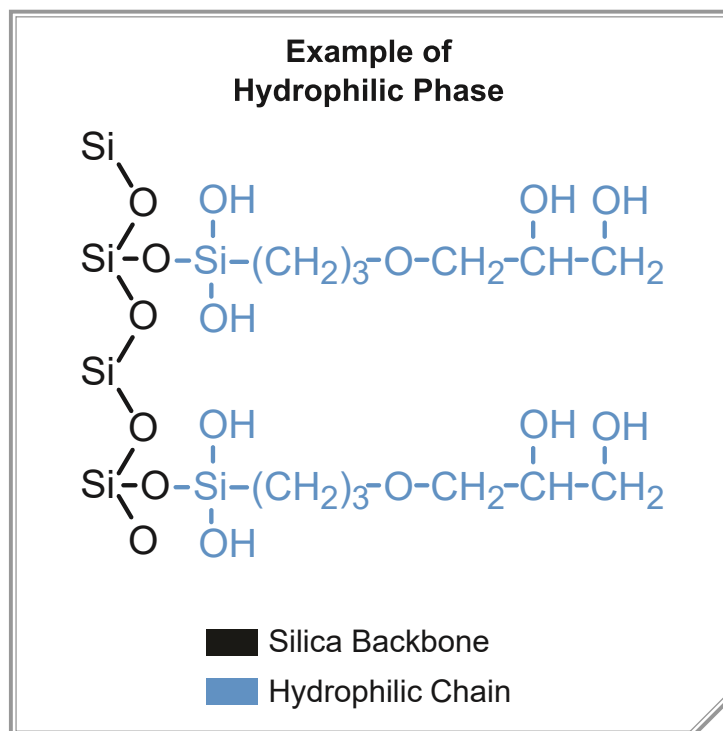


CLEAN-UP® HYDROPHILIC NORMAL PHASE EXTRACTION SORBENTS

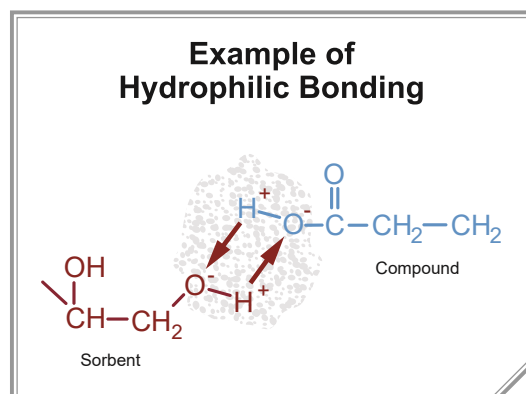
This sorbent is composed of a silica backbone bonded with carbon chains containing polar functional groups. Examples of groups that have this functionality are amines, hydroxyls and carbonyls.



Mechanism of Hydrophilic Bonding

Compounds are retained on hydrophilic sorbents through polar interactions including hydrogen bonding, pi-pi or dipole-dipole interactions. These types of interactions occur when the distribution of electrons between individual atoms in functional groups is unequal, causing negative and positive polarity. Compounds typically extracted on a hydrophilic column include analytes which have polar groups, such as amines, hydroxyls and carbonyls. Strong polar solvents, in turn, elute the analyte off of the sorbent.

Hydrophilic Sorbents & Structures	
Sorbent	Structure
Silica	-SiOH
Diol	-Si(CH ₂) ₃ OCH ₂ OHCH ₂ OH
Cyanopropyl	-Si(CH ₂) ₃ CN



CLEAN-UP® HYDROPHILIC PHASE

CLEAN-UP® UNBONDED SILICA, ACID WASHED

Organic Loading = N/A
Surface Area = 500 m²/g

Average Pore Size = 60Å
Pore Volume = 0.77 cm³/g

COLUMNS

Tube Volume (mL)	Sorbent Amount (mg)	Units per Pack	Part Number
1	100	100	CUSIL111
3	100	50	CUSIL113
3	200	50	CUSIL123
3	500	50	CUSIL153
6	100	50	CUSIL116
6	500	50	CUSIL156
6	1000	30	CUSIL1M6
10	100	50	CUSIL11Z
10	500	50	CUSIL15Z
15	2000	20	CUSIL12M15
25	5000	20	CUSIL15M25
75	10000	10	CUSIL110M75
75	20000	10	CUSIL120M75

CLEAN-UP® PHARMA-SIL®

Organic Loading = N/A
Surface Area = 500 m²/g

Average Pore Size = 60Å
Pore Volume = 0.82 cm³/g

COLUMNS

Tube Volume (mL)	Sorbent Amount (mg)	Units per Pack	Part Number
1	50	100	PHSIL1L1
1	100	100	PHSIL111
3	200	50	PHSIL123
6	500	50	PHSIL156
6	1000	30	PHSIL1M6
10	500	50	PHSIL15Z
15	2000	20	PHSIL12M15
25	5000	20	PHSIL15M25

36

CLEAN-UP® FLORISIL®

Florisil® is the trademark of U.S. Silica Co.

COLUMNS

Tube Volume (mL)	Sorbent Amount (mg)	Units per Pack	Part Number
1	100	100	CUFLS111
3	200	50	CUFLS123
3	500	50	CUFLS153
6	500	50	CUFLS156
6	1000	30	CUFLS1M6
10	100	50	CUFLS11Z
10	200	50	CUFLS12Z
10	500	50	CUFLS15Z
15	1000	30	CUFLS1M15
15	2000	30	CUFLS12M15
25	5000	20	CUFLS15M25
75	10000	10	CUFLS110M75

CLEAN-UP® HYDROPHILIC PHASE

CLEAN-UP® ALUMINA, ACIDIC

COLUMNS				
Tube Volume (mL)	Sorbent Amount (mg)	Units per Pack	Part Number	
1	100	100	CUALA111	
3	200	50	CUALA123	
3	500	50	CUALA153	
6	500	50	CUALA156	
6	1000	30	CUALA1M6	
15	2000	20	CUALA12M15	
25	5000	20	CUALA15M25	
75	10000	10	CUALA110M75	
WELL PLATE				
Number of Wells	Sorbent Amount (mg)	Units per Pack	Extended Drip Tip	Part Number
96	50	1	NO	WSHALA05

CLEAN-UP® ALUMINA, BASIC

COLUMNS				
Tube Volume (mL)	Sorbent Amount (mg)	Units per Pack	Part Number	
3	200	50	CUALB123	
3	500	50	CUALB153	
6	500	50	CUALB156	
6	1000	30	CUALB1M6	
10	200	50	CUALB12Z	
10	500	50	CUALB15Z	
15	2000	20	CUALB12M15	
25	5000	20	CUALB15M25	
75	10000	10	CUALB110M75	
WELL PLATE				
Number of Wells	Sorbent Amount (mg)	Units per Pack	Extended Drip Tip	Part Number
96	50	1	NO	WSHALB105

37

CLEAN-UP® ALUMINA, NEUTRAL

COLUMNS			
Tube Volume (mL)	Sorbent Amount (mg)	Units per Pack	Part Number
1	50	100	CUALN1L1
1	100	100	CUALN111
3	200	50	CUALN123
3	500	50	CUALN153
6	500	50	CUALN156
6	1000	30	CUALN1M6
10	200	50	CUALN12Z
10	500	50	CUALN15Z
15	2000	20	CUALN12M15
25	5000	20	CUALN15M25
75	10000	10	CUALN110M75

CLEAN-UP® CN, CYANOPROPYL

Organic Loading = 9.0%
Surface Area = 500 m²/g

Average Pore Size = 60 Å
Pore Volume = 0.77 cm³/g

COLUMNS				
Tube Volume (mL)	Sorbent Amount (mg)	Units per Pack	End-capped	Part Number
1	50	100	YES	CECNP1L1
1	100	100	YES	CECNP111
1	100	100	NO	CUCNP111
3	100	50	NO	CUCNP113
3	200	50	YES	CECNP123
3	200	50	NO	CUCNP123
3	500	50	YES	CECNP153
6	500	50	YES	CECNP156
6	500	50	NO	CUCNP156
6	1000	30	YES	CECNP1M6
6	1000	30	NO	CUCNP1M6
10	200	50	YES	CECNP12Z
15	2000	20	YES	CECNP12M15
15	2000	20	NO	CUCNP12M15
75	10000	10	YES	CECNP110M75

CLEAN-UP® HYDROPHILIC PHASE

CLEAN-UP® DIOL

Organic Loading = 8.0%
Surface Area = 500 m²/g

Average Pore Size = 60 Å
Pore Volume = 0.77 cm³/g

COLUMNS			
Tube Volume (mL)	Sorbent Amount (mg)	Units per Pack	Part Number
1	100	100	CUDOL111
3	200	50	CUDOL123
3	500	50	CUDOL153
6	500	50	CUDOL156
15	2000	20	CUDOL12M15
25	5000	20	CUDOL15M25

38

CLEAN-UP® CARBON, GRAPHITIZED NON-POROUS, 120/400 MESH

Carbon supports have been used to isolate extremely polar organic compounds. Carbon adsorption involves a hydrophobic mechanism with a high surface area and ion exchange. This interaction can happen in a wide range of polar and non-polar solvents.



COLUMNS			
Tube Volume (mL)	Sorbent Amount (mg)	Units per Pack	Part Number
1	50	100	CUCARBL1
3	150	50	CUCARB1L3
3	200	50	CUCARB23
3	250	50	CUCARB2L3
3	500	50	CUCARB53
6	250	30	CUCARB26
6	500	30	CUCARB56
6	1000	20	CUCARBM6
10	500	50	CUCARB5Z
15	1000	20	CUCARBM15