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Chromatography Columns and Supplies

LC COLUMN SELECTION Specifications of C1 to C8 and C30 Bonded Reversed-Phase Materials

Catalogue 9

Hichrom Limited

1 The Markham Centre, Station Road
Theale, Reading, Berks, RG7 4PE, UK

Tel: +44 (0)118 930 3660 Fax: +44 (0)118 932 3484

Email: sales@hichrom.co.uk www.hichrom.co.uk

SPECIFICATIONS OF C1 TO C8 & C30 BONDED REVERSED-PHASE MATERIALS

Octyl-bonded phases are the most common medium polarity alternative to C18 bonded phases. Very short chain alkyl-bonded phases are less stable. The shorter the alkyl chain the greater the vulnerability of the material to aqueous dissolution at high pH or loss of bonded phase at low pH. For wide pore silicas the C4 chemistry retains high popularity. Table 1 lists the physical characteristics of a range of C1 to C8 bonded and C30 bonded narrow pore silica phases. For wide pore (300Å) phases see page 42.

Table 1. Short chain alkyl (C1 to C8) and C30 bonded silica phases

Phase	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	Endcapped	Page
C1 Bonded						
CAPCELL PAK C1 UG	5	120	300	7	No	79, 80
Chromegabond TMS	5	60	475	-	No	102
Develosil TMS-UG	3, 5	140	300	4.5	Yes	95, 96
Exsil C1	3, 5	100	200	3	No	104
Hypersil SAS	5	120	170	2.5	No	232
Kromasil C1	5	100	320	4.7	Yes	141, 143, 144
ProntoSIL C1	3, 5	120	300	2	No	78
Waters Spherisorb C1	3, 5	80	220	2.2	No	262, 263
YMC TMS	3, 5	120	330	4	No	270, 272
ZORBAX TMS	5	70	330	4	Yes	279, 280
C2 Bonded						
Chromegabond C2	5	60	480	-	No	102
NUCLEOSIL C2	7	100	350	3.5	No	163, 164
C3 Bonded						
ZORBAX SB-C3	5	80	180	4	No	281
C4 Bonded						
ACE C4	2[2], 3, 5, 10	100	300	5.5	Yes	64, 70,74-76
Epic C4-SD	1.8, 3, 5, 10	120	350	8	Yes	100
Inertsil C4	5	150	320	7.5	Yes	116, 117
Kromasil C4	2.5, 3.5, 5, 7, 10	100	320	8	Yes	6, 141, 143-146
ProntoSIL C4	3, 5	120	300	4	No	78
YMC C4	3, 5	120	330	7	Yes	270, 272
YMC ProC4	3, 5	120	340	7	Yes	268, 269
C6 Bonded						
Chromegabond C6	5	60	220	6	No	102
Chromegabond MC-CC6	5	60	475	7	Yes	102
Waters Spherisorb C6	3, 5	80	220	4.7	Yes	262, 263
C8 Bonded						
Acclaim C8	2.2, 3, 5	120	300	11	Yes	235, 238
Accucore C8[1]	2.6	80	130	5	Yes	223, 224, 227
ACE C8	2[2], 3, 5, 10	100	300	9.0	Yes	64, 70,74-76
AquaSep	3, 5	100	450	16	-	101
Brownlee Spheri RP-8	5, 10	80	180	6	Yes	194
Brownlee SPP[1]	2.7	90	150	7.7	Yes	195
CAPCELL PAK C8 UG	5	120	300	10	Yes	79, 80
CAPCELL PAK C8 AG	5	120	300	10	Yes	79, 80
CAPCELL PAK C8 DD	5	80	300	11	Yes	79, 80
CAPCELL PAK C8 SG	5	120	300	10	Yes	79, 80
Chromegabond BAS-C8	5	100	300	8	No	102
Chromegabond C8	5	100	300	8	No	102
Chromegabond C8-BD	5	100	475	12	No	102
Chromolith RP-8e	-	-	300	11	Yes	178, 179
Cogent Bidentate C8	4	100	350	7	No	186, 188
Develosil UG C8	5	140	300	11	Yes	95, 96
Epic C8	1.8, 3, 5, 10	120	230	10	Yes	100
Exsil C8	3, 5	100	200	6	Yes	104
Genesis C8	3, 4, 7	120	300	11	No	124
Genesis C8 e/c	3, 4, 7	120	300	11	Yes	124
HALO C8[1]	2.7	90	150	5.4	Yes	125, 126, 128
HALO-5 C8[1]	5	90	90	3.7	Yes	125, 128, 129

[1] Superficially porous phases [2] As ACE Excel column

Specifications of C1 to C8 & C30 Bonded Reversed-Phase Materials (continued)

Table 1. Short chain alkyl (C1 to C8) and C30 bonded silica phases (continued)

Phase	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	Endcapped	Page
C8 Bonded						
Hichrom C8	3.5, 5	150	250	8	Yes	132-136
Hypersil MOS	3, 5	120	170	6.5	No	232
Hypersil MOS-2	5	120	170	6.5	Yes	232
Hypersil BDS C8	2.4, 3, 5	130	170	11	Yes	233
Hypersil GOLD C8	1.9, 3, 5	175	220	8	Yes	228-230
Inertsil C8	5	150	320	10.5	Yes	116, 117
Inertsil C8-3	2, 3, 5	100	450	9	Yes	108, 113, 114
Inertsil C8-4	2, 3, 5	100	450	5	Yes	107
InertSustain C8	2, 3, 5	100	350	8	Yes	5
Inspire C8	3, 5, 10	100	440	17	Yes	97, 98
Kromasil C8	2.5, 3.5, 5, 10	100	320	12	Yes	6, 141-146
L-column C8	5	120	340	10	Yes	156
L-column2 C8	5	120	340	10	Yes	156
LiChrosorb RP-8	5, 10	100	300	9.5	No	181, 184
LiChrospher RP-8	5	100	350	12.5	No	182-184
LiChrospher RP-8e	5	100	350	13	Yes	182-184
Nova-Pak C8	4	60	120	4	Yes	265
NUCLEODUR C8 Gravity	1.8, 5	110	340	11	Yes	157, 160
NUCLEODUR C8 ec	3, 5	110	340	10.5	Yes	157, 160
NUCLEOSIL C8	5, 7, 10	100	350	8.5	No	163-166
NUCLEOSIL C8	3, 5, 7, 10	120	200	6.5	No	163-166
NUCLEOSIL C8 HD	5	100	-	13	Yes	167
Partisil C8	5, 10	-	-	-	-	189, 190, 192,193
Partisphere C8	5	-	-	-	-	190, 191
Symmetry C8	3.5, 5	100	335	12	Yes	264
Syncronis C8	1.7, 3, 5	100	320	10	Yes	234
TSKgel Octyl-80Ts	5	80	-	11	Yes	247, 248
TSKgel Super-Octyl	2.3	110	-	5	Yes	247, 248
Ultrasphere C8	3, 5	80	-	-	Yes	258, 259
Waters Spherisorb C8	3, 5, 10	80	220	5.8	Yes	262, 263
YMC Basic	3, 5	proprietary	proprietary	8	Yes	270-272
YMC C8	3, 5	120	330	10	Yes	270, 272
YMC ProC8	3, 5	120	340	10	Yes	268, 269
YMC-Triart C8	1.9, 3, 5	120	-	7	Yes	266, 267
ZORBAX C8	5	70	330	12	Yes	279, 280
ZORBAX Eclipse Plus C8	1.8, 3.5, 5	95	160	7	Yes	281
ZORBAX Eclipse XDB-C8	1.8, 3.5, 5	80	180	7.6	Yes	281
ZORBAX Rx-C8	5	80	180	5.5	No	281, 282
ZORBAX SB-C8	1.8, 3.5, 5	80	180	5.5	No	281
C30 Bonded						
Acclaim C30	3, 5	200	200	13	Yes	235, 238
Accucore C30[1]	2.6	150	80	5	Yes	223, 225, 227
Cogent C30	3, 5	200	-	18	No	186, 187
Develosil RPAQUEOUS	3, 5	140	300	18	Yes	95, 96
Develosil RPAQUEOUS-AR	3, 5	140	300	18	Yes	95, 96
Develosil XG-C30	3, 5	140	300	19.5	Yes	95
ProntoSil C30	3, 5, 10	200	200	20	No	78
YMC Carotenoid	3, 5	proprietary	proprietary	-	-	270-272

[1] Superficially porous phases