromatography, nitrile cyanopropylsilyl.	1077300	Luna CN (Cyano) HyperClone CN (Cyano) PhenoSphere CN (Cyano)	3 to 10	213 196 240
Silica gel for chromatography, nitrile R1 chemically bonded nitrile groups.	1077400	Luna CN (Cyano) HyperClone CN (Cyano) PhenoSphere CN (Cyano)	3 to 10	213 196 240
Silica gel for chromatography, nitrile R2 ultrapure silica (<20 ppm metal) with cyanopropylsilyl groups.	1119500	Luna CN (Cyano) HyperClone CN (Cyano) PhenoSphere CN (Cyano)	3 to 10	213 196 240
Silica gel for chromatography, nitrile, endcapped with cyanopropylsilyl groups.	1174500	Luna CN (Cyano)	3 to 10	213
Silica gel for chromatography, octadecanoylamino-propylsilyl amino-propylsilyl groups which are acylated with octadecanoyl groups.	1115200			

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Silica gel for chromatography, octadecylsilyl.	1077500	Luna C18(2) Synergi Hydro-RP Synergi Fusion-RP Gemini C18 Gemini NX-C18 HyperClone C18 Kinetex C18 Kinetex XB-C18 SphereClone C18 ODS(1) or (2)	3 to 10	213 265 265 187 187 196 199 199 262
Silica gel for chromatography, octadecylsilyl R1 ultrapure silica (<20 ppm metals), pore size and C-load are indicated in the method.	1110100	Luna C18(2) Synergi Hydro-RP Synergi Fusion-RP Gemini C18 Gemini NX-C18 Jupiter C18 Kinetex C18 Kinetex XB-C18	3 to 10	213 265 265 187 187 307 199 199
Silica gel for chromatography, octadecylsilyl R2 ultrapure silica; 150 Å pore size; 20 % C-load; optimized for the analysis of PAHs.	1115300	EnviroSep-PP Prodigy ODS-2		186 243
Silica gel for chromatography, octadecylsilyl, base-deactivated pretreated before the bonding by careful washing and hydrolyzing most of the superficial siloxane bridges to minimize the interaction with basic components.	1077600	Luna C18(2) Gemini C18 Gemini NX-C18 Kinetex C18 Kinetex XB-C18	3 to 10	213 187 187 199 199
Silica gel for chromatography, octadecylsilyl, endcapped. To minimize any interaction with basic compounds it's carefully endcapped to cover most of the remaining silanol groups.	1115400	Luna C18(2) Gemini C18 Gemini NX-C18 Kinetex C18 Kinetex XB-C18	3 to 10	213 187 187 199 199
Silica gel for chromatography, octadecylsilyl, endcapped R1 ultrapure silica (<20 ppm metal), 19 % C-load. To minimize any interaction with basic compounds it's carefully endcapped to cover most of the remaining silanol groups.	1115401	Luna C18 Synergi Hydro-RP		213 265
Silica gel for chromatography, octadecylsilyl, endcapped, base-deactivated; pore size 100 Å, C-load: 16 %, pretreated before the bonding by careful washing and hydrolyzing most of the superficial siloxane bridges. To further minimize any interaction with basic compounds it's carefully endcapped to cover most of the remaining silanol groups.	1108600	Luna C18(2) Prodigy ODS-3 Gemini C18 Gemini NX-C18	3 to 10	213 243 187 187
Silica gel for chromatography, octadecylsilyl, endcapped, base-deactivated R1; pretreated before the bonding by careful washing and hydrolyzing most of the superficial siloxane bridges. To further minimize any interaction with basic compounds it's carefully endcapped to cover most of the remaining silanol groups.	1162600	Luna C18(2) Gemini C18 Gemini NX-C18 Kinetex C18 Kinetex XB-C18	3 to 10	213 187 187 199 199
Silica gel for chromatography, octadecylsilyl, monolithic.	1154500	Onyx C18		230
Silica gel for chromatography, octadecylsilyl, with polar embedded groups, endcapped; the particles are based on a mixture of silica chemically modified at the surface by the bonding of octadecylsilyl groups and silica chemically modified with a reagent providing a surface with chains having embedded polar groups.	1177900	(Synergi Fusion-RP)	3 to 10	265
Silica gel for chromatography, octadecylsilyl, with polar incorporated groups, endcapped; the particles are based on silica, chemically modified with a reagent providing a surface with chains having polar incorporated groups and terminating octadecyl groups.	1165100	Synergi Fusion-RP	3 to 10	265
Silica gel for chromatography, octylsilyl.	1077700	Luna C8(2) Prodigy C8 HyperClone C8 (MOS) Kinetex C8 SphereClone C8	3 to 10	213 243 196 199 262
Silica gel for chromatography, octylsilyl R1. Bonding of octylsilyl and methyl groups (double bonded phase).	1077701	Luna C8(2) Prodigy C8 HyperClone C8 (MOS) Kinetex C8 SphereClone C8	3 to 10	213 243 196 199 262
Silica gel for chromatography, octylsilyl R2 ultrapure silica (<20 ppm metal); pore size 100 Å; C-load: 19 %.	1077702			
Silica gel for chromatography, octylsilyl R3 ultrapure silica, bonding of octylsilyl groups and sterically protected with branched hydrocarbons at the silanes.	1155200	ZORBAX StableBond C8		278
Silica gel for chromatography, octylsilyl, base-deactivated pretreated before the bonding by careful washing and hydrolyzing most of the superficial siloxane bridges to minimize the interaction with basic components.	1131600	Luna C8(2) Prodigy C8 HyperClone C8 (BDS) Kinetex C8	3 to 10	213 243 196 199
Silica gel for chromatography, octylsilyl, endcapped. To minimize any interaction with basic compounds it's carefully endcapped to cover most of the remaining silanol groups.	1119600	Luna C8(2) Prodigy C8 HyperClone C8 (BDS) Kinetex C8	3 to 10	213 243 196 199
Silica gel for chromatography, octylsilyl, endcapped, base-deactivated pretreated before the bonding by careful washing and hydrolyzing most of the superficial siloxane bridges to minimize the interaction with basic components. To further minimize any interaction with basic compounds it's carefully endcapped to cover most of the remaining silanols.	1148800	Luna C8(2) Prodigy C8 Kinetex C8 HyperClone C8 (BDS)	3 to 10	213 243 199 196
Silica gel for chromatography, octylsilyl, with polar incorporated groups, endcapped; chains having polar incorporated groups and terminating octyl groups.	1152600		3 to 10	
Silica gel for chromatography, oxypropionitrilsilyl	1184700			
Silica gel for chromatography, palmitamidopropylsilyl, endcapped bonding with palmitamidopropyl groups and endcapped with acetamidopropyl groups.	1161900		3 to 10	

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Silica gel for chromatography, phenylhexylsilyl.	1153900	Kinetex Phenyl-Hexyl Luna Phenyl-Hexyl Gemini C6-Phenyl	3 to 10	199 213 187
Silica gel for chromatography, phenylhexylsilyl, endcapped. 3 µm; To minimize any interaction with basic compounds it's carefully endcapped to cover most of the remaining silanol groups.	1170600	Luna Phenyl-Hexyl Gemini C6-Phenyl Kinetex Phenyl-Hexyl	3	213 187 199
Silica gel for chromatography, phenylsilyl.	1110200	Synergi Polar-RP Luna Phenyl-Hexyl Gemini C6-Phenyl Prodigy Phenyl-3 (PH3) SphereClone Phenyl Kinetex Phenyl-Hexyl	5 to 10	265 213 187 243 262 199
Silica gel for chromatography, phenylsilyl, R1 spherical silica; pore size: 80 Å; surface area: 180 m ² /g; C-load: 5.5%.	1075700	ZORBAX StableBond Phenyl	5	278
Silica gel for chromatography, phenylsilyl, endcapped. To minimize any interaction with basic compounds it's carefully endcapped to cover most of the remaining silanol groups.	1154900	Synergi Polar-RP Luna Phenyl-Hexyl Gemini C6-Phenyl Prodigy Phenyl-3 (PH3) Kinetex Phenyl-Hexyl	5 to 10	265 213 187 243 199
Silica gel for chromatography, propoxybenzene, endcapped.	1174600	Synergi Polar-RP	3 to 10	265
Silica gel for chromatography, propylsilyl.	1170700		3 to 10	
Silica gel for chromatography, strong anion-exchange bonding of quaternary ammonium groups; pH limit of use: 2 to 8.	1077800	PhenoSphere SAX	3 to 10	240
Silica gel for chromatography, strong cation-exchange bonding of sulfonic acid groups.	1161400	Luna SCX	5 to 10	213
Silica gel for chromatography, trimethylsilyl.	1115500	Develosil TMS-UG (C1) Capcell Pak C1 UG PhenoSphere C1	3 to 10	185 183 240
Silica for size-exclusion chromatography. 10 µm silica with a very hydrophilic surface. Pore size average: 30 nm; pH stability 2 to 8; exclusion range for proteins: 1 x 10 ³ to 3 x 10 ⁶ .	1077900	BioSep-SEC-S3000	10	304
Silica gel OC for chiral separations.	1146800		5	
Silica gel OD for chiral separations.	1110300	Lux Cellulose-1	5	332
Silica gel OJ for chiral separations.	1179800	Lux Cellulose-3		332
Silica gel for chromatography, 4-nitrophenylcarbamidesilyl.	1185200			
A very finely divided silica gel, chemically modified at the surface by bonding with 4-nitrophenyl-carbamide groups.				
Organosilica polymer, amorphous, octadecylsilyl. Synthetic, spherical hybrid particles containing both inorganic (silica) and organic (organosiloxanes) components, chemically modified at the surface by trifunctionally bonded octadecylsilyl groups.	1144200	Gemini C18 Gemini NX-C18		187 187
Organosilica polymer, amorphous, octadecylsilyl, endcapped. Synthetic, spherical hybrid particles containing both inorganic (silica) and organic (organosiloxanes) components, chemically modified at the surface by trifunctionally bonded octadecylsilyl groups. To minimize any interaction with basic compounds, it is carefully endcapped to cover most of the remaining silanol groups.	1178600	Gemini C18 Gemini NX-C18		187 187
Organosilica polymer, amorphous, polar embedded, octadecylsilyl, endcapped. Synthetic, spherical hybrid particles containing both inorganic (silica) and organic (organosiloxanes) components, chemically modified at the surface by the bonding of polar embedded octadecylsilyl groups. To minimize any interaction with basic compounds, it is carefully endcapped to cover most of the remaining silanol groups.	1150600			
Organosilica polymer, amorphous, polar embedded propyl-2-phenylsilyl, endcapped. Synthetic, spherical hybrid particles containing both inorganic (silica) and organic (organosiloxanes) components, chemically modified at the surface by the bonding of polar embedded propyl-2-phenylsilyl groups. To minimize any interaction with basic compounds, it is carefully endcapped to cover most of the remaining silanol groups.	1178100			
Organosilica polymer for mass spectrometry, amorphous, octadecylsilyl, endcapped. Synthetic, spherical hybrid particles containing both inorganic (silica) and organic (organosiloxanes) components. To minimize any interaction with basic compounds, it is carefully endcapped to cover most of the remaining silanol groups.	1164900	Gemini C18 Gemini NX-C18		187 187
Vinyl polymer for chromatography, octadecyl. Spherical particles (5 µm) of a vinyl alcohol copolymer, bonding of octadecyl groups on the hydroxyl groups.	1155400	Asahipak ODP-50	5	181
Vinyl polymer for chromatography, octadecylsilyl. Spherical particles (5 µm) of a vinyl alcohol copolymer bonded to an octadecylsilane. C-load: 17 %.	1121600	Asahipak ODP-50	5	181
Ion-exclusion resin for chromatography. A resin with sulfonic acid groups attached to a polymer lattice consisting of polystyrene cross-linked with divinylbenzene.	1131000	Rezex ROA-Organic Acid Rezex RHM-Monosaccharide		244 244
Cation-exchange resin, strong. Strong cation-exchange resin in protonated form with sulfonic acid groups attached to a polymer lattice consisting of polystyrene cross-linked with divinylbenzene.	1156800	Rezex ROA-Organic Acid Rezex RHM-Monosaccharide		244 244
Cation-exchange resin (Calcium form), strong. Resin in calcium form with sulfonic acid groups attached to a polymer lattice consisting of polystyrene cross-linked with 8 % divinylbenzene	1104600	Rezex RCM-Monosaccharide Rezex RCU-USP Sugar Alcohols		244 244
Cation-exchange resin (Sodium form), strong. Resin in sodium form with sulfonic acid groups attached to a polymer lattice consisting of polystyrene cross-linked with divinylbenzene.	1176100	Rezex RNM-Carbohydrate		244 244