



UNITED CHEMICAL TECHNOLOGIES, INC.

*Market Leaders in Solid Phase Sorbent Technologies Introduces
Economical • Prepacked • Disposable*

FLASH CHROMATOGRAPHY COLUMNS



For rapid purification of natural and synthetic products

*Compatible with common
Flash Systems including
Biotage[®], Flashmaster[®] and
RediSep[™]**

- Ensures high yield separations
- Observe reproducible results
- Guaranteed not to leak
- Optimized performance



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*Biotage is a trademark of Dyax Corporation

*Flashmaster is a trademark of Argonaut Corporation

*RediSep is a trademark of ISCO Corporation

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Biotage® Compatible Columns

Silica

Part Number	Amt. of Sorbent	Size	Qty / Pack
FUSIL12S-20	4	12S	20
FUSIL12S-100	4	12S	100
FUSIL12M-20	8	12M	20
FUSIL12M-100	8	12M	100
FUSIL40S-12	40	40S	12
FUSIL40S-100	40	40S	144
FUSIL40M-12	90	40M	12
FUSIL40M-100	90	40M	144
FUSIL40L-12	120	40L	12
FUSIL65M-6	300	65M	6

C18

Part Number	Amt. of Sorbent	Size	Qty / Pack
FEC1812S-20	4	12S	20
FEC1812S-100	4	12S	100
FEC1812M-20	8	12M	20
FEC1812M-100	8	12M	100
FEC1840S-12	40	40S	12
FEC1840S-100	40	40S	144
FEC1840M-12	90	40M	12
FEC1840M-100	90	40M	144
FEC1840L-12	120	40L	12
FEC1865M-6	300	65M	6

Flashmaster® Compatible Columns

Silica

Part Number	Amt. of Sorbent	Column Size	Qty / Pack
MUSIL215-20	2g	15mL	20
MUSIL525-20	5g	25mL	20
MUSIL175-16	10g	75mL	16
MUSIL275-16	20g	75mL	16

C18

Part Number	Amt. of Sorbent	Column Size	Qty / Pack
MEC18215-20	2g	15mL	20
MEC18525-20	5g	25mL	20
MEC18175-16	10g	75mL	16
MEC18275-16	20g	75mL	16

RediSep™ Compatible Columns

C18

Part Number	Amt. of Sorbent	Qty / Pack
IEC18-4	4g	20
IEC18-12	12g	20
IEC18-40	40g	15

BCX



Part Number	Amt. of Sorbent	Qty / Pack
IUBCX-4	4g	20
IUBCX-12	12g	20
IUBCX-40	40g	15

Silica

Part Number	Amt. of Sorbent	Qty / Pack
IUSIL-4	4g	20
IUSIL-12	12g	20
IUSIL-40	40g	16

Flash columns can be packed with a variety of our phases.

Reverse Phase (Hydrophobic)

SORBENT	SORBENT CODE	STRUCTURE
C2 ethyl	CO2	SiCH ₂ CH ₃
C3 propyl	CO3	Si(CH ₂) ₂ CH ₃
C4 n-butyl	Cn4	Si(CH ₂) ₃ CH ₃
iC4 isobutyl	CI4	SiCH ₂ CH(CH ₃) ₂
tC4 tertiary butyl	Ct4	SiC(CH ₃) ₃
C5 pentyl	CO5	Si(CH ₂) ₄ CH ₃
C6 hexyl	CO6	Si(CH ₂) ₅ CH ₃
C7 heptyl	CO7	Si(CH ₂) ₆ CH ₃
C8 octyl	CO8	Si(CH ₂) ₇ CH ₃
C10 decyl	C10	Si(CH ₂) ₉ CH ₃
C12 dodecyl	C12	Si(CH ₂) ₁₁ CH ₃
C18 octadecyl	C18	Si(CH ₂) ₁₇ CH ₃
C20 eicosyl	C20	Si(CH ₂) ₁₉ CH ₃
C30 tricontyl	C30	Si(CH ₂) ₂₉ CH ₃
Cyclohexyl	CYH1	Si- 
Phenyl	PHY1	Si- 

Normal Phase (Hydrophilic)



Silica	SIL1	SiOH
Diol	DOL1	Si(CH ₂) ₃ OCH ₂ CHOHCH ₂ OH
Cyanopropyl	CYN1	Si(CH ₂) ₃ CN
Florisil PR [®]	FLS	
Alumina-Acid	ALA	
Alumina-Neutral	ALN	
Alumina-Base	ALB	
Carbon		

Ion Exchange



Anion

			pKa
Aminopropyl (1° amine)	NAX1	Si(CH ₂) ₃ NH ₂	9.8
n-2 aminoethyl (2° amine)	PSA1	Si(CH ₂) ₃ NH ₂ (CH ₂) ₂ NH ₂	10.1, 10.9
Diethylamino (3° amine)	DAX1	Si(CH ₂) ₃ NH(CH ₂ CH ₃) ₂	10.6
Quaternary Amine Chloride	QAX1	Si(CH ₂) ₃ N ⁺ (CH ₃) ₃	always charged
Quaternary Amine Hydroxide	CHQAX1	Si(CH ₂) ₃ N ⁺ (CH ₃) ₃	always charged
Quaternary Amine Acetate	CAQAX1	Si(CH ₂) ₃ N ⁺ (CH ₃) ₃	always charged
NEW Polyimine	PAX	Si(CH ₂) ₃ - [NHCH ₂ CH ₂] ₁₂ -	


Cation

Carboxylic Acid	CCX1	SiCH ₂ COOH	4.8
Propylsulfonic Acid	PCX1	Si(CH ₂) ₃ SO ₃ H	<1
Benzenesulfonic Acid	BCX1	Si(CH ₂) ₂ -  -SO ₃ H	always charged
Benzenesulfonic Acid High Load	BCXHL1	Si(CH ₂) ₂ -  -SO ₃ H	always charged
NEW Triacetic Acid	TAX	Si(CH ₂) ₃ N(CH ₂ COOH)(CH ₂) ₂ N(CH ₂ COOH) ₂	
Thiopropyl	THX	Si(CH ₂) ₃ SH	

Copolymeric (Mixed Phase)*

Aminopropyl + C8	NAX2	Si(CH ₂) ₃ NH ₂ + Si(CH ₂) ₇ CH ₃
Quaternary Amine + C8	QAX2	Si(CH ₂) ₃ N ⁺ (CH ₃) ₃ + Si(CH ₂) ₇ CH ₃
Carboxylic Acid + C8	CCX2	SiCH ₂ COOH + Si(CH ₂) ₇ CH ₃
Propylsulfonic Acid + C8	PCX2	Si(CH ₂) ₃ SO ₃ H + Si(CH ₂) ₇ CH ₃
Benzenesulfonic Acid + C8	BCX2	Si(CH ₂) ₂ -  -SO ₃ H + Si(CH ₂) ₇ CH ₃
Cyanopropyl + C8	CNP2	Si(CH ₂) ₃ CN + Si(CH ₂) ₇ CH ₃
Cyclohexyl + C8	CYH2	Si-  + Si(CH ₂) ₇ CH ₃

Covalent Phases

NEW Epoxy	EPX	Si(CH ₂) ₃ - O - CH ₂ - CH - CH ₂
NEW Aldehydic	ALD	Si(CH ₃) ₄ CHO
Phenyl Boronic Acid	PBA	Si(CH ₃) ₃ -  - B(OH) ₂
NEW Isocyanate	ICN	Si(CH ₂) ₃ NCO

*UCT manufactures true copolymeric sorbents by dually reacting their high purity silicas. The product is not a mixed bed sorbent.

Organic Loading and Ion Exchange Capacity

Reverse Phase (Hydrophobic)

SORBENT	% Organic Loading	Exchange (meq/g)
C2 ethyl	6.60	
C3 propyl	7.60	
C4 n-butyl	8.50	
iC4 isobutyl	8.80	
tC4 tertiary butyl	8.50	
C5 pentyl	9.50	
C6 hexyl	11.00	
C7 heptyl	not tested	
C8 octyl	11.1	
C10 decyl	15.70	
C12 dodecyl	not tested	
C18 octadecyl	21.70	
C20 eicosyl	24.30	
C30 tricontyl	26.00	
Cyclohexyl	11.60	
Phenyl	11.00	

Normal Phase (Hydrophilic)

Silica	3.50	N/A
Diol	8.00	N/A
Cyanopropyl	6.90	N/A
Florisil PR [®]	N/A	N/A
Alumina-Acid	N/A	N/A
Alumina-Neutral	N/A	N/A
Alumina-Base	N/A	N/A

Ion Exchange

Anion

Aminopropyl (1° amine)	6.65	0.310
n-2 aminoethyl (2° amine)	9.70	0.320
Diethylamino (3° amine)	8.40	0.280
Quaternary Amine Chloride	8.40	0.250
Quaternary Amine Hydroxide	7.30	0.250
Quaternary Amine Acetate	8.40	0.250
NEW Polyimine	13.5	0.250

Cation

Carboxylic Acid	9.10	0.170
Propylsulfonic Acid	7.10	0.180
Benzenesulfonic Acid	11.00	0.320
Benzenesulfonic Acid High Load	15.00	0.650
NEW Triacetic Acid	7.61	Anion 0.17 / Cation .06
Thiopropyl	6.50	N/A

Copolymeric (Mixed Phase)

Aminopropyl + C8	12.3	0.163
Quaternary Amine + C8	13.60	0.160
Carboxylic Acid + C8	12.50	0.105
Propylsulfonic Acid + C8	15.20	0.114
Benzenesulfonic Acid + C8	12.30	0.072
Cyanopropyl + C8	14.60	0.163
Cyclohexyl + C8	N/A	N/A

Covalent Phases

Epoxy	N/A	N/A
NEW Aldehydic	N/A	N/A
Phenyl Boronic Acid	N/A	N/A
NEW Isocyanate	7.1	N/A