



*The wise choice*



# Scharlau Chromatography Supplies

Edition No. 2



**Scharlab** The Lab Sourcing Group

# Scharlau HPLC & LC/MS columns and supplies

## HPLC & LC/MS Scharlau columns. KromaPhase

For over 30 years, Spanish scientists have been working with SCHARLAU HPLC columns. Pharmaceutical Labs., Research Centres, Universities, Independent labs... all of them have been using SCHARLAU columns for their reliability and reproducibility. Each column is tested after manufacture for efficiency, capacity, selectivity and peak symmetry. The results of this test are shown in the Test Chromatogram, which is included with each column.

We can pack columns from 2mm to 50mm I.D. having an extensive experience in semi-preparative and preparative columns, in 2mm columns for LC/MS, and also in the standard columns of 4 and 4,6mm I.D.

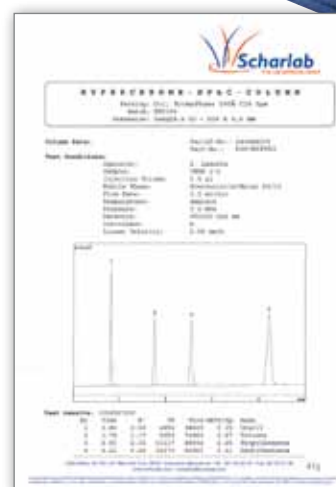
We are especially proud of our latest development in HPLC columns: our new KromaPhase line.



KromaPhase is based on ultra pure spherical silica of high quality that provides high reproducibility and chemical stability using monofunctional silanes and total end-capping.

**KromaSil can be perfectly substituted for KromaPhase without changing the method.** To ensure lot to lot reproducibility each lot is subject to specific controls.

**KromaPhase resolves the vast majority of analytical problems.**



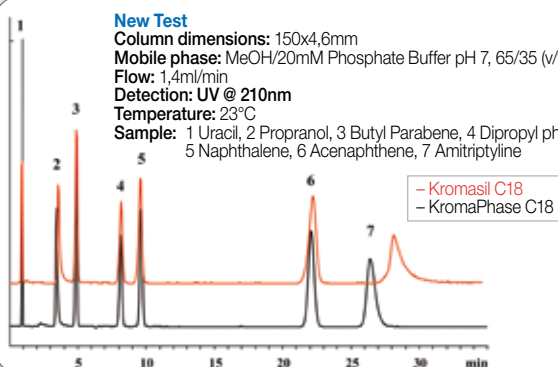
Scharlau HPLC & LC/MS

### KromaPhase specifications

	C18	C8	SIL
USP Code	L1	L7	L3
Particle sizes	3, 3,5, 5, 10µm	3, 3,5, 5, 10µm	3, 3,5, 5, 10µm
Pore size	100Å	100Å	100Å
Surface Area	300m <sup>2</sup> /g	300m <sup>2</sup> /g	300m <sup>2</sup> /g
pH range	1 to 10	2 to 9	1 to 8
Carbon Load	20%	12%	-
Pore volume	0,8ml/g	0,8ml/g	0,8ml/g
Particle size distribution (D10/D90)	< 1,6	< 1,6	< 1,6

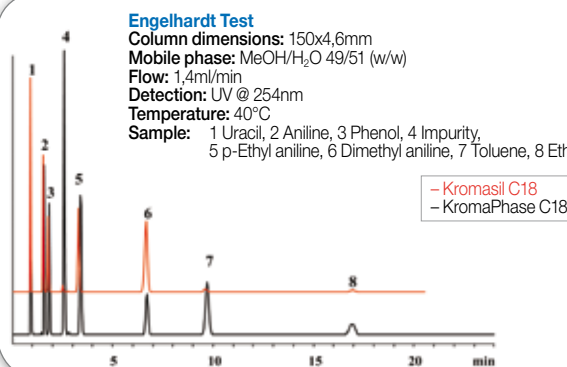
#### New Test

Column dimensions: 150x4,6mm  
Mobile phase: MeOH/20mM Phosphate Buffer pH 7, 65/35 (v/v)  
Flow: 1,4ml/min  
Detection: UV @ 210nm  
Temperature: 23°C  
Sample: 1 Uracil, 2 Propranol, 3 Butyl Parabene, 4 Dipropyl phthalate, 5 Naphthalene, 6 Acenaphthene, 7 Amitriptyline



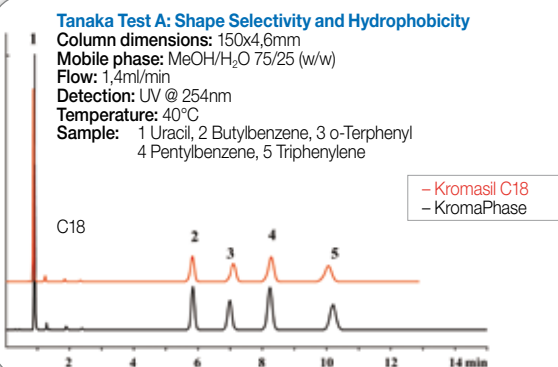
#### Engelhardt Test

Column dimensions: 150x4,6mm  
Mobile phase: MeOH/H<sub>2</sub>O 49/51 (w/w)  
Flow: 1,4ml/min  
Detection: UV @ 254nm  
Temperature: 40°C  
Sample: 1 Uracil, 2 Aniline, 3 Phenol, 4 Impurity, 5 p-Ethyl aniline, 6 Dimethyl aniline, 7 Toluene, 8 Ethylbenzene



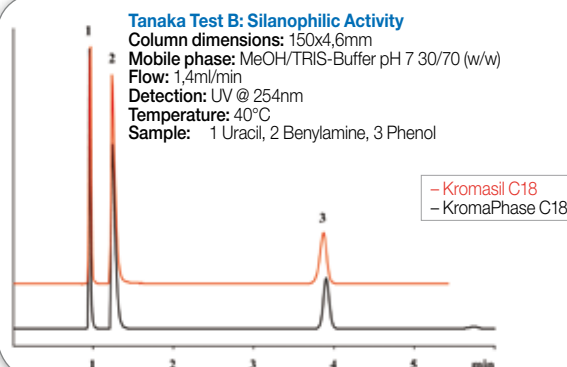
#### Tanaka Test A: Shape Selectivity and Hydrophobicity

Column dimensions: 150x4,6mm  
Mobile phase: MeOH/H<sub>2</sub>O 75/25 (w/w)  
Flow: 1,4ml/min  
Detection: UV @ 254nm  
Temperature: 40°C  
Sample: 1 Uracil, 2 Butylbenzene, 3 o-Terphenyl, 4 Pentylbenzene, 5 Triphenylene



#### Tanaka Test B: Silanophilic Activity

Column dimensions: 150x4,6mm  
Mobile phase: MeOH/TRIS-Buffer pH 7 30/70 (w/w)  
Flow: 1,4ml/min  
Detection: UV @ 254nm  
Temperature: 40°C  
Sample: 1 Uracil, 2 Benylamine, 3 Phenol



## HPLC & LC/MS Scharlau columns. KromaPhase

### Corticosteroids with KromaPhase

**Column:** KromaPhase C18 5µm 250x4,6mm art. no. 066-B6Y803

**Flow:** 1ml/min

**Injection volume:** 20µl

**Detector:** UV-Visible at 240nm

**Mobile phase:**

**A:** Water 0,1% formic acid

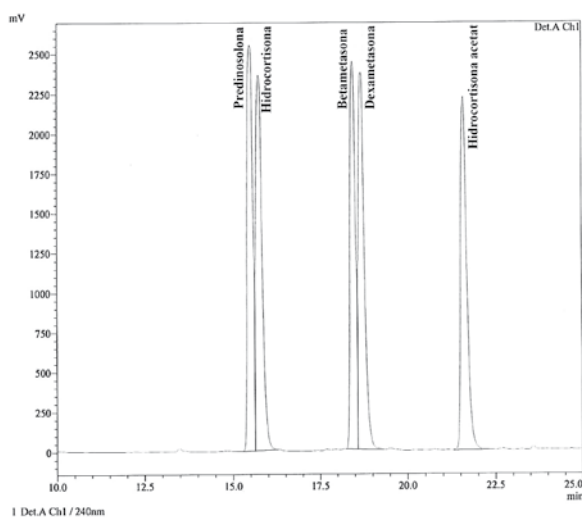
**B:** Acetonitrile

Time	Pump	% Mobile phase
0,1	□	5
5	□	20
10	□	28
20	□	45
25	□	100
30	□	100
35	□	5

**Analytes:** Prednisolone, Hydrocortisone, Betamethasone, Dexamethasone and Hydrocortisone 21 acetate

Sample Name : Corticoides CC  
Method Filename : corticoides.lcm

Sample Information



This chromatogram has been obtained from an independent reference laboratory.

### Fat Soluble Vitamins with KromaPhase

**Column:** KromaPhase C18 5µm 250x4,6mm art. no. 066-B6Y803

**Mobile phase:** Methanol/water 60/40

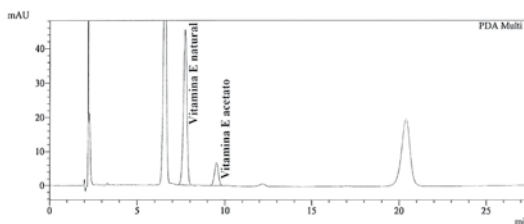
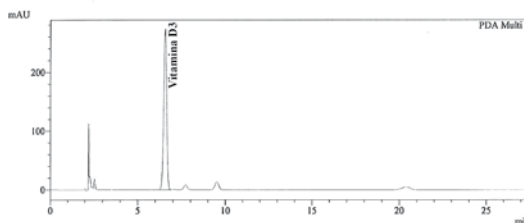
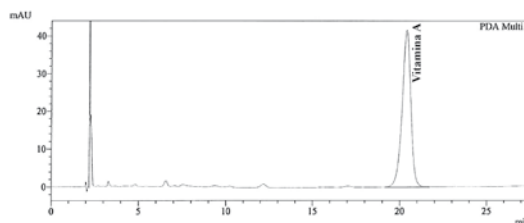
**Flow:** 1ml/min

**Detector:** diode (325 nm for vitamine A, 265nm for vitamine D3 and 294nm for Vitamines E)

**Analytes:** Vitamin A palmitate, vitamin E natural, vitamin E acetate and vitamin D3

Sample Name : Vitamins  
Method Filename : VITAMINAS LIPOSOLUBLES.lcm

Sample Information

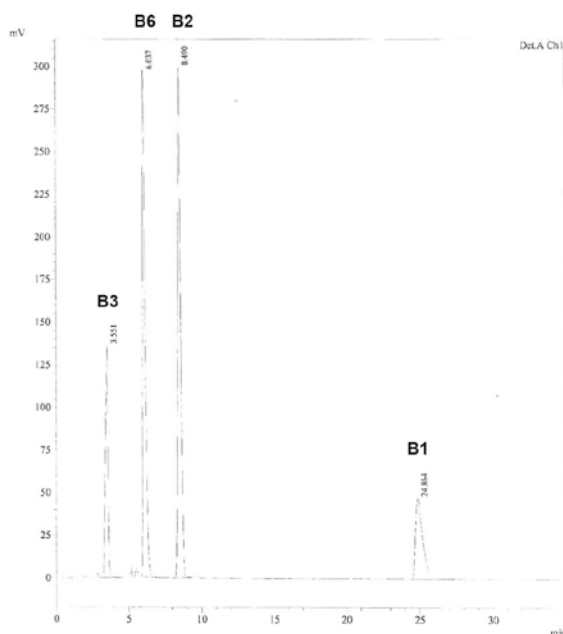


1 PDA Multi 1 / 325nm 4nm  
2 PDA Multi 2 / 265nm 4nm  
3 PDA Multi 3 / 294nm 4nm

This chromatogram has been obtained from an independent reference laboratory.

Sample Name : Vitamins hidrosolubles  
Sample ID : patron  
Vial : 8  
Method Filename : Vitamins Hidrosolubles.lcm

Sample Information



### Water soluble vitamins with KromaPhase

**Column:** KromaPhase C18 5µm 250x4,6mm art. no. 066-B6Y803

**Flow:** 1,5ml/min

**Detector:** UV-Visible to 280nm

**Mobile phase:**

**A:** pentanosulfonic acid 0,96 g + 20ml acetic acid  
in 1L methanol/water (25/75)

**B:** pentanosulfonic acid 1,1 g + 20ml acetic acid  
in 1L methanol/water (25/75)

(625ml A/375ml B)

Time (min)	Analyte
3,551	B3 Vitamin
6,037	B6 Vitamin
8,490	B2 Vitamin
24,864	B1 Vitamin

This chromatogram has been obtained from an independent reference laboratory.

## HPLC & LC/MS Scharlau columns. KromaPhase

<b>KromaPhase 100Å</b>	<b>50x2mm</b>	<b>100x2mm</b>	<b>125x2mm</b>	<b>150x2mm</b>	<b>250x2mm</b>	<b>30x2mm* guard column</b>
<b>C18 3,5µm</b>	070B35Y811	070B36Y811	070B39Y811	070B40Y811	070B43Y811	070-B1PY811
<b>C18 5µm</b>	070B35Y803	070B36Y803	070B39Y803	070B40Y803	070B43Y803	070-B1PY803
<b>C8 3,5µm</b>	070B35Y809	070B36Y809	070B39Y809	070B40Y809	070B43Y809	070-B1PY809
<b>C8 5µm</b>	070B35Y802	070B36Y802	070B39Y802	070B40Y802	070B43Y802	070-B1PY802
<b>SIL 3,5µm</b>	070B35Y814	070B36Y814	070B39Y814	070B40Y814	070B43Y814	070-B1PY814
<b>SIL 5µm</b>	070B35Y801	070B36Y801	070B39Y801	070B40Y801	070B43Y801	070-B1PY801
<b>KromaPhase 100Å</b>	<b>50x3mm</b>	<b>100x3mm</b>	<b>125x3mm</b>	<b>150x3mm</b>	<b>250x3mm</b>	<b>30x3mm* guard column</b>
<b>C18 3,5µm</b>	070B58Y811	070B52Y811	070B56Y811	070B53Y811	070B54Y811	070-B4PY811
<b>C18 5µm</b>	070B58Y803	070B52Y803	070B56Y803	070B53Y803	070B54Y803	070-B4PY803
<b>C8 3,5µm</b>	070B58Y809	070B52Y809	070B56Y809	070B53Y809	070B54Y809	070-B4PY809
<b>C8 5µm</b>	070B58Y802	070B52Y802	070B56Y802	070B53Y802	070B54Y802	070-B4PY802
<b>SIL 3,5µm</b>	070B58Y814	070B52Y814	070B56Y814	070B53Y814	070B54Y814	070-B4PY814
<b>SIL 5µm</b>	070B58Y801	070B52Y801	070B56Y801	070B53Y801	070B54Y801	070-B4PY801
<b>KromaPhase 100Å</b>	<b>50x4mm</b>	<b>100x4mm</b>	<b>125x4mm</b>	<b>150x4mm</b>	<b>250x4mm</b>	<b>30x4mm* guard column</b>
<b>C18 3,5µm</b>	070-B3Y811	070-B1Y811	070-B7Y811	070-B2Y811	070-B6Y811	070B9PY811
<b>C18 5µm</b>	070-B3Y803	070-B1Y803	070-B7Y803	070-B2Y803	070-B6Y803	070B9PY803
<b>C18 10µm</b>	070-B3Y805	070-B1Y805	070-B7Y805	070-B2Y805	070-B6Y805	070B9PY805
<b>C8 3,5µm</b>	070-B3Y809	070-B1Y809	070-B7Y809	070-B2Y809	070-B6Y809	070B9PY809
<b>C8 5µm</b>	070-B3Y802	070-B1Y802	070-B7Y802	070-B2Y802	070-B6Y802	070B9PY802
<b>C8 10µm</b>	070-B3Y804	070-B1Y804	070-B7Y804	070-B2Y804	070-B6Y804	070B9PY804
<b>SIL 3,5µm</b>	070-B3Y814	070-B1Y814	070-B7Y814	070-B2Y814	070-B6Y814	070B9PY814
<b>SIL 5µm</b>	070-B3Y801	070-B1Y801	070-B7Y801	070-B2Y801	070-B6Y801	070B9PY801
<b>SIL 10µm</b>	070-B3Y810	070-B1Y810	070-B7Y810	070-B2Y810	070-B6Y810	070B9PY810
<b>KromaPhase 100Å</b>	<b>50x4,6mm</b>	<b>100x4,6mm</b>	<b>125x4,6mm</b>	<b>150x4,6mm</b>	<b>250x4,6mm</b>	<b>30x4mm* guard column</b>
<b>C18 3,5µm</b>	066-B3Y811	066-B1Y811	066-B7Y811	066-B2Y811	066-B6Y811	070B9PY811
<b>C18 5µm</b>	066-B3Y803	066-B1Y803	066-B7Y803	066-B2Y803	066-B6Y803	070B9PY803
<b>C18 10µm</b>	066-B3Y805	066-B1Y805	066-B7Y805	066-B2Y805	066-B6Y805	070B9PY805
<b>C8 3,5µm</b>	066-B3Y809	066-B1Y809	066-B7Y809	066-B2Y809	066-B6Y809	070B9PY809
<b>C8 5µm</b>	066-B3Y802	066-B1Y802	066-B7Y802	066-B2Y802	066-B6Y802	070B9PY802
<b>C8 10µm</b>	066-B3Y804	066-B1Y804	066-B7Y804	066-B2Y804	066-B6Y804	070B9PY804
<b>SIL 3,5µm</b>	066-B3Y814	066-B1Y814	066-B7Y814	066-B2Y814	066-B6Y814	070B9PY814
<b>SIL 5µm</b>	066-B3Y801	066-B1Y801	066-B7Y801	066-B2Y801	066-B6Y801	070B9PY801
<b>SIL 10µm</b>	066-B3Y810	066-B1Y810	066-B7Y810	066-B2Y810	066-B6Y810	070B9PY810
<b>KromaPhase 100Å</b>		<b>100x8mm</b>		<b>150x8mm</b>	<b>250x8mm</b>	<b>30x8mm* guard column</b>
<b>C18 5µm</b>		070B32Y803		070B22Y803	070B23Y803	070B2PY803
<b>C18 10µm</b>		070B32Y805		070B22Y805	070B23Y805	070B2PY805
<b>C8 5µm</b>		070B32Y802		070B22Y802	070B23Y802	070B2PY802
<b>C8 10µm</b>		070B32Y804		070B22Y804	070B23Y804	070B2PY804
<b>SIL 5µm</b>		070B32Y801		070B22Y801	070B23Y801	070B2PY801
<b>SIL 10µm</b>		070B32Y810		070B22Y810	070B23Y810	070B2PY810
<b>KromaPhase 100Å</b>				<b>150x16mm</b>	<b>250x16mm</b>	<b>30x16mm* guard column</b>
<b>C18 5µm</b>				070B44Y803	070B27Y803	070B3PY803
<b>C18 10µm</b>				070B44Y805	070B27Y805	070B3PY805
<b>C8 5µm</b>				070B44Y802	070B27Y802	070B3PY802
<b>C8 10µm</b>				070B44Y804	070B27Y804	070B3PY804
<b>SIL 5µm</b>				070B44Y801	070B27Y801	070B3PY801
<b>SIL 10µm</b>				070B44Y810	070B27Y810	070B3PY810
<b>KromaPhase 100Å</b>				<b>150x20mm</b>	<b>250x20mm</b>	<b>30x20mm* guard column</b>
<b>C18 5µm</b>				070B11Y803	070B10Y803	070B5PY803
<b>C18 10µm</b>				070B11Y805	070B10Y805	070B5PY805
<b>C8 5µm</b>				070B11Y802	070B10Y802	070B5PY802
<b>C8 10µm</b>				070B11Y804	070B10Y804	070B5PY804
<b>SIL 5µm</b>				070B11Y801	070B10Y801	070B5PY801
<b>SIL 10µm</b>				070B11Y810	070B10Y810	070B5PY810

KromaPhase available from 2 to 50mm internal diameter

→ \*For cartridge guard columns see below.

## KromaPhase guard columns

We offer two different guard columns systems: the column system and the cartridge system.

### The column system



It is a small column of 3cm length packed with the required packing material.  
See ordering information in the table above (\*).

### Cartridge system



Consists on a holder which contains a guard cartridge of 10mm length packed with the required packing material.

### Cartridge system (continued)

Art. No.	Description	Pack
070-HOLDER2	Guard column cartridge holder for 10x4,0mm	x u.
070-BGY811	Guard column cartridge 100Å C18 3,5µm 10x4,0mm	x 5 u.
070-BGY803	Guard column cartridge 100Å C18 5µm 10x4,0mm	x 5 u.
070-BGY805	Guard column cartridge 100Å C18 10µm 10x4,0mm	x 5 u.
070-BGY809	Guard column cartridge 100Å C8 3,5µm 10x4,0mm	x 5 u.
070-BGY802	Guard column cartridge 100Å C8 5µm 10x4,0mm	x 5 u.
070-BGY804	Guard column cartridge 100Å C8 10µm 10x4,0mm	x 5 u.
070-BGY814	Guard column cartridge 100Å SIL 3,5µm 10x4,0mm	x 5 u.
070-BGY801	Guard column cartridge 100Å SIL 5µm 10x4,0mm	x 5 u.
070-BGY810	Guard column cartridge 100Å SIL 10µm 10x4,0mm	x 5 u.

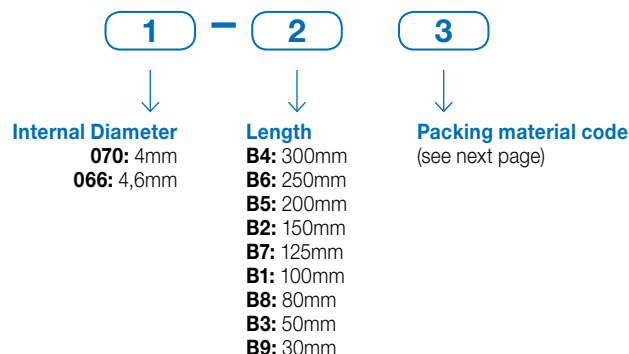
## HPLC & LC/MS Scharlau columns

Scharlab can also offer high reproducibility HPLC columns packed with materials available from other manufacturers. With the same dimensions as that of our KromaPhase columns: from 2mm to 50mm internal diameter. Below is how to find the catalogue number in each case depending on the dimensions and phase code. If you have any questions, please contact [scharlab@scharlab.com](mailto:scharlab@scharlab.com).

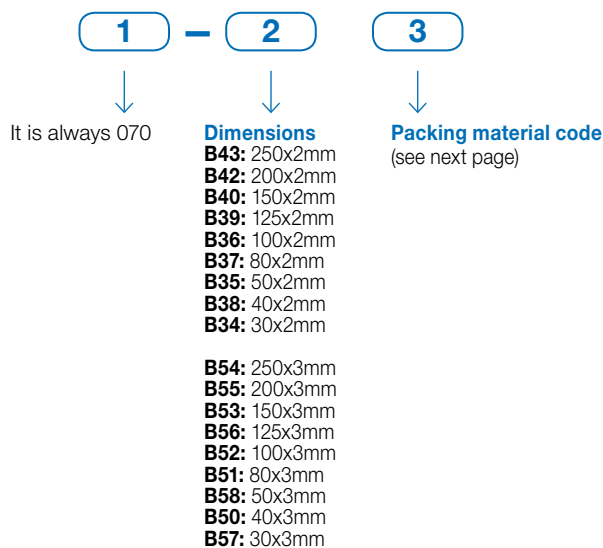
### How to build the column catalogue number

The catalogue number of our columns is formed by three parts:

#### Analytical columns:



#### For microbore and semipreparative columns:



**1**

For analytical columns, indicates the internal diameter.

For microbore or semipreparative columns it is always 070-.

**2**

For analytical columns, indicate the length.

For microbore or semipreparative columns it reflects their dimensions.

**3**

Always indicates the packing material code.

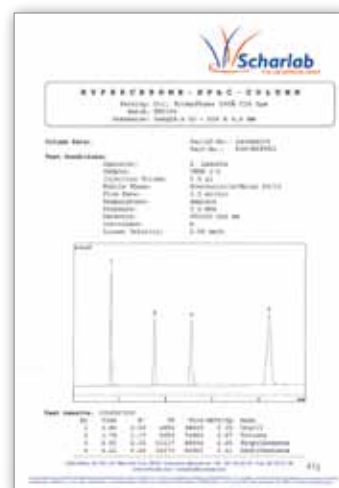
B54: 250x3mm  
B55: 200x3mm  
B53: 150x3mm  
B56: 125x3mm  
B52: 100x3mm  
B51: 80x3mm  
B58: 50x3mm  
B50: 40x3mm  
B57: 30x3mm

B25: 300x8mm  
B23: 250x8mm  
B24: 200x8mm  
B22: 150x8mm  
B31: 125x8mm  
B32: 100x8mm  
B33: 80x8mm  
B26: 30x8mm

B73: 250x10mm

B34: 300x16mm  
B27: 250x16mm  
B35: 200x16mm  
B44: 150x16mm  
B45: 125x16mm  
B46: 100x16mm  
B47: 80x16mm  
B29: 30x16mm

B10: 250x20mm  
B11: 150x20mm  
B12: 100x20mm  
B13: 50x20mm  
B14: 30x20mm





## HPLC & LC/MS Scharlau columns

### List of packing materials available

Packing material	Code
<b>KromaPhase</b> 100Å C18 3,5µm	Y811
<b>KromaPhase</b> 100Å C18 5µm	Y803
<b>KromaPhase</b> 100Å C18 10µm	Y805
<b>KromaPhase</b> 100Å C8 3,5µm	Y809
<b>KromaPhase</b> 100Å C8 5µm	Y802
<b>KromaPhase</b> 100Å C8 10µm	Y804
<b>KromaPhase</b> 100Å SIL 3,5µm	Y814
<b>KromaPhase</b> 100Å SIL 5µm	Y801
<b>KromaPhase</b> 100Å SIL 10µm	Y810

(See page 2 to 4 for more information)

Packing material	Code
<b>Nucleosil</b> 100-3, ca.3µm, 100Å	Y53
<b>Nucleosil</b> 100-5, 5µm, 100Å	Y54
<b>Nucleosil</b> 100-7, 7µm, 100Å	Y55
<b>Nucleosil</b> 100-10, 10µm, 100Å	Y56
<b>Nucleosil</b> 100-5 C8, 5µm, 100Å	Y72
<b>Nucleosil</b> 100-7 C8, 7,5µm, 100Å	Y73
<b>Nucleosil</b> 100-10 C8, 10µm, 100Å	Y74
<b>Nucleosil</b> 100-3 C18, ca.3, 100Å	Y75
<b>Nucleosil</b> 100-5 C18, 5µm, 100Å	Y76
<b>Nucleosil</b> 100-7 C18, 7µm, 100Å	Y77
<b>Nucleosil</b> 100-10 C18, 10µm, 100Å	Y78
<b>Nucleosil</b> 100-5 CN, 5µm, 100Å	Y80
<b>Nucleosil</b> 100-10 CN, 10µm, 100Å	Y81
<b>Nucleosil</b> 100-5 NH <sub>2</sub> , 5µm, 100Å	Y82
<b>Nucleosil</b> 100-10 NH <sub>2</sub> , 10µm, 100Å	Y83
<b>Nucleosil</b> 100-5 N(CH <sub>3</sub> ) <sub>2</sub> , 5µm, 100Å	Y84
<b>Nucleosil</b> 100-10 N(CH <sub>3</sub> ) <sub>2</sub> , 10µm, 100Å	Y85
<b>Nucleosil</b> 100-5 NO <sub>2</sub> , 5µm, 100Å	Y86
<b>Nucleosil</b> 100-10 NO <sub>2</sub> , 10µm, 100Å	Y87
<b>Nucleosil</b> 100-5 C <sub>6</sub> H <sub>5</sub> , 5µm, 100Å	Y88
<b>Nucleosil</b> 100-7 C <sub>6</sub> H <sub>5</sub> , 7µm, 100Å	Y130
<b>Nucleosil</b> 100-7 OH, 7µm, 100Å	Y93
<b>Nucleosil</b> 100-5 SA, 5µm, 100Å	Y89
<b>Nucleosil</b> 100-10 SA, 10µm, 100Å	Y90
<b>Nucleosil</b> 100-5 SB, 5µm, 100Å	Y91
<b>Nucleosil</b> 100-10 SB, 10µm, 100Å	Y92
<b>Nucleosil</b> 120-3, ca.3µm, 120Å	Y58
<b>Nucleosil</b> 120-5, 5µm, 120Å	Y59
<b>Nucleosil</b> 120-7, 7µm, 120Å	Y60
<b>Nucleosil</b> 120-10, 10µm, 120Å	Y61
<b>Nucleosil</b> 120-5 C4, 5µm, 120Å	Y131
<b>Nucleosil</b> 120-3 C8, ca.3µm, 120Å	Y94
<b>Nucleosil</b> 120-5 C8, 5µm, 120Å	Y95
<b>Nucleosil</b> 120-7 C8, 7µm, 120Å	Y96
<b>Nucleosil</b> 120-10 C8, 10µm, 120Å	Y97
<b>Nucleosil</b> 120-3 C18, ca.3µm, 120Å	Y98

Packing material	Code
<b>Nucleosil</b> 120-5 C18, 5µm, 120Å	Y99
<b>Nucleosil</b> 120-7 C18, 7µm, 120Å	Y100
<b>Nucleosil</b> 120-10 C18, 10µm, 120Å	Y101
<b>Nucleosil</b> 120-7 C <sub>6</sub> H <sub>5</sub> , 7µm, 120Å	Y102
<b>Nucleosil</b> 120-7 CN, 7µm, 120Å	Y103
<b>Nucleosil</b> 120-7 NH <sub>2</sub> , 7µm, 120Å	Y104
<b>Nucleosil</b> 300-5, 5µm, 300Å	Y62
<b>Nucleosil</b> 300-7, 7µm, 300Å	Y63
<b>Nucleosil</b> 300-10, 10µm, 300Å	Y64
<b>Nucleosil</b> 300-5 C4, 5µm, 300Å	Y105
<b>Nucleosil</b> 300-7 C4, 7µm, 300Å	Y106
<b>Nucleosil</b> 300-10 C4, 10µm, 300Å	Y107
<b>Nucleosil</b> 300-5 C8, 5µm, 300Å	Y108
<b>Nucleosil</b> 300-7 C8, 7µm, 300Å	Y109
<b>Nucleosil</b> 300-10 C8, 10µm, 300Å	Y110
<b>Nucleosil</b> 300-5 C18, 5µm, 300Å	Y111
<b>Nucleosil</b> 300-7 C18, 7µm, 300Å	Y112
<b>Nucleosil</b> 300-10 C18, 10µm, 300Å	Y113
<b>Nucleosil</b> 300-7 C <sub>6</sub> H <sub>5</sub> , 7µm, 300Å	Y115
<b>Nucleosil</b> 300-7 OH, 7µm, 300Å	Y116
<b>Nucleosil</b> 300-7 CN, 7µm, 300Å	Y117
<b>Nucleosil</b> 300-7 NH <sub>2</sub> , 7µm, 300Å	Y132
<b>Nucleosil</b> 500-5, 5µm, 500Å	Y66
<b>Nucleosil</b> 500-7, 7,5µm, 500Å	Y67
<b>Nucleosil</b> 500-10, 10µm, 500Å	Y68
<b>Nucleosil</b> 500-7 C4, 7µm, 500Å	Y118
<b>Nucleosil</b> 500-7 C8, 7µm, 500Å	Y119
<b>Nucleosil</b> 500-7 C18, 7µm, 500Å	Y120
<b>Nucleosil</b> 500-7 OH, 7µm, 500Å	Y121
<b>Nucleosil</b> 500-7 CN, 7µm, 500Å	Y122
<b>Nucleosil</b> 500-7 C <sub>6</sub> H <sub>5</sub> , 7µm, 500Å	Y133
<b>Nucleosil</b> 1000-5, 5µm, 1000Å	Y134
<b>Nucleosil</b> 1000-7, 7,5µm, 1000Å	Y70
<b>Nucleosil</b> 1000-10, 10µm, 1000Å	Y135
<b>Nucleosil</b> 1000-7 OH, 7µm, 1000Å	Y123
<b>Nucleosil</b> 1000-7 C4, 7µm, 1000Å	Y124
<b>Nucleosil</b> 1000-7 C18, 7µm, 1000Å	Y125
<b>Nucleosil</b> 1000-7 C <sub>6</sub> H <sub>5</sub> , 7µm, 1000Å	Y138
<b>LiChrosorb</b> Si 60, 5µm, 60Å	Y185
<b>LiChrosorb</b> Si 60, 7µm, 60Å	Y186
<b>LiChrosorb</b> Si 60, 10µm, 60Å	Y187
<b>LiChrosorb</b> 60 RP 8, 5µm, 60Å	Y199
<b>LiChrosorb</b> 60 RP 8, 7µm, 60Å	Y200
<b>LiChrosorb</b> 60 RP 8, 10µm, 60Å	Y201
<b>LiChrosorb</b> 60 RP 8 Select B, 5µm, 60Å	Y379
<b>LiChrosorb</b> 60 RP 8 Select B, 10µm, 60Å	Y380
<b>LiChrosorb</b> 60 RP 18, 5µm, 60Å	Y202

Packing material	Code
<b>LiChrosorb</b> 60 RP 18, 7µm, 60Å	Y203
<b>LiChrosorb</b> 60 RP 18, 10µm, 60Å	Y204
<b>LiChrosorb</b> 60 DIOL, 5µm, 60Å	Y205
<b>LiChrosorb</b> 60 DIOL, 7µm, 60Å	Y206
<b>LiChrosorb</b> 60 DIOL, 10µm, 60Å	Y207
<b>LiChrosorb</b> 60 NH <sub>2</sub> , 5µm, 60Å	Y208
<b>LiChrosorb</b> 60 NH <sub>2</sub> , 7µm, 60Å	Y209
<b>LiChrosorb</b> 60 NH <sub>2</sub> , 10µm, 60Å	Y210
<b>LiChrosorb</b> 60 CN, 5µm, 60Å	Y211
<b>LiChrosorb</b> 60 CN, 7µm, 60Å	Y212
<b>LiChrosorb</b> 60 CN, 10µm, 60Å	Y213
<b>LiChrosorb</b> Si 100, 5µm, 100Å	Y188
<b>LiChrosorb</b> Si 100, 7µm, 100Å	Y189
<b>LiChrosorb</b> Si 100, 10µm, 100Å	Y190
<b>LiChrospher</b> Si 60, 5µm, 60Å	Y244
<b>LiChrospher</b> Si 60, 10µm, 60Å	Y245
<b>LiChrospher</b> 60 RP-8 Select B, 5µm, 60Å	Y381
<b>LiChrospher</b> 60 RP-8 Select B, 10µm, 60Å	Y382
<b>LiChrospher</b> Si 100, 5µm, 100Å	Y214
<b>LiChrospher</b> Si 100, 10µm, 100Å	Y215
<b>LiChrospher</b> 100/II RP-8, 5µm, 100Å	Y216
<b>LiChrospher</b> 100/II RP-8, 10µm, 100Å	Y217
<b>LiChrospher</b> 100/II RP-8, 5µm, 100Å EC	Y246
<b>LiChrospher</b> 100/II RP-8, 10µm, 100Å EC	Y247
<b>LiChrospher</b> 100/II RP-18, 5µm, 100Å	Y218
<b>LiChrospher</b> 100/II RP-18, 10µm, 100Å	Y219
<b>LiChrospher</b> 100/II RP-18, 5µm, 100Å EC	Y248
<b>LiChrospher</b> 100/II RP-18, 10µm, 100Å EC	Y249
<b>LiChrospher</b> 100/II DIOL, 5µm, 100Å	Y277
<b>LiChrospher</b> 100/II DIOL, 10µm, 100Å	Y278
<b>LiChrospher</b> 100/II NH <sub>2</sub> , 5µm, 100Å	Y252
<b>LiChrospher</b> 100/II NH <sub>2</sub> , 10µm, 100Å	Y253
<b>LiChrospher</b> 100/II CN, 5µm, 100Å	Y250
<b>LiChrospher</b> 100/II CN, 10µm, 100Å	Y251
<b>Partisil</b> 5, 5µm, 90Å	Y224
<b>Partisil</b> 10, 10µm, 90Å	Y225
<b>Partisil</b> 10 ODS, 10µm, 90Å	Y230
<b>Partisil</b> 10 ODS 2, 10µm, 90Å	Y231
<b>Partisil</b> 5 PAC, 5µm, 90Å	Y226
<b>Partisil</b> 10 PAC, 10µm, 90Å	Y227
<b>Partisil</b> 10 SAX, 10µm, 90Å	Y234
<b>Partisil</b> 10 SCX, 10µm, 90Å	Y235
<b>Partisil</b> 5 ODS 3, 5µm, 90Å	Y232
<b>Partisil</b> 10 ODS 3, 10µm, 90Å	Y233
<b>Partisil</b> 5 C8, 5µm, 90Å	Y228
<b>Partisil</b> 10 C8, 10µm, 90Å	Y229

→ If you do not find the phase you are looking for this table, please contact [scharlab@scharlab.com](mailto:scharlab@scharlab.com)



## Scharlau guard columns

### Column system



It is a small column of 3cm length packed with the required packing material.

Description	Art. No.
Guard column 30mm x 4mm I.D.	070-B9P****
Guard column 30mm x 2mm I.D.	070-B1P****
Guard column 30mm x 3mm I.D.	070-B4P****
Guard column 30mm x 8mm I.D.	070-B2P****
Guard column 30mm x 16mm I.D.	070-B3P****
Guard column 30mm x 20mm I.D.	070-B5P****

→ \*\*\*\* Should be replaced by the packing material code. See codes on page 6.

### Cartridge system



Consists on a holder which contains a guard cartridge of 10mm length packed with the required packing material.

Art. No.	Description	Pack
070HOLD2	Guard column cartridge holder for 10x4,0mm	x u.
070-BGY811	Guard column cartridge 100Å C18 3,5µm 10x4,0mm	x 5 u.
070-BGY803	Guard column cartridge 100Å C18 5µm 10x4,0mm	x 5 u.
070-BGY805	Guard column cartridge 100Å C18 10µm 10x4,0mm	x 5 u.
070-BGY809	Guard column cartridge 100Å C8 3,5µm 10x4,0mm	x 5 u.
070-BGY802	Guard column cartridge 100Å C8 5µm 10x4,0mm	x 5 u.
070-BGY804	Guard column cartridge 100Å C8 10µm 10x4,0mm	x 5 u.
070-BGY814	Guard column cartridge 100Å SIL 3,5µm 10x4,0mm	x 5 u.
070-BGY801	Guard column cartridge 100Å SIL 5µm 10x4,0mm	x 5 u.
070-BGY810	Guard column cartridge 100Å SIL 10µm 10x4,0mm	x 5 u.

## Chromatography vials

We have in stock the most popular chromatography vials for immediate delivery.

All of them are high quality products to fulfil the requirements of the most demanding labs: pharmaceutical companies, research centres, private labs...

Art. No.	Description	Pack
VTRCR12X32	12x32mm crimp top 1,8ml clear vial	100 u.
S11020100A	12x32mm crimp top 1,8ml amber vial	100 u.
CRIMPCAP12	Aluminium crimp cap 11mm, w/PTFE/rubber	100 u.
00S200-100	Aluminium crimp cap 11mm, w/PTFE/rubber	1.000 u.
VTRCRIM12M	Kit 12x32 crimp top 1,8ml clear vial and aluminium crimp cap 11mm, w/PTFE/rubber	1.000 u.
00S200-246	Crimper for 12x32mm crimp top vials (11mm)	u.

Art. No.	Description	Pack
VARBE12X32	12x32mm 9-425 thread 1,8ml amber vial	100 u.
VTRRB12X32	12x32mm 9-425 thread 1,8ml clear vial	100 u.
RBBSILCAP	Open top cap 9-425 with PTFE/silicone septa	100 u.
VTRRBCAPSM	Kit 12x32mm 9-425 clear vial and cap with PTFE/silicone septa	1.000 u.

Art. No.	Description	Pack
S11015100C	12x32mm 8-425 thread 1,8ml clear vial	100 u.
00S500-554	12x32mm 8-425 thread 1,8ml amber vial	100 u.
S500-062SP	Open top cap 8-425 with PTFE/silicone (0,045")	1.000 u.
00S500-062	Open top cap 8-425 with PTFE/silicone (0,060")	100 u.
00S200-344	Septa 8mm PTFE/silicone (0,060")	1.000 u.
00S200-288	Open top cap 8-425	1.000 u.



## Scharlau syringe filters for sample filtration



Scharlau syringe filters are primarily used to filter small aqueous and organic samples. They have a low hold-up volume in order to inject them into the HPLC sample loop systems. The filtered samples ensure column protection. The membrane filter in Scharlau Nylon syringe filters is a high quality hydrophilic nylon which contains no wetting agents and yields an exceptionally low extractable level. The housing is made of pure polypropylene.

The result is a high quality syringe filter which fulfils the needs of the most demanding chromatographists.

- **Nylon** syringe filters have become the “standard” filter material due to their wide range of chemical compatibility and naturally hydrophilic characteristics. They can be used to filter aqueous and the majority of solvent solutions.
- **Regenerated cellulose** syringe filters show less protein retention than nylon and less extractables than PVDF.
- **PVDF** syringe filters are specially suitable for extreme pH solutions filtration compared to both Nylon and Regenerated cellulose.
- **PTFE** syringe filters have the lowest extractables and the broadest chemical compatibility compared to the rest of membranes. They are especially suitable for solvents filtering due to its hydrophobic nature.

Art. No.	Description	Pack
NY25020200	Nylon syringe filter 25mm 0,2µm	200 u.
NY25021000	Nylon syringe filter 25mm 0,2µm	1.000 u.
NY25045200	Nylon syringe filter 25mm 0,45µm	200 u.
NY25041000	Nylon syringe filter 25mm 0,45µm	1.000 u.
NY13020500	Nylon syringe filter 13mm 0,2µm	500 u.
NY13021000	Nylon syringe filter 13mm 0,2µm	1.000 u.
NY13045200	Nylon syringe filter 13mm 0,45µm	200 u.
NY13041000	Nylon syringe filter 13mm 0,45µm	1.000 u.
CR25020200	Regenerated cellulose syringe filter 25mm 0,2µm	200 u.
CR25021000	Regenerated cellulose syringe filter 25mm 0,2µm	1.000 u.
CR25045200	Regenerated cellulose syringe filter 25mm 0,45µm	200 u.
CR25041000	Regenerated cellulose syringe filter 25mm 0,45µm	1.000 u.
CR13021000	Regenerated cellulose syringe filter 13mm 0,2µm	1.000 u.
CR13041000	Regenerated cellulose syringe filter 13mm 0,45µm	1.000 u.
PV30020200	PVDF syringe filter 30mm 0,22µm	200 u.
PV30021000	PVDF syringe filter 30mm 0,22µm	1.000 u.
PV30045200	PVDF syringe filter 30mm 0,45µm	200 u.
PV30041000	PVDF syringe filter 30mm 0,45µm	1.000 u.
PV17020200	PVDF syringe filter 17mm 0,22µm	200 u.
PV17021000	PVDF syringe filter 17mm 0,22µm	1.000 u.
PV17045200	PVDF syringe filter 17mm 0,45µm	200 u.
PV17041000	PVDF syringe filter 17mm 0,45µm	1.000 u.
TF30020200	PTFE syringe filter 30mm 0,22µm	200 u.
TF30021000	PTFE syringe filter 30mm 0,22µm	1.000 u.
TF30045200	PTFE syringe filter 30mm 0,45µm	200 u.
TF30041000	PTFE syringe filter 30mm 0,45µm	1.000 u.
TF17020200	PTFE syringe filter 17mm 0,22µm	200 u.
TF17021000	PTFE syringe filter 17mm 0,22µm	1.000 u.
TF17045200	PTFE syringe filter 17mm 0,45µm	200 u.
TF17041000	PTFE syringe filter 17mm 0,45µm	1.000 u.



## Scharlau solvents for LC-MS and HPLC

### Solvents for LC-MS

Description	Capacity	Art. No.
Acetic acid, eluent additive for LC-MS	50ml	AC03470050
Acetonitrile, LC-MS	1l	AC03711000
Acetonitrile, LC-MS	2,5l	AC03712500
Acetonitrile with 0,1% acetic acid, LC-MS	1l	AC03741000
Acetonitrile with 0,1% formic acid, LC-MS	1l	AC03731000
Acetonitrile with 0,1% trifluoroacetic acid, LC-MS	1l	AC03721000
Ammonia, solution 28%, eluent additive for LC-MS	100ml	AM02580100
Ammonium acetate, eluent additive for LC-MS	50g	AM02590050
Ammonium acetate, solution 10 mmol/l in water, buffered at pH=7, LC-MS	1l	AM02621000
Ammonium formate, eluent additive for LC-MS	50g	AM03200050
Ethyl acetate, LC-MS	1l	AC01581000
Ethyl acetate, LC-MS	2,5l	AC01582500
Formic acid, eluent additive for LC-MS	50ml	AC10760050
Formic acid, solution 10% in water, for cleaning purposes, LC-MS	1l	AC10751000
Methanol, LC-MS	1l	ME03261000
Methanol, LC-MS	2,5l	ME03262500

Description	Capacity	Art. No.
Methanol with 0,1% acetic acid, LC-MS	1l	ME03291000
Methanol with 0,1% ammonium acetate, LC-MS	1l	ME03301000
Methanol with 0,1% trifluoroacetic acid, LC-MS	1l	ME03271000
Mixture 2-propanol/water, 50:50 (v/v), for cleaning purposes, LC-MS	1l	ME07971000
2-Propanol, LC-MS	1l	AL03261000
2-Propanol, LC-MS	2,5l	AL03262500
Triethylamine, eluent additive for LC-MS	50ml	TR02170050
Trifluoroacetic acid, eluent additive for LC-MS	50ml	AC31440050
Water, LC-MS	1l	AG00061000
Water, LC-MS	2,5l	AG00062500
Water with 0,1% acetic acid, LC-MS	1l	AG00091000
Water with 0,1% ammonium acetate, LC-MS	1l	AG00101000
Water with 0,1% formic acid, LC-MS	1l	AG00081000
Water with 0,1% trifluoroacetic acid, LC-MS	1l	AG00071000

### HPLC grade solvents

Description	Capacity	Art. No.
Acetone, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	AC03101000
Acetone, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	AC03102500
Acetone, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	AC03104000
Acetonitrile, Multisolvant® HPLC grade ACS UV-VIS	1l	AC03331000
Acetonitrile, Multisolvant® HPLC grade ACS UV-VIS	2,5l	AC03332500
Acetonitrile, Multisolvant® HPLC grade ACS UV-VIS	4l	AC03334000
Acetonitrile, isocratic HPLC grade	1l	AC03401000
Acetonitrile, isocratic HPLC grade	2,5l	AC03402500
Acetonitrile, isocratic HPLC grade	4l	AC03404000
Acetonitrile, gradient 240nm/ far UV HPLC	1l	AC03291000
Acetonitrile, gradient 240nm/ far UV HPLC	2,5l	AC03292500
Acetonitrile, gradient 240nm/ far UV HPLC	4l	AC03294000
Acetonitrile, gradient HPLC grade	2,5l	AC03902500
Acetonitrile, gradient HPLC grade	4l	AC03904000
Acetonitrile, supragradient HPLC grade	1l	AC03311000
Acetonitrile, supragradient HPLC grade	2,5l	AC03312500
Acetonitrile, supragradient HPLC grade	4l	AC03314000
Acetonitrile, fluorescence HPLC grade	1l	AC03351000
Acetonitrile, fluorescence HPLC grade	2,5l	AC03352500
Benzene, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	BE00411000
Benzene, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	BE00412500
Benzene, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	BE00414000
1-Butanol, HPLC grade	1l	AL01751000
1-Butanol, HPLC grade	2,5l	AL01752500
tert-Butyl methyl ether, HPLC grade	1l	ME05521000
tert-Butyl methyl ether, HPLC grade	2,5l	ME05522500
tert-Butyl methyl ether, HPLC grade	4l	ME05524000
1-Chlorobutane, HPLC grade	1l	CL01201000
1-Chlorobutane, HPLC grade	2,5l	CL01202500
Chloroform, stabilized with ethanol, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	CL02181000
Chloroform, stabilized with ethanol, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	CL02182500
Chloroform, HPLC grade, stabilized with amylene (approx. 150 ppm)	1l	CL02071000
Chloroform, HPLC grade, stabilized with amylene (approx. 150 ppm)	2,5l	CL02072500
Chloroform, HPLC grade, stabilized with amylene (approx. 150 ppm)	4l	CL02074000
Cyclohexane, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	CI00391000
Cyclohexane, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	CI00392500
Cyclohexane, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	CI00394000

Description	Capacity	Art. No.
1,2-Dichloroethane, HPLC grade	1l	DI04091000
1,2-Dichloroethane, HPLC grade	2,5l	DI04092500
Dichloromethane, stabilized with approx. 50 ppm of amylene, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	CL03471000
Dichloromethane, stabilized with approx. 50 ppm of amylene, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	CL03472500
Dichloromethane, stabilized with approx. 50 ppm of amylene, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	CL03474000
Dichloromethane, HPLC grade, stabilized with ethanol	1l	CL03351000
Dichloromethane, HPLC grade, stabilized with ethanol	2,5l	CL03352500
Diethyl ether, stabilized with approx. 7 ppm of 2,6-Di-tert-butyl-4-methylphenol (BHT), Multisolvant® ACS ISO	1l	ET00821000
Diethyl ether, stabilized with approx. 7 ppm of 2,6-Di-tert-butyl-4-methylphenol (BHT), Multisolvant® ACS ISO	2,5l	ET00822500
Diethyl ether, stabilized with approx. 7 ppm of 2,6-Di-tert-butyl-4-methylphenol (BHT), Multisolvant® ACS ISO	4l	ET00824000
N,N-Dimethylacetamide, HPLC grade	1l	DI08601000
N,N-Dimethylacetamide, HPLC grade	2,5l	DI08602500
N,N-Dimethylformamide, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	DI10721000
N,N-Dimethylformamide, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	DI10722500
N,N-Dimethylformamide, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	DI10724000
Dimethyl sulfoxide, HPLC grade	1l	SU01551000
Dimethyl sulfoxide, HPLC grade	2,5l	SU01552500
1,4-Dioxane, HPLC grade, stabilized with 1 ppm of 2,6-Di-tert-butyl-4-methylphenol (BHT)	1l	DI12921000
1,4-Dioxane, HPLC grade, stabilized with 1 ppm of 2,6-Di-tert-butyl-4-methylphenol (BHT)	2,5l	DI12922500
Ethanol absolute, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	ET00151000
Ethanol absolute, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	ET00152500
Ethanol absolute, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	ET00154000
Ethanol absolute, gradient HPLC grade	1l	ET00101000
Ethanol absolute, gradient HPLC grade	2,5l	ET00102500
Ethanol 96% v/v, Multisolvant® HPLC grade ACS UV-VIS	1l	ET00131000
Ethanol 96% v/v, Multisolvant® HPLC grade ACS UV-VIS	2,5l	ET00132500
Ethanol 96% v/v, Multisolvant® HPLC grade ACS UV-VIS	4l	ET00134000
Ethyl acetate, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	AC01551000
Ethyl acetate, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	AC01552500
Ethyl acetate, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	AC01554000
n-Heptane, 99%, HPLC grade	1l	HE01311000

## HPLC grade solvents

Description	Capacity	Art. No.
n-Heptane, 99%, HPLC grade	2,5l	HE01312500
n-Heptane, 99%, HPLC grade	4l	HE01314000
n-Hexane, 99%, HPLC grade	1l	HE02421000
n-Hexane, 99%, HPLC grade	2,5l	HE02422500
n-Hexane, 99%, HPLC grade	4l	HE02424000
n-Hexane, 96%, Multisolvant® HPLC grade ACS UV-VIS	1l	HE02341000
n-Hexane, 96%, Multisolvant® HPLC grade ACS UV-VIS	2,5l	HE02342500
n-Hexane, 96%, Multisolvant® HPLC grade ACS UV-VIS	4l	HE02344000
Hexane, fraction from petroleum, Multisolvant® HPLC grade ACS	1l	HE02211000
Hexane, fraction from petroleum, Multisolvant® HPLC grade ACS	2,5l	HE02212500
Hexane, fraction from petroleum, Multisolvant® HPLC grade ACS	4l	HE02214000
Isohexane, Multisolvant® HPLC grade UV-VIS	1l	IS01221000
Isohexane, Multisolvant® HPLC grade UV-VIS	2,5l	IS01222500
Isooctanol, HPLC grade	1l	IS01621000
Isooctanol, HPLC grade	2,5l	IS01622500
Methanol, Multisolvant® HPLC grade ACS ISO UV-VIS K.F.	1l	ME03151000
Methanol, Multisolvant® HPLC grade ACS ISO UV-VIS K.F.	2,5l	ME03152500
Methanol, Multisolvant® HPLC grade ACS ISO UV-VIS K.F.	4l	ME03154000
Methanol, isocratic HPLC grade (254 nm)	1l	ME03101000
Methanol, isocratic HPLC grade (254 nm)	2,5l	ME03102500
Methanol, isocratic HPLC grade (254 nm)	4l	ME03104000
Methanol, Supragradient HPLC grade	1l	ME03061000
Methanol, Supragradient HPLC grade	2,5l	ME03062500
Methanol, Supragradient HPLC grade	4l	ME03064000
Methanol, fluorescence HPLC grade	1l	ME03171000
Methanol, fluorescence HPLC grade	2,5l	ME03172500
n-Pentane, 99%, HPLC grade	1l	PE00971000
n-Pentane, 99%, HPLC grade	2,5l	PE00972500
Petroleum ether, boiling range 40-60°C, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	ET00951000
Petroleum ether, boiling range 40-60°C, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	ET00952500
Petroleum ether, boiling range 40-60°C, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	ET00954000
1-Propanol, HPLC grade	1l	AL04381000
1-Propanol, HPLC grade	2,5l	AL04382500
1-Propanol, HPLC grade	4l	AL04384000
2-Propanol, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	AL03211000
2-Propanol, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	AL03212500
2-Propanol, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	AL03214000
2-Propanol, gradient HPLC grade	1l	AL03151000
2-Propanol, gradient HPLC grade	2,5l	AL03152500
2-Propanol, gradient HPLC grade	4l	AL03154000
Tetrachloroethene, Multisolvant® HPLC grade UV-VIS	1l	TE01271000
Tetrachloroethene, Multisolvant® HPLC grade UV-VIS	2,5l	TE01272500
Tetrahydrofuran, Multisolvant® GPC grade ACS, stabilized with 250 ppm of 2,6-Di-tert-butyl-4-methylphenol (BHT)	1l	TE02281000
Tetrahydrofuran, Multisolvant® GPC grade ACS, stabilized with 250 ppm of 2,6-Di-tert-butyl-4-methylphenol (BHT)	2,5l	TE02282500
Tetrahydrofuran, Multisolvant® GPC grade ACS, stabilized with 250 ppm of 2,6-Di-tert-butyl-4-methylphenol (BHT)	4l	TE02284000
Tetrahydrofuran, HPLC grade, without stabilizer	1l	TE02251000
Tetrahydrofuran, HPLC grade, without stabilizer	2,5l	TE02252500
Tetrahydrofuran, HPLC grade, without stabilizer	4l	TE02254000
Toluene, Multisolvant® HPLC grade ACS ISO UV-VIS	1l	TO00851000
Toluene, Multisolvant® HPLC grade ACS ISO UV-VIS	2,5l	TO00852500
Toluene, Multisolvant® HPLC grade ACS ISO UV-VIS	4l	TO00854000
1,2,4-Trichlorobenzene, HPLC grade	1l	TR01201000
1,2,4-Trichlorobenzene, HPLC grade	2,5l	TR01202500
2,2,4-Trimethylpentane, HPLC grade	1l	IS01561000
2,2,4-Trimethylpentane, HPLC grade	2,5l	IS01562500
Water, gradient HPLC grade	1l	AG00011000
Water, gradient HPLC grade	2,5l	AG00012500
Xylene, mixture of isomers, Multisolvant® ACS	1l	XI00591000
Xylene, mixture of isomers, Multisolvant® ACS	2,5l	XI00592500

## HPLC Auxiliaries

Description	Capacity	Art. No.
Acetic acid glacial, HPLC grade	1l	AC03461000
Acetic acid glacial, HPLC grade	2,5l	AC03462500
Ammonium acetate, HPLC grade	250g	AM02550250
Ammonium acetate, HPLC grade	1Kg	AM02551000
Ammonium carbonate, HPLC grade	250g	AM02670250
Buffer solution for HPLC, pH = 6 (potassium dihydrogen phosphate/sodium hydroxide)	1l	SO10201000
Potassium dihydrogen phosphate, HPLC grade	250g	PO02610250
di-Potassium hydrogen phosphate trihydrate, HPLC grade	250g	PO02700250
di-Potassium hydrogen phosphate trihydrate, HPLC grade	1Kg	PO02701000
Sodium acetate trihydrate, HPLC grade	250g	SO00300250
Sodium acetate trihydrate, HPLC grade	1Kg	SO00301000
Sodium formate, HPLC grade	250g	SO03250250
Sodium hydrogen carbonate, HPLC grade	250g	SO01300250
di-Sodium hydrogen phosphate dihydrate, HPLC grade	250g	SO03450250
Sodium lauryl sulfate, for ion-pair chromatography	25g	SO04560025
Sodium lauryl sulfate, for ion-pair chromatography	100g	SO04650100
Triethylamine, HPLC grade	1l	TR02181000
Triethylamine, HPLC grade	2,5l	TR02182500
Trifluoroacetic acid, buffer substance, HPLC grade	100ml	AC31430100

## Ion pair reagents

Description	Capacity	Art. No.
1-Butane sulfonic acid, sodium salt, HPLC grade	25g	AC06010025
1-Butane sulfonic acid, sodium salt, HPLC grade	100g	AC06010100
1-Butane sulfonic acid, sodium salt, HPLC grade	1Kg	AC06011000
1-Decane sulfonic acid, sodium salt, HPLC grade	25g	AC08010025
1-Decane sulfonic acid, sodium salt, HPLC grade	100g	AC08010100
n-Dodecyltrimethylammonium bromide, HPLC grade	25g	BR01800025
1-Heptane sulfonic acid, sodium salt monohydrate, HPLC grade	25g	AC12420025
1-Heptane sulfonic acid, sodium salt monohydrate, HPLC grade	100g	AC12420100
1-Heptane sulfonic acid, sodium salt, solution 0,1 mol/l, HPLC grade	250ml	AC12400250
Hexadecyltrimethylammonium bromide, HPLC grade	25g	BR01700025
1-Hexane sulfonic acid, sodium salt monohydrate, HPLC grade	25g	AC12470025
1-Hexane sulfonic acid, sodium salt monohydrate, HPLC grade	100g	AC12470100
1-Hexane sulfonic acid, sodium salt, solution 0,1 mol/l, HPLC grade	250ml	AC12450250
1-Octane sulfonic acid, sodium salt monohydrate	25g	AC17020025
1-Octane sulfonic acid, sodium salt monohydrate	100g	AC17020100
1-Octane sulfonic acid, sodium salt, solution 0,1 mol/l, HPLC grade	250ml	AC17000250
1-Octane sulfonic acid, sodium salt, solution 0,1 mol/l, HPLC grade	1l	AC17001000
1-pentane sulfonic acid, sodium salt monohydrate, HPLC grade	25g	AC17450025
1-Pentane sulfonic acid, sodium salt, solution 0,1 mol/l, HPLC grade	250ml	AC17400250
Tetrabutylammonium bromide, HPLC grade	25g	BR02000025
Tetrabutylammonium hydrogen sulfate, for ion-pair chromatography	10g	TE01200010
Tetrabutylammonium hydrogen sulfate, for ion-pair chromatography	100g	TE01200100
Tetrabutylammonium hydrogen sulfate, for ion-pair chromatography	1Kg	TE01201000
Tetrabutylammonium hydroxide, solution 0,1 mol/l, buffered with phosphates, HPLC grade	250ml	TE01150250
Tetrabutylammonium hydroxide, solution 0,1 mol/l, buffered with phosphates, HPLC grade	1l	TE01151000
Tetrabutylammonium iodide, HPLC grade	10g	TE01300010
Tetradecyltrimethylammonium bromide, HPLC grade	25g	BR02010025

# Scharlau Solid Phase Extraction

## Scharlab and Solid Phase Extraction

Solid Phase Extraction (SPE) has become the ideal method for sample preparation prior to analyses using HPLC, GC, TLC, RIA, NMR... and other analytical techniques. The popularity of this technique has grown dramatically over the past two decades due to advances in analytical instrumentation or robots (automated instrumentations).

SPE is used in various analytical fields such as:

- Chemical Analysis
- Food & Beverages
- Pharmaceuticals
- Cosmetics
- Drug Abuse
- Environment
- Agrochemicals
- Clinical and Forensic

The main objectives in using SPE are, "clean-up", concentration, or change of solvent (for example, from aqueous to organic). It offers greater selectivity and "clean up", less solvent consumption, time saving, and the possibility of automation. SPE is based on the same principle of selective retention as liquid chromatography. The extraction is carried out in extraction columns (straight walled syringe barrel tubes) containing modified or plain silica gel or other packing materials. There are a variety of columns that differ in the type of stationary phase (packing material), the capacity and the amount of stationary phase they contain.

With over 20 years technical and sales experience in products for Solid Phase Extraction (SPE), Scharlab introduces its new line in SPE: **ExtraBond®**.

**Scharlau ExtraBond®** comprises a **wide range** of packing materials, silica gel as well as polymers of the **highest quality and purity** that provide **excellent and reproducible separation** as well as a **high recovery rate**. Each box of ExtraBond® comes with a **certificate of analysis**.

**Scharlau ExtraBond®** is available in **all formats: closed minicartridges, opened cartridges for SPE (SPE columns), cartridges for flash chromatography, 96 well plates...**



**Scharlau ExtraBond® SPE**

## Choosing the ExtraBond® phase

The choice of a cartridge is determined by the type and volume of the matrix and the type and concentration of analytes. For an extraction to take place, 3 types of interactions must be taken into account:

- **Analyte/packing:** are responsible for the retention of the analyte in the stationary phase.
- **Analyte/matrix:** also affect the retention of the analyte in the stationary phase.
- **Matrix/packing:** are competing with those of the analyte/packing.

The stationary phase chosen must have a high affinity for both the analytes to be extracted as well as the interferences to be eliminated. The choice of this phase will define a specific selectivity for the compounds of interest and a loading capacity sufficient for complete adsorption.

Two approaches are possible either the analyte of interest can be retained in order to separate it from interferences which may pass through or the interferences may be retained and the analytes of interest are allowed to pass through.



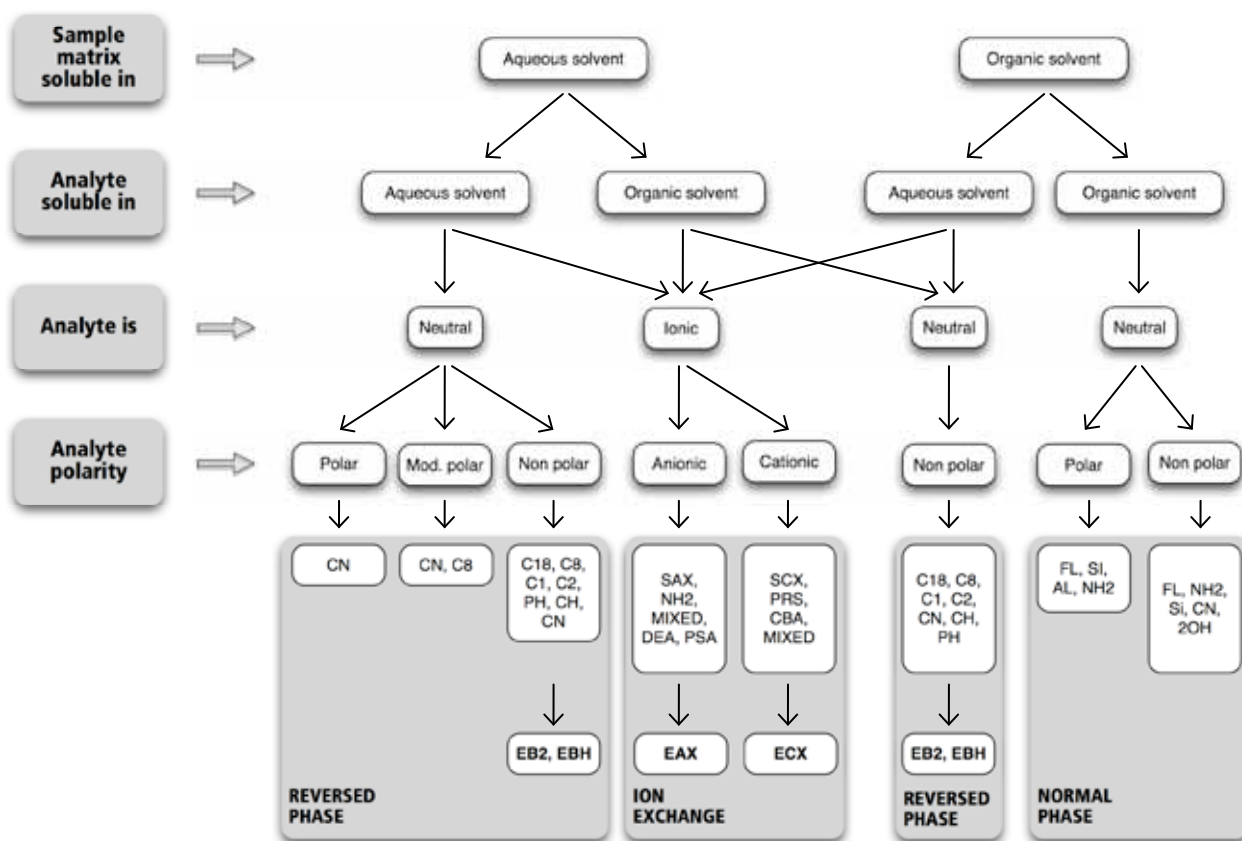
There are two major groups of packings: stationary phases **based on silica** gel and stationary phases **based on polymers**. Polymeric phases offer the advantage of being very stable chemically and pH resistant in ranges from 1 to 14. On the other hand, they are generally less selective than those with a silica base. Their loading capacity is higher and elution volume lower, so the process can be faster, minimising the evaporation stage.

Silica based stationary phases have a lower chemical stability (pH 2 to pH 7.5) but are much more selective than polymer phases which is why they remain widely in use. The silica based phases include 4 major groups according to the mechanism of interaction and selectivity: **reversed-phase, normal phase, ion-exchange and mixed mode**.

For more information, see the section **Development of the extraction method, in this brochure**.

## Choose the phase according to the sample characteristics

Scharlau ExtraBond® SPE



## Quantity of phase and elution volume

Once the phase is chosen it is necessary to determine the quantity required to ensure complete extraction.

### › As a general rule for silica based cartridges:

- The **capacity** of a cartridge \* corresponds to approx. 5% of the mass of the phase contained in the cartridge.
- The **minimum volume of elution** is considered to be twice the volume of the bed. The bed volume is the amount of solvent required to fill all the internal pores and interstitial spaces of the phase particles. Consider that the optimum volume of elution is at least 4 or 5 times the bed volume. The bed volume for a silica based phase 50µ and 60A is about 120µL /100mg of adsorbent.

Cartridge mass	50mg	100mg	200mg	500mg	1g	2g	5g	10g
Capacity	2,5mg	5mg	10mg	25mg	50mg	100mg	250mg	500mg
Min. Elution Vol.	125µL	250µL	500µL	1,2ml	2,4ml	4,8ml	12ml	24ml

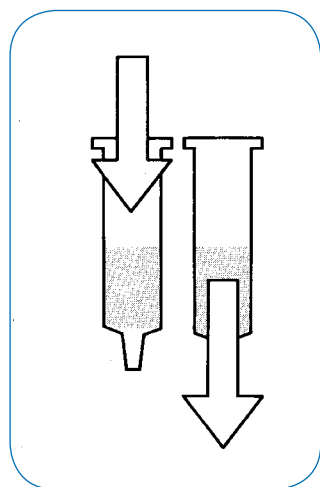
\* Ion exchange phases capacity is defined in meq/g based on free ionic groups available. See page 14.

### › For polymeric cartridges, the following must be taken into consideration:

- The **capacity** of a cartridge corresponds to approx. **15% of the mass** of the phase contained in the cartridge.
- The **bed volume** is generally **180µl/100mg** of adsorbent.

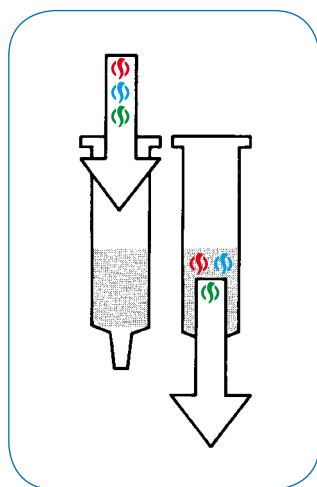


## Development of the extraction method using ExtraBond®



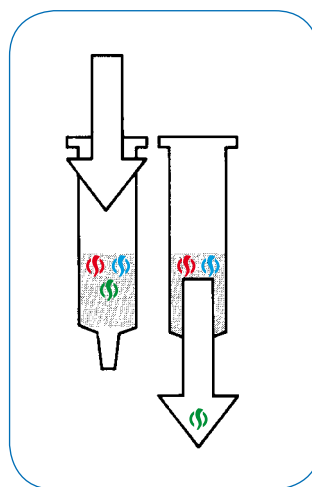
### Conditioning

Sorbent ligands must be "activated" and the bed then equilibrated before applying the sample to obtain a reproducible interaction. This is carried out by passing a volume of suitable solvent through the stationary phase, followed by a volume of liquid similar to the sample matrix. **4** bed volumes are commonly recommended.



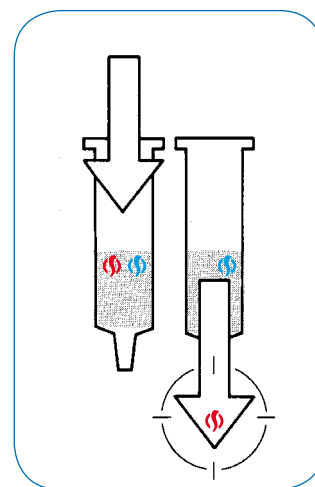
### Retention

After applying the sample, the analyte (●) and possibly other matrix components (● and ●), are retained on the phase due to one or several chemical interactions. Other matrix components can pass through the stage without being retained.



### Wash

This stage should result in the elution of all the unwanted components of the matrix (●) that were retained in the phase at the retention stage. **6-8** bed volumes are commonly recommended.



### Elution

An elution solvent that only "breaks" the bonds between the analyte (●) and the phase should be chosen which results solely in the selective elution of the analyte. **4-5** bed volumes are commonly recommended.

The SPE methodology varies with the type of phase used (normal, reversed or ion exchange). The following are proposed "simplified generic methods" for each type of phase although the protocols may differ slightly from one sample to another and should be optimized for each application. For polymer packings see the **ExtraBond® Polymer** section in this brochure.

	Normal phase	Reversed phase	Ion Exchange	
			Anionic	Cationic
<b>Typical phases</b>	Florisil, Silica, Amine, Cyano, Diol	C18, C8, C2, C1, Cyclohexyl, Cyano, Phenyl, EB2, EBH	NH2, SAX, EAX	CBA, SCX, ECX
<b>Phase polarity</b>	High	Low	High	
<b>Matrix</b>	Organic solvents	Aqueous	Organic solvents or aqueous (buffer)	
<b>Analyte</b>	Polar / without load	Non polar / without load	Acid	Base
<b>Retained compounds</b>	Polar	Non polar	Ionized	
<b>Stage 1: Conditioning</b>	1) IPA 2) hexane	1) methanol 2) water	1) methanol: water (50:50) 2) buffer* (0,1M)	
<b>Stage 2: Retention</b>	Load sample 1-5ml/min	Load sample 1-5ml/min	Load sample 1ml/min	
<b>Stage 3: Wash</b>	Hexane or hexane: IPA (98:2)	Water or water: methanol (95:5)	Methanol: buffer* (0,1M) (10:90)	
<b>Stage 4: Elution</b>	IPA, ethyl acetate, acetone or hexane: IPA (50:50)	Methanol o acetonitrile**	Buffer*** (0,5M-1,0M) or modify pH until the analyte is no longer retained	

\* Low ionic strength buffer

\*\* Could require addition of acid or base

\*\*\* High ionic strength buffer



## ExtraBond® Specification Table

The following table describes the packings available in the most common particle sizes. For other packings, please contact us.

Sorbent Phase	Code	Interaction	Description	"Endcapped"	Typical carbon Loading (%)	Surface Area (m <sup>2</sup> /g)*	Particle size (µm)*	Shape	Mean Pore Size (Å)
<b>C18</b>	C18	Non-polar	Octadecyl silica based	Yes	17	500	50	Irregular	60
<b>C18</b>	C19	Non-polar	Octadecyl silica based	No	17	500	50	Irregular	60
<b>C8</b>	C8E	Non-polar	Octyl silica based	Yes	11	500	50	Spherical	60
<b>C2</b>	C2E	Non-polar	Ethyl silica based	Yes	3,75	500	50	Irregular	60
<b>C1</b>	C1E	Non-polar	Methyl silica based	Yes	5	500	50	Irregular	60
<b>PH</b>	PHE	Non-polar	Phenyl silica based	Yes	8	500	50	Irregular	60
<b>CH</b>	CHN	Non-polar	Cyclohexyl silica based	Yes	10,5	450	60	Irregular	60
<b>CN-E (Cyano)</b>	CNE	Non-polar	Cyanopropyl silica based	Yes	8	500	50	Spherical	60
<b>CN-U (Cyano)</b>	CNU	Polar	Cyanopropyl silica based	No	7	500	50	Irregular	60
<b>NH2 (Amino)</b>	NH2	Polar / Anion exchange	Aminopropyl silica based (7meq/g)	No	5	500	50	Spherical	60
<b>2OH (Diol)</b>	2OH	Polar	Diol silica based	No	7	450	60	Irregular	60
<b>Si</b>	SIL	Polar	Silica	No	–	500	50	Spherical	60
<b>AL-A Acid Alumina</b>	ALA	Polar	Aluminium oxide acidic	–	–	–	50	Irregular	60
<b>AL-B Basic Alumina</b>	ALB	Polar	Aluminium oxide basic	–	–	–	50	Irregular	60
<b>AL-N Neutral Alumina</b>	ALN	Polar	Aluminium oxide neutral	–	–	–	50	Irregular	60
<b>FL</b>	FLO	Polar	Florisil	No	–	–	200	Irregular	–
<b>CBA</b>	CBA	Cation exchange	Carboxylic acid silica based (0,22meq/g)	Yes	–	450	60	Irregular	60
<b>PRS</b>	PRS	Cation exchange	Propylsulfonic acid silica based	No	–	500	50	Irregular	60
<b>SCX</b>	SCX	Cation exchange	Benzenesulfonic acid silica based (0,7meq/g)	No	–	450	60	Irregular	60
<b>PSA</b>	PSA	Anion exchange	Ethylendiamine-N-propyl silica based	No	9	500	50	Irregular	60
<b>DEA</b>	DEA	Anion exchange	Diethylaminopropyl silica based (0,33meq/g)	No	–	450	60	Irregular	60
<b>SAX</b>	SAX	Anion exchange	Trimethylaminopropyl silica based (0,30meq/g)	No	–	450	60	Irregular	60
<b>PCB</b>	PCB	Polar / Cation exchange	Silica and Benzenesulfonic acid silica based	No	–	500	–	Irregular	60
<b>Drug</b>	DRG	Mixed Non-polar / Cationic	Drug (silica based)	–	8	500	50	Irregular	60
<b>SC8</b>	SC8	Non-polar / Cation exchange	Octyl and Benzenesulfonic acid silica based	No	–	500	50	Irregular	60
<b>SA8-2</b>	SA2	Non-polar / Anion exchange	Octyl and TMA acetate silica based	No	–	500	50	Irregular	60
<b>EB2</b>	EB2	Non-polar	PSDVB	No	–	700	90	Spherical	70
<b>EBH</b>	EBH	Non-polar	PSDVB	No	–	700	55	Spherical	70
<b>EAX</b>	EAX	Anion exchange	PSDVB	No	–	700	55	Spherical	70
<b>ECX</b>	ECX	Cation exchange	PSDVB	No	–	700	55	Spherical	70
<b>Carbon</b>	GCB	High non-polar	Graphitized Carbon	No	–			Irregular	
<b>Carbon</b>	CAC	High non-polar	Activated Carbon	No	–			Irregular	

\* Average values.

## ExtraBond® Ordering Information

Below are the ExtraBond® cartridges available for immediate delivery (subject to prior sale). These cartridges are manufactured in medical grade polypropylene. For any other cartridge format, glass cartridges or 96 and 48 well plates, contact [scharlab@scharlab.com](mailto:scharlab@scharlab.com).

Description	Pack	Art. No.
<b>C18</b>		
C18, 50mg/1ml	100 units	C18050-01C
C18, 100mg/1ml	100 units	C18100-01C
C18, 200mg/3ml	50 units	C18200-03L
C18, 500mg/3ml	50 units	C18500-03L
C18, 500mg/6ml	30 units	C18500-06T
C18, 500mg LR	50 units	C18500-10L
C18, 1g/6ml	30 units	C1801G-06T
C18, 2g/12ml	20 units	C1802G-12A
C18, 5g/20ml	20 units	C1805G-20A
C18, 10g/60ml	16 units	C1810G-60B
C18, 500mg (WP 125Å)	50 units	C18500-00L
C18, 1000mg (WP 125Å)	50 units	C181000-0L

<b>C8</b>		
C8, 100mg LR	50 units	C8E100-15L
C8, 200mg LR	50 units	C8E200-15L
C8, 500mg/3ml	50 units	C8E500-03L

<b>C2E</b>		
C2E, 100mg/1ml	100 units	C2E100-01C
C2E, 500mg/3ml	50 units	C2E500-03L

<b>CHN</b>		
CHN, 500mg/3ml	50 units	CHN500-03L

<b>NH2</b>		
NH2, 500mg/3ml	50 units	NH2500-03L
NH2, 500mg/6ml	30 units	NH2500-06T
NH2, 500mg LR	50 units	NH2500-15L
NH2, 1g/6ml	30 units	NH201G-06T

<b>20H</b>		
2OH, 500mg/3ml	50 units	2OH500-03L

<b>Si</b>		
Si, 50mg/1ml	100 units	SIL050-01C
Si, 100mg/1ml	100 units	SIL100-01C
Si, 500mg/3ml	50 units	SIL500-03L
Si, 500mg LR	50 units	SIL500-15L
Si, 1g/6ml	30 units	SIL01G-06T
Si, 2g/12ml	20 units	SIL02G-12A
Si, 5g/20ml	20 units	SIL05G-20A
Si, 500mg (WP 125Å)	50 units	SIL500-00L
Si, 1000mg (WP 125Å)	50 units	SIL1000-0L

<b>FL</b>		
FL, 500mg/3ml	50 units	FLO500-03L
FL, 1g/6ml	30 units	FLO01G-06T
FL, 2g/12ml	20 units	FLO02G-12A

<b>PRS</b>		
PRS, 500mg/3ml	50 units	PRS500-03L
PRS, 500mg LR	50 units	PRS500-10L
PRS, 1g/6ml	50 units	PRS01G-06L

<b>SCX</b>		
SCX, 500mg/3ml	50 units	SCX500-03L
SCX, 1g/6ml	30 units	SCX01G-06T
SCX, 5g/20ml	20 units	SCX05G-20A

<b>DEA</b>		
DEA, 100mg LR	50 units	DEA100-15L

<b>SAX</b>		
SAX, 100mg/1ml	100 units	SAX100-01C
SAX, 500mg/3ml	50 units	SAX500-03L
SAX, 500mg/6ml	30 units	SAX500-06T
SAX, 1g/6ml	30 units	SAX01G-06T

<b>PCB</b>		
PCB, 1g/6ml	30 units	PCB01G-06L

<b>ALB</b>		
Basic Alumina, 200mg/3ml	50 units	ALB200-03L

<b>Drug</b>		
Drug, 130mg LR	50 units	DRG130-10L
Drug, 200mg/3ml	50 units	DRG200-03L
Drug, 300mg LR	50 units	DRG300-10L
Drug, 500mg/6ml	30 units	DRG500-06T

<b>SA82</b>		
SA82, 200mg LR	50 units	SA2200-10L
SA82, 500mg/6ml	30 units	SA2500-06T

<b>EBH</b>		
EBH, 30mg/1ml	100 units	EBH030-01C
EBH, 60mg/3ml	50 units	EBH060-03L
EBH, 200mg/6ml	30 units	EBH200-06T
EBH, 500mg/6ml	30 units	EBH500-06T

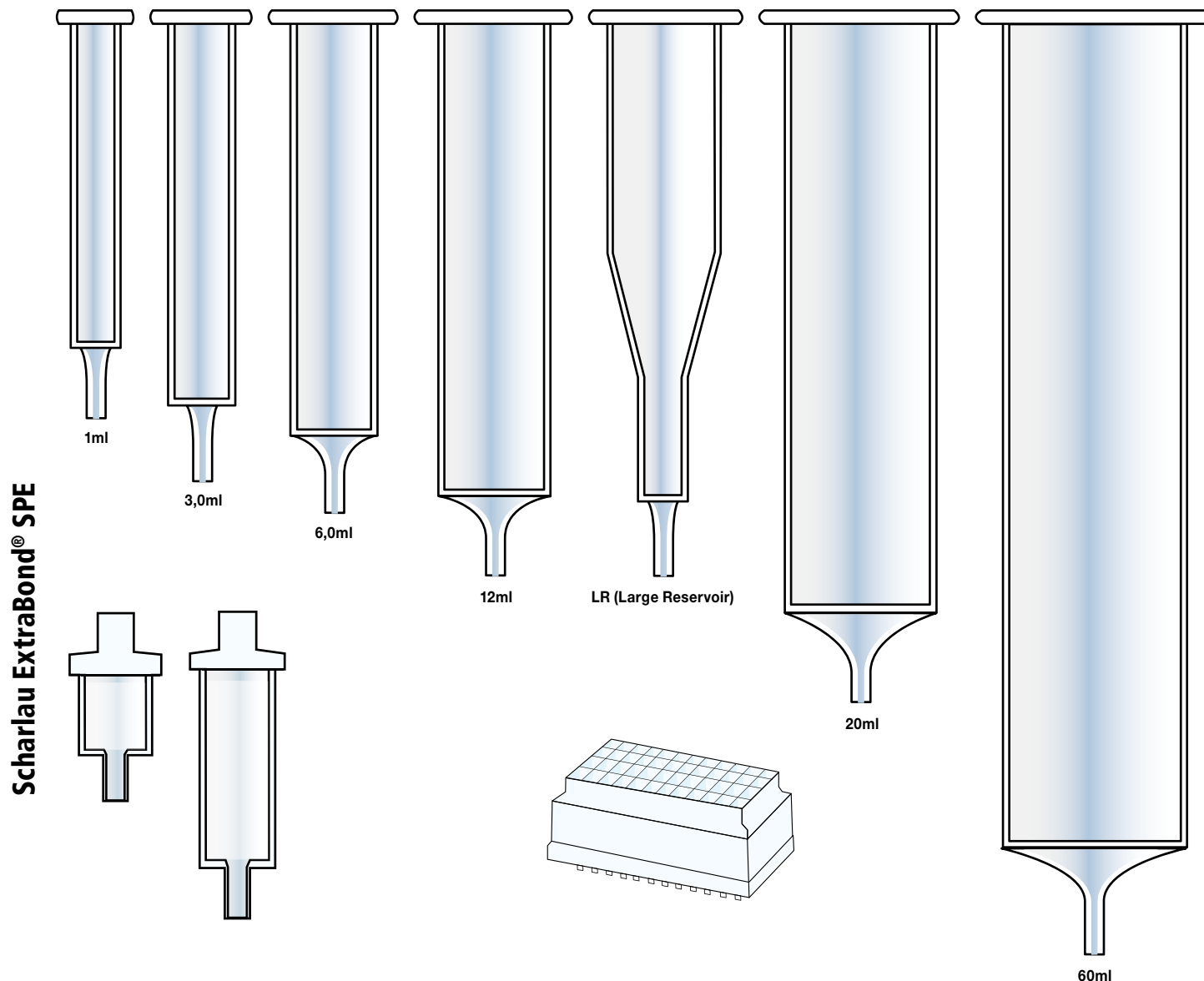
<b>EB2</b>		
EB2, 30mg/1ml	100 units	EB2030-01C
EB2, 60mg/3ml	50 units	EB2060-03L
EB2, 200mg/6ml	30 units	EB2200-06T
EB2, 500mg/6ml	30 units	EB2500-06T

<b>ECX</b>		
ECX, 30mg/1ml	100 units	ECX030-01C
ECX, 60mg/3ml	50 units	ECX060-03L
ECX, 200mg/6ml	30 units	ECX200-06T
ECX, 500mg/6ml	30 units	ECX500-06T

<b>EAX</b>		
EAX, 30mg/1ml	100 units	EAX030-01C
EAX, 60mg/3ml	50 units	EAX060-03L
EAX, 200mg/6ml	30 units	EAX200-06T
EAX, 500mg/6ml	30 units	EAX500-06T

## ExtraBond® Formats

ExtraBond® is available in a wide range of formats: open straight cartridges from 1 to 60ml, wide openings Large Reservoir Cartridges (LRC) of 10 or 15ml, closed cartridges, glass cartridges, 96 and 48 well extraction plates. Except in the case of the glass cartridges, the plastic is medical grade polypropylene and the frits are polyethylene although frits are available in other materials.



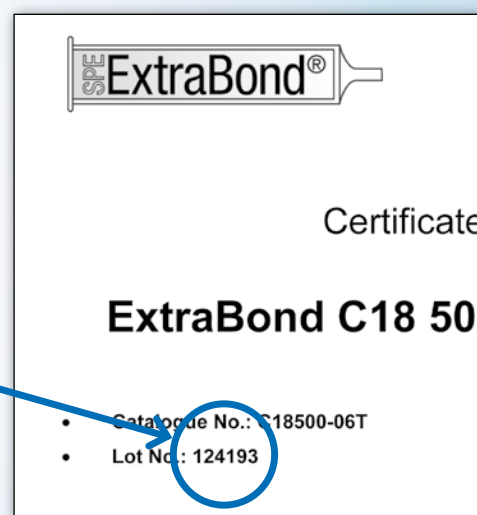
### Problems with the method of extraction? Implementing a new extraction procedure?

Contact the Chromatography Consultation Service  
at Scharlab: [scharlab@scharlab.com](mailto:scharlab@scharlab.com)

- What is the matrix?
- What are the analytes of interest?
- Is SPE being employed for extraction?

# Unique features of ExtraBond®:

- Phase type printed on each cartridge = **No more confusions**
- Lot number printed on each cartridge = **Perfect traceability**
- Vacuum packed = **Moisture impervient barrier**  
**guarantees product properties**  
**no matter what storage**



**ExtraBond® cartridges** are supplied with a certificate of analysis that includes the results of tests carried out prior to the approval of each lot.

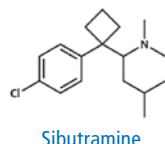
## ExtraBond® Drug

**ExtraBond® Drug** is a revolutionary silica based packing designed for the extraction of drugs of abuse with greater reproducibility and efficiency. Using sensitive detectors such as MS, the advantages are dramatic.

ExtraBond® Drug is manufactured under strict hygienic conditions and the levels of extractables are monitored. Each batch undergoes stringent control of various parameters. These levels of control and precision mean that ExtraBond® Drug offers remarkably consistent results and batch to batch reproducibility, essential factors in current validation requirements.

Following are some examples, but the same method of extraction as that for BondElut® Certify (manufactured by Agilent Technologies) can be employed.

### Extraction of Sibutramine from human plasma using ExtraBond® Drug



**Sample preparation:** 0,1ml human plasma and 2,0ml 1% Acetic acid

**Conditioning:** 3ml Methanol and 3ml Water

**Load prepared sample**

**Wash:** 3ml Water and 3ml Methanol (vacuum 5" Hg)

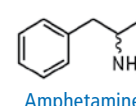
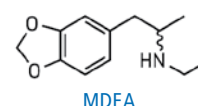
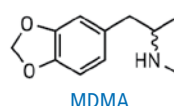
**Elution:** 3ml 5% Ammonia / Methanol (gravity)

› Optimum volumes for 500mg of phase.

Addition (ng/ml) levels	Recovery (% for N=6)	RSD (%)
1,00	81	10
5,00	82	7
20,00	80	4

› Ordering information is on page 15.

### Extracción of MDMA, MDEA and Amphetamine from Urine with ExtraBond® Drug



**Sample preparation:** 0,5ml urine and 2,5ml Sulfuric acid (0,1M)

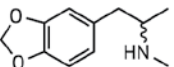
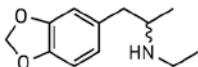
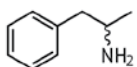
**Conditioning:** 2x3ml Methanol and 2x3ml Sulfuric acid(0,1M)

**Load prepared sample**

**Wash:** 3ml Phosphate buffer (KH<sub>2</sub>PO<sub>4</sub>/K<sub>2</sub>HPO<sub>4</sub>, pH=7,0) and 3ml Sulfuric acid (0,1M) and 3ml Methanol

**Elution:** 2x3ml Ammonia ac. (5%v/v)

› Optimum volumes for 200mg of phase.

		
MDMA	MDEA	Amphetamine
96%	98%	89%

› Ordering information is on page 15.

## ExtraBond® Bulk



ExtraBond® phases are available in bulk so you can prepare your own cartridges, or, for extraction of solid samples by putting the packing directly in contact with the sample.

The following 100g phases are available for immediate supply (subject to prior sale).

Other phases are available and also larger quantities. Please contact [scharlab@scharlab.com](mailto:scharlab@scharlab.com).

Phase	100mg
<b>C18</b>	000C18100G
<b>NH2</b>	000NH2100G
<b>AL-N</b>	000ALN100G
<b>FL</b>	000FLO100G
<b>PSA</b>	000PSA100G
<b>GCB Graphitized Carbon*</b>	000GCB100G

› \*See specifications on page 14.

› See pages 22 and 18 for supplies and bulk phases.



## ExtraBond® QuEChERS

**QuEChERS** is a Quick, Easy, Cheap, Effective, Rugged and Safe multi-residue extraction method for fruits and vegetables that combines two stages.

- **Extraction stage:** the sample is extracted using Acetonitrile and various salts.
- **Dispersive Solid Phase Extraction (SPE) stage:** the *clean-up* of an aliquot of the extract from the first stage is carried out. For this *clean-up* stage PSA (SPE sorbent) and Magnesium Sulphate are used.

Since the launch of QuEChERS in 2003<sup>1</sup> many variants of this method have been developed and employed differing according to the matrix and the pesticide

residues being determined. Method approved by the European Food Regulatory Agencies<sup>2</sup>.

Despite being originally developed for the extraction of pesticides in fruits and vegetables, today QuEChERS is also being used to extract many compounds from a wide variety of matrices including milk, meat, fish, kidney, honey, wine and soils.

<sup>1</sup> Fast and Easy Multiresidue Method Employing Acetonitrile Extraction/Partitioning and "Dispersive SPE" for the Determination of Pesticide Residues in Produce M. Anastassiades, S.J. Lehotay, D. Stajnbauer, F.J. Schenck, J. AOAC Int., 86 (2) 412-431, 2003.  
<sup>2</sup> EU Document No. SANCO/10476/2003, 5th February 2004 and method prEN 15662: 2007.

**Qu** (Quick)  
**E** (Easy)  
**Ch** (Cheap)  
**E** (Effective)  
**R** (Rugged)  
**S** (Safe)

### ExtraBond® variant QuEChERS EN-A

Scharlau variant ExtraBond® QuEChERS EN-A for use according to the method EN 15662:2008:

For the **extraction stage**, Scharlau employs sachets instead of tubes for **maximum convenience and ease-of-use**. The content of the sachet is easily poured into a 50ml tube at the appropriate time, after adding the acetonitrile to the sample. In this way the possible exothermic reaction is avoided and greater recoveries obtained.

#### EXTRACTION STAGE

Weigh 10g of homogenized sample in a 50ml centrifuge tube

Add 10ml of Acetonitrile

Shake 1 minute

Add the contents of a sachet from Kit 1A

Centrifuge

#### DISPERSIVE STAGE

To a tube from the dispersive kit add a 4ml aliquot of the supernatant from the extract above

Shake 30 seconds

Centrifuge

Analyze (GC or HPLC)

For the **solid-phase dispersion stage**, tubes from the ExtraBond® QuEChERS kits have the type of kit and batch number imprinted on them for **greater traceability**. By employing this variant with a smaller amount of PSA, **the kit price is reduced**. Use kit 2B in case of fatty/waxy fruits and vegetables such as avocado, almonds and olives. Otherwise, use kit 2A.

## EXTRACTION STAGE

✓ **Sachets: more convenient**

Ref. QUEXTENAK1, **Kit 1A\***

Contains 50 sachets. Each sachet contains:

- 1g, 99,9% Sodium Citrate
- 0,5g, 99% Sodium Hydrogen Citrate sesquihydrate
- 4g, 98,5 to 101,5% Magnesium Sulphate (passed through a flask)
- 1g, 99,5% Sodium Chloride

\*Also available in 15ml tubes, ref. QUEXTENBK1

## DISPERSIVE SPE STAGE

✓ **Batch No. on each tube: improved traceability**  
✓ **Better price**

**For general fruits and vegetables**

Ref. QUDISENAK2, **Kit 2A**

Contains 50 tubes of 15ml. Each tube contains:

- PSA 100mg
- Magnesium Sulfate 600mg

**For fatty/waxy fruits and vegetables**

Ref. QUDISENCK2, **Kit 2C**

Contains 50 tubes of 15ml. Each tube contains:

- PSA 100mg
- Magnesium Sulfate 600mg
- C18 100mg

## ExtraBond® Polymeric

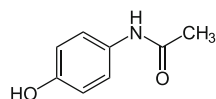
Cartridges from the latest generation ExtraBond® Polymeric line are based on the ExtraBond® EB phase. This sorbent is a spherical divinylbenzene polystyrene. It has more capacity and surface area than silica-based packings with high recovery and extraction rates. It is a material that provides a balance between hydrophilic and hydrophobic properties and can be used in a pH range of 1 to 14.

The ExtraBond® Polymeric range covers all extraction needs. It consists of 4 types of packing materials with differing polarities due to modifications:

### Reversed-phase

**ExtraBond® EBH.** Universal packing for all analytes, acidic, basic and neutral. Its increased surface polarity improves the adsorption of polar analytes. Useful for polar and non-polar compounds including some highly hydrophilic compounds with little retention on C18 phases. The eluent used for this phase is Methanol although the strength of elution may be increased using 1%  $\text{NH}_3 \cdot \text{H}_2\text{O}$ . **It is an alternative packing material to Oasis HLB\*.**

#### Extraction of acetaminophen with ExtraBond® EBH



Acetaminophen (Paracetamol)

**Conditioning:** 2ml Methanol and 2ml Water

**Sample loading:** 2ml sample to cartridge

**Wash:** 2ml 5% Methanol in Water

**Elution:** 2ml 100% Methanol

› Optimum volumes for 60mg of phase.

#### Chromatographic conditions:

**Column:** KromaPhase C18, 4.6\*150mm, 5µm, 150Å. Art. No. 066-B2Y803

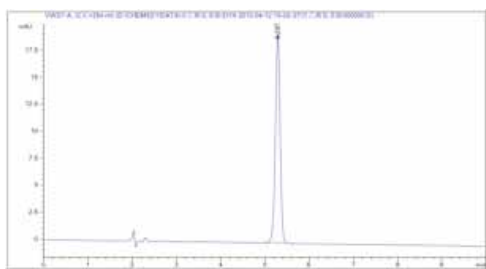
**Mobil phase:** Methanol: Water = 1:3

**Detection:** 254nm

**Flow:** 1,0ml/min

**Injection:** 20µL

**Temperature:** 30°



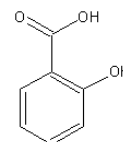
	Sample	rt(min)	Área	Recovery %
2ppm	Acetaminophen	5,346	142,4	–
2ppm	Acetaminophen in EBH	5,287	145,65	102,28
2ppm	Acetaminofeno in Oasis HLB*	5,335	142,13	99,81

\* Oasis HLB is a registered trademark of the Waters Corporation.

### Reversed phase type

**ExtraBond® EB2** has a urea modification. It is suitable for most analytes, even for highly polar and hydrophilic compounds. As can be seen in the graph corresponding to the extraction of Caffeine (neutral), Metoprolol (basic) and Salicylic acid (acid), EB2 ExtraBond® is excellent for both acidic, basic and neutral analytes but is dramatically superior for acidic compounds. For acidic compounds, acidify with 1 or 2% Acetic acid.

#### Salicylic acid extraction with ExtraBond® EB2



Salicylic acid

**Conditioning:** 2ml Methanol and 2ml Water

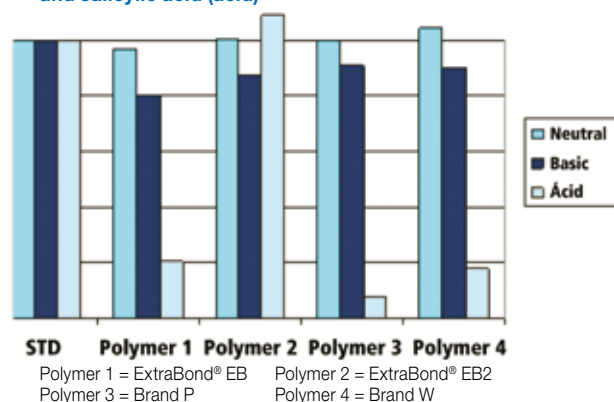
**Sample loading:** 1ml sample (50 µg/ml in Water)

**Wash:** 2ml Water  
**Dry:** 4 minutes

**Elution:** 3ml Methanol

› Optimum volumes for 60mg of phase.

#### Recovery of caffeine (neutral) metoprolol (basic) and salicylic acid (acid)



› Ordering information is on page 15.

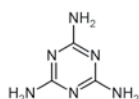
› Ordering information is on page 15.

## ExtraBond® Polymeric (continued)

### Cation exchange

**ExtraBond® ECX** acts as a dual phase, reversed phase and cation exchanger.

#### Extraction of melamine in pet food with ExtraBond® ECX



Melamine

**Conditioning:** 3ml Methanol and 3ml Water

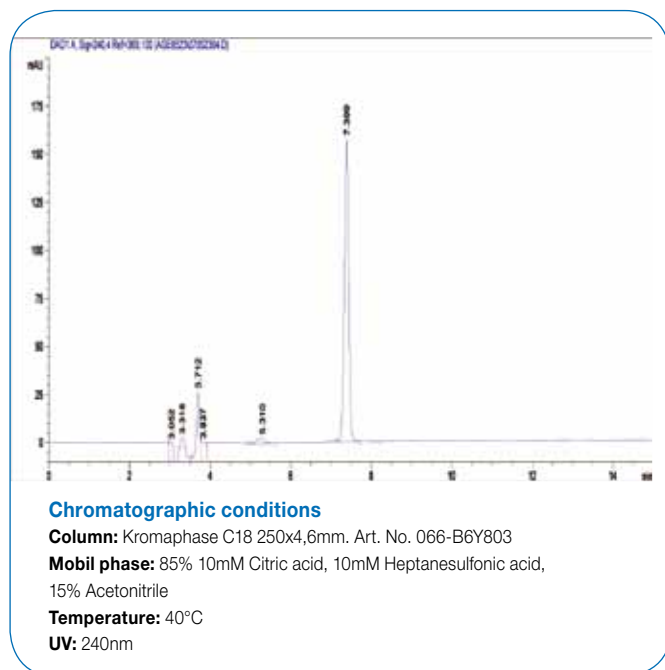
**Sample loading:** 3ml sample

**Wash:** 3ml Water and 3ml Methanol.  
**Dry:** 4 minutes

**Elution:** 3ml 5% Ammonia / Methanol

› Optimum volumes for 60mg of phase.

Addition (mg/L)	Recovery
0,1	108%
0,5	92%
2	96%

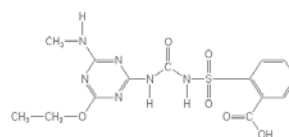


› Ordering information is on page 15.

### Anion exchange

**ExtraBond® EAX** acts as a dual phase, reversed phase and anion exchanger. Stable from pH 0 to 14.

#### Ethametsulfuron (herbicide) extraction with ExtraBond® EAX



Ethametsulfuron

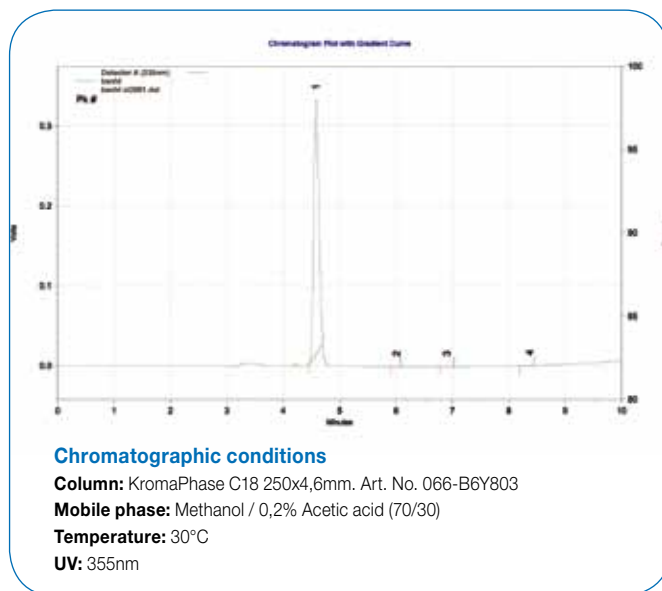
**Conditioning:** 1ml Methanol and 1ml Water

**Sample loading:** 2ml sample (2% Ammonia)

**Wash:** 2ml 2% Ammonia and Methanol.  
**Dry:** 4 minutes

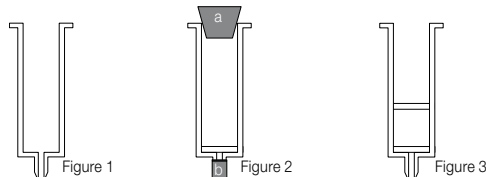
**Elution:** 3ml 2% Acetic acid/Methanol

› Optimum volumes for 60mg of phase.



› Ordering information is on page 15.

## ExtraBond® Accessories and Chemicals

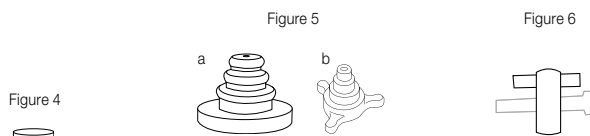


### ExtraBond® accessories

Description	Pack	Art. No.
PP Stopcocks for ExtraVac (Figure 6)	12 units	STOPCOCKVA
1ml Empty column (Figure 1)	100 units	EMPTY0-01C
3ml Empty column (Figure 1)	100 units	EMPTY0-03C
6ml Empty column (Figure 1)	100 units	EMPTY0-06C
12ml Empty column (Figure 1)	100 units	EMPTY0-12C
20ml Empty column (Figure 1)	100 units	EMPTY0-20C
60ml Empty column (Figure 1)	100 units	EMPTY0-60C
1ml Empty column with 2 20µm PE frits (Figure 3)	100 units	EMP2FR-01C
3ml Empty column with 2 20µm PE frits (Figure 3)	100 units	EMP2FR-03C
6ml Empty column with 2 20µm PE frits (Figure 3)	100 units	EMP2FR-06C
12ml Empty column with 2 20µm PE frits (Figure 3)	100 units	EMP2FR-12C
20ml Empty column with 2 20µm PE frits (Figure 3)	100 units	EMP2FR-20C
60ml Empty column with 2 20µm PE frits (Figure 3)	100 units	EMP2FR-60C
1ml 20µm PE frits (Figure 4)	100 units	FRITPE-01C
3ml 20µm PE frits (Figure 4)	100 units	FRITPE-03C
6ml 20µm PE frits (Figure 4)	100 units	FRITPE-06C
12ml 20µm PE frits (Figure 4)	100 units	FRITPE-12C
20ml 20µm PE frits (Figure 4)	100 units	FRITPE-20C
60ml 20µm PE frits (Figure 4)	50 units	FRITPE-60L
Top adapter for 1,3 and 6ml cartridges (Figure 5b)	15 units	ADAPTS00-E
Top adapter for 10, 12, 20 and 60ml cartridges (Figure 5a)	6 units	ADAPTL00-S
Luer Tip cap (Figure 2b)	100 units	CAPLUER0-C
1ml Top cap (Figure 2a)	100 units	CAPT0P-01C
3ml Top cap (Figure 2a)	100 units	CAPT0P-03C
6ml Top cap (Figure 2a)	100 units	CAPT0P-06C
12ml Top cap (Figure 2a)	100 units	CAPT0P-12C
20ml Top cap (Figure 2a)	100 units	CAPT0P-20C
60ml Top cap (Figure 2a)	50 units	CAPT0P-60L
Tube PTFE 3,2mm (1/8) O.D. x 1,50mm I.D.	10 m	08T3215010
Needles PP	12 units	NEEDLEPP-F
Adapter luer male	2 units	ADAPLUERM2
Adapter luer female	2 units	ADAPLUERF2

### Scharlau chemical products

Description	Presentation	Art. No.
Acetone Multisolvant®	1l	AC03101000
Acetone Multisolvant®	2,5l	AC03102500
Acetonitrile Multisolvant®	1l	AC03331000
Acetonitrile Multisolvant®	2,5l	AC03332500
Ethyl acetate, Multisolvant®	1l	AC01551000
Ethyl acetate, Multisolvant®	2,5l	AC01552500
n-Hexane, 96%, Multisolvant®	1l	HE02341000
n-Hexane, 96%, Multisolvant®	2,5l	HE02342500
Magnesium sulphate 7-hydrate, for analysis	250g	MA00850250
Magnesium sulphate 7-hydrate, for analysis	500g	MA00850500
Magnesium sulphate 7-hydrate, for analysis	1Kg	MA00851000
Magnesium sulphate anhydrous, high purity	1Kg	MA00801000
Methanol, Multisolvant®	1l	ME03151000
Methanol, Multisolvant®	2,5l	ME03152500
2-Propanol, Multisolvant®	1l	AL03211000
2-Propanol, Multisolvant®	2,5l	AL03212500



### Scharlau chemical products (continued)

Description	Presentation	Art. No.
Sodium acetate 3-hydrate, for ACS ISO analysis	500g	SO00250500
Sodium acetate 3-hydrate, for ACS ISO analysis	1Kg	SO00251000
Sodium acetate anhydrous, for ACS analysis	250g	SO00350250
Sodium acetate anhydrous, for ACS analysis	500g	SO00350500
Sodium acetate anhydrous, for ACS analysis	1Kg	SO00351000
Sodium chlorate, for ACS ISO analysis	500g	SO02270500
Sodium chloride, for ACS ISO analysis	1Kg	SO02271000
di-Sodium hydrogen citrate 1,5 hydrate, for analysis	500g	SO03490500
di-Sodium hydrogen citrate 1,5 hydrate, for analysis	1Kg	SO03491000
tri-Sodium citrate 2 hydrate, for ACS ISO analysis	250g	SO02000250
tri-Sodium citrate 2 hydrate, for ACS ISO analysis	500g	SO02000500
tri-Sodium citrate 2 hydrate, for ACS ISO analysis	1Kg	SO02001000

### Scharlau pH paper

Description	Pack	Art. No.
pH Paper Strips pH 1-14 (colour-fast)	100 strips	1562-1013C

### Centrifuge tubes and microtubes, conical bottomed in polypropylene, autoclaveable and graduated

Description	Ø ext. x h. (mm)	Cap. (ml)	Units	Art. No.
Without skirt	29,2x113,5	50	600 (10x60µ)	00TC50G-09
With skirt	29,2x114,5	50	500 (10x50µ)	0TU50G-019
Without skirt	17x122	15	500	027-429910
Microtube (without skirt)	11x40	2	500	0274092.6N

### Automatic pipette, adjustable volume, autoclaveable, 5 years warranty

Description	Uds.	Art. No.
Finpipette Model F2. Range 0,5 - 5ml graduated with 0,01µl increments	1	0004642100

### Polypropylene funnels for solids, autoclaveable

Description	Uds.	Art. No.
Funnel mouth ø 60mm, stem ø 15mm	1	425-000171

### Scharlau timer

Description	Uds.	Art. No.
Scharlau timer	1	502EI8845S

› See page 18 for bulk phases.

## How to use ExtraBond®

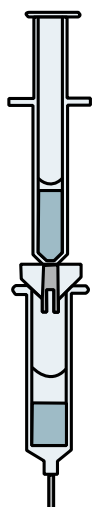


Figure 1

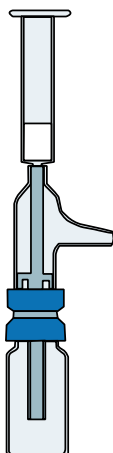


Figure 2

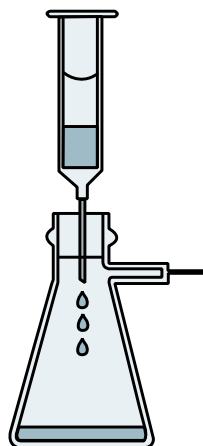


Figure 3

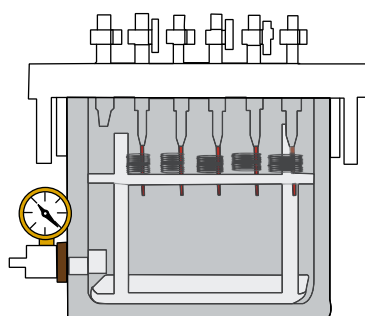


Figure 4

We recommend using pressure equipment (positive or negative) taking care not to allow the solvents to "fall" by gravity for maximum reproducibility.

There are several ways of carrying out solid phase extraction using ExtraBond®.

- For a small number of samples use a syringe and an adapter to "push" the solvents through the column by positive pressure using the adapters that are listed on this page. See **Figure 1**.
- Or, you can use the negative pressure provided by a vacuum source. See **Figure 2 and 3**.
- When the number of samples is high and you want to achieve better reproducibility more rapidly, vacuum manifolds are the best choice. See **Figure 4**.

### Description

Description	Art. No.
Scharlau ExtraVac, Vacuum manifold 12 complete, 12 positions	EXTRAVAC12*
Scharlau vacuum manifold ExtraVac 20 complete, 20 positions	EXTRAVAC20*
KNF vacuum pump mod. N820FT.18 (20 L/min, 100 mbar final vacuum, chemically resistant)	00N820FT18
500ml Büchner Filtration flask 29/32	073-000163
Male adapter with lateral olive 29/32	073-000652
Rubber latex vacuum tubing, 10 mm I.D. x 20 mm O.D.	288-430.11
Vacuum adapter 24/40	ADAVAC2440
Vacuum adapter 19/22	ADAVAC1922
Vacuum adapter 14/20	ADAVAC1420
Vacuum adapter for vial 20-400 with vial	ADAVACVIAL
Vacuum adapter for vial 20-400 without vial	ADAVASVIAL

\* For the ExtraVac vacuum manifolds 13 x 100 mm, 16 x 100 mm and 16 x 125 mm collection tubes may be used.

## ExtraBond® LLE. Liquid-Liquid Extraction



Developed to speed up liquid-liquid extractions in laboratories. Extra-Bond® LLE cartridges are made of polypropylene medical grade with diatomaceous earth packing of high purity and chemically stable to solvents.

Unlike cartridges, solid phase extraction ExtraBond®, LLE operate simply by gravity without the need for vacuum.

the organic solvent (immiscible with water) is added, the resulting liquid-liquid extraction is very fast and efficient. This is a general method suitable for sample preparation prior to LC/MS.

For purification of organic reaction mixtures, fill the cartridge with acidified water (to remove amines) or water with an alkaline pH (to remove acids). The cartridge selected must be based on the total volume of aqueous buffer being used. Then pass the reaction mixture through the cartridge. It is an easy, rapid and reproducible way to remove excess reagents or reaction byproducts from an organic reaction mixture.

Max. sample volume	Buffer	Pack	Art. No.
3ml	No	100	LLE-03C000
5ml	No	100	LLE-05C000
10ml	No	100	LLE-10C000
20ml	No	100	LLE-20C000

For preparation of biological samples, the cartridge must be selected with the volume of adsorbent corresponding to the total volume of the sample, including buffers and additives. The method is very simple. When an aqueous sample is added to ExtraBond® LLE, it acts to distribute it as a thin film on its surface. When



## ExtraBond® Flash

The Flash chromatography technique is increasingly used for synthesis and purification. Available from Scharlab, Universal ExtraBond® Flash cartridges.

- Ultra-clean Polypropylene Cartridges
- Guaranteed no leaks at 100 psi (6.9 bar)
- Bundled with ExtraBond® ultrapure silica (40-63 microns, 60 Å)
- Narrow particle size distribution
- pH neutral
- Water content controlled
- Variety of available phases: C18, Amino, Cyano, Diol, SCX...
- Variety of formats (4, 12, 25, 40, 80, 120, 220 and 330 g)
- Innovative packaging
- Very good resolution, no tails
- Lot to lot reproducibility
- Also available high efficiency silica (20-40µm)

### Compatible with the following equipment:

- Teledyne Isco: CombiFlash® (Rf, Companion®, Retrieve™, Optix™)
- Biotage: Isolera™, SP™, Flash+™, FlashMater II
- Analogix (Varian): IntelliFlash 310 and 280, SimpliFlash, F12/40
- Interchim (PuriFlash™ 430evo)
- Armen (Spot Flash System)
- Moritex: Purif-α2, Purif-compact
- Yamazen (W-Prep 2XY)
- Büchi (Sepacore®)
- Grace Reveleris

Description	Silica	C18
ExtraBond® Flash 4g, 20 units	FLASIL04GA	FLAC1804GA
ExtraBond® Flash 12g, 20 units	FLASIL12GA	FLAC1812GA
ExtraBond® Flash 25g, 15 units	FLASIL25GE	FLAC1825GE
ExtraBond® Flash 40g, 15 units	FLASIL40GE	FLAC1840GE
ExtraBond® Flash 80g, 12 units	FLASIL80GF	FLAC1880GF
ExtraBond® Flash 120g, 10 units	FLASIL120X	FLAC18120X
ExtraBond® Flash 220g, 4 units	FLASIL220G	FLAC18220G
ExtraBond® Flash 330g, 4 units	FLASIL330G	FLAC18330G



## ExtraBond® Flash adapters

ExtraBond® Flash fits virtually any unit directly. However, for some models adapters are required.

### • Biotage Isolera. Use ExtraBond® Flash directly

### • Biotage SP1 and SP4

- **Option A:** Change the current solvent line to a Luer lock line. It will not be necessary to use the compression module.



Art. No. SOLVBIOTAG

- **Option B:** use of adapters. These adapters allow the use of ExtraBond® Flash cartridges with the Biotage solvent line which can also be connected to the compressor module. Preferred option when trying to use both systems alternately.



Art. No. ADAPBIOTAG (2 pieces)

- **Flash Master™.** On Flash Master™ systems, cartridges are running upside down. Connect ExtraBond® Flash directly on the system using the Flash Master™ adapter.

Description	Art. No.
Flash Master™ adapter	ADAPFLASMA

## ExtraBond® Flash SLL - Screw Luer Lock

ExtraBond® Flash SLL are hand screw-on head cap columns with luer lock design at both top and bottom. These are universal cartridges compatible with most of the flash equipment including Biotage and Isco.

### ExtraBond® Flash SLLS - Screw Luer Lock with spacer

ExtraBond® Flash SLLS series columns are designed to be used with a spacer inside for **solid sample method**. If spacer is no needed use ExtraBond® Flash SLLN.

Description	Silica 60Å, 40-60µm	Spacer	C18 100Å, 40-60µm	Spacer
ExtraBond® Flash SLLS 12g, 20 units	FLLSSH12GA*	FLLSPA12GA (1g)	FLLS1812GA*	FLLSP812GA (1g)
ExtraBond® Flash SLLS 20g, 20 units	FLLSSI20GA*	FLLSPA20GA (3g)	FLLS1820GA*	FLLSP820GA (3g)
ExtraBond® Flash SLLS 40g, 10 units	FLLSSI40GX*	FLLSPA40GX (4g)	FLLS1840GX*	FLLSP840GX (4g)
ExtraBond® Flash SLLS 80g, 5 units	FLLSSI80GV*	FLLSPA80GV (7g)	FLLS1880GV*	FLLSP880GV (7g)
ExtraBond® Flash SLLS 120g, 5 units	FLLSSI120V*	FLLSPA120V (10g)	FLLS18120V*	FLLSP8120V (10g)

\*Spacer is not included in this Article No.



### ExtraBond® Flash SLLN - Screw Luer Lock without spacer

Description	Silica 60Å, 40-60µm	C18 100Å, 40-60µm
ExtraBond® Flash SLLN 12g, 20 units	FLLNSI12GA	FLLN1812GA
ExtraBond® Flash SLLN 20g, 20 units	FLLNSI20GA	FLLN1820GA
ExtraBond® Flash SLLN 40g, 10 units	FLLNSI40GX	FLLN1840GX
ExtraBond® Flash SLLN 80g, 5 units	FLLNSI80GV	FLLN1880GV
ExtraBond® Flash SLLN 120g, 5 units	FLLNSI120V	FLLN18120V



## Cross References: Agilent (Varian)

Agilent (Varian) Art. No.	Varian Description	Scharlau Art. No.	Scharlau Description
01210-2001	Bond Elut C18 100mg 1ml, 100u. Varian	C18100-01C	ExtraBond® C18 100mg 1ml, 100u. Scharlau
01210-2003	Bond Elut C2 100mg 1ml, 100u. Varian	C2E100-01C	ExtraBond® C2 100mg 1ml, 100u. Scharlau
01210-2010	Bond Elut Si 500mg 1ml, 100u. Varian	SIL050-01C	ExtraBond® Si 500mg 1ml, 100u. Scharlau
01210-2017	Bond Elut SAX 100mg 1ml, 100u. Varian	SAX100-01C	ExtraBond® SAX 100mg 1ml, 100u. Scharlau
01210-2025	Bond Elut C18 200mg 3ml, 50u. Varian	C18200-03L	ExtraBond® C18 200mg 3ml, 50u. Scharlau
01210-2028	Bond Elut C18 500mg 3ml, 50u. Varian	C18500-03L	ExtraBond® C18 500mg 3ml, 50u. Scharlau
01210-2029	Bond Elut C8 500mg 3ml, 50u. Varian	C8E500-03L	ExtraBond® C8 500mg 3ml, 50u. Scharlau
01210-2030	Bond Elut C2 500mg 3ml, 50u. Varian	C2E500-03L	ExtraBond® C2 500mg 3ml, 50u. Scharlau
01210-2033	Bond Elut CH 500mg 3ml, 50u. Varian	CHN500-03L	ExtraBond® CH 500mg 3ml, 50u. Scharlau
01210-2036	Bond Elut 20H 500mg 3ml, 50u. Varian	20H500-03L	ExtraBond® 20H 500mg 3ml, 50u. Scharlau
01210-2037	Bond Elut Si 500mg 3ml, 50u. Varian	SIL500-03L	ExtraBond® Si 500mg 3ml, 50u. Scharlau
01210-2039	Bond Elut PRS 500mg 3ml, 50u. Varian	PRS500-03L	ExtraBond® PRS 500mg 3ml, 50u. Scharlau
01210-2040	Bond Elut SCX 500mg 3ml, 50u. Varian	SCX500-03L	ExtraBond® SCX 500mg 3ml, 50u. Scharlau
01210-2041	Bond Elut NH2 500mg 3ml, 50u. Varian	NH2500-03L	ExtraBond® NH2 500mg 3ml, 50u. Scharlau
01210-2044	Bond Elut SAX 500mg 3ml, 50u. Varian	SAX500-03L	ExtraBond® SAX 500mg 3ml, 50u. Scharlau
01210-2050	Bond Elut FL 500mg 3ml, 50u. Varian	FLO500-03L	ExtraBond® FL 500mg 3ml, 50u. Scharlau
01210-2052	Bond Elut C18 500mg 6ml, 30u. Varian	C18500-06T	ExtraBond® C18 500mg 6ml, 30u. Scharlau
01210-2058	Bond Elut C18 50mg 1ml, 100u. Varian	C18050-01C	ExtraBond® C18 50mg 1ml, 100u. Scharlau
01210-2068	Bond Elut Si 50mg 1ml, 100u. Varian	SIL050-01C	ExtraBond® Si 50mg 1ml, 100u. Scharlau
01210-2084	Bond Elut Certify II 500mg 6ml 30u. Varian	SA2500-06T	ExtraBond® SA8-2 500mg 6ml, 30u. Scharlau
01210-2093	Bond Elut Certify 500mg 6ml 30u. Varian	DRG500-06T	ExtraBond® Drug 500mg 6ml, 30u. Scharlau
01210-2144	Bond Elut SAX 500mg 6ml, 30u. Varian	SAX500-06T	ExtraBond® SAX 500mg 6ml, 30u. Scharlau
01210-2145	Bond Elut CERTIFY 200mg 3ml 50u. Varian	DRG200-03L	ExtraBond® Drug 200mg 3ml, 50u. Scharlau
01210-5032	Bond Elut PCB 1gml, 50u. Varian	PCB01G-06L	ExtraBond® PCB 1g 6ml, 50u. Scharlau
01210-8206	Bond Elut PLEXA PCX 200mg 6ml 30u. Varian	ECX200-06T	ExtraBond® ECX SPE 40um 200mg 6ml, 30u. Scharlau
01210-8301	Bond Elut PLEXA PCX 30mg 1ml 100u. Varian	ECX030-01C	ExtraBond® ECX SPE 40um 30mg 1ml, 100u. Scharlau
01210-8603	Bond Elut PLEXA PCX 60mg 3ml 50u. Varian	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
01210-9206	Bond Elut PLEXA 200mg 6ml 30u. Varian	EBH200-06T	ExtraBond® EBH SPE 40um 200mg 6ml, 30u. Scharlau
01210-9301	Bond Elut PLEXA 30mg 1ml 100u. Varian	EBH030-01C	ExtraBond® EBH SPE 40um 30mg 1ml, 100u. Scharlau
01210-9603	Bond Elut PLEXA 60mg 3ml 50u. Varian	EBH060-03L	ExtraBond® EBH SPE 40um 60mg 3ml, 50u. Scharlau
01211-3002	Bond Elut C8 100mg 10ml, 50u. Varian	C8E100-15L	ExtraBond® C8 100mg LR, 50u. Scharlau
01211-3016	Bond Elut DEA 100mg 10ml, 50u. Varian	DEA100-15L	ExtraBond® DEA 100mg LR, 50u. Scharlau
01211-3027	Bond Elut C18 500mg 10ml, 50u. Varian	C18500-10L	ExtraBond® C18 500mg LR, 50u. Scharlau
01211-3036	Bond Elut Si 500mg 10ml, 50u. Varian	SIL500-15L	ExtraBond® Si 500mg LR, 50u. Scharlau
01211-3038	Bond Elut PRS 500mg 10ml, 50u. Varian	PRS500-10L	ExtraBond® PRS 500mg LR, 30u. Scharlau
01211-3040	Bond Elut NH2 500mg 10ml, 50u. Varian	NH2500-15L	ExtraBond® NH2 500mg LR, 50u. Scharlau
01211-3050	Bond Elut LRC Certify 130mg 50u. Varian	DRG130-10L	ExtraBond® Drug 130mg LR, 50u. Scharlau
01211-3051	Bond Elut LRC Certify II 200mg 50u. Varian	SA2200-10L	ExtraBond® SA8-2 200mg LR, 50u. Scharlau
01211-3052	Bond Elut LRC Certify 300mg 50u. Varian	DRG300-10L	ExtraBond® Drug 300mg LR, 50u. Scharlau
01213-1001	Adapter -1 3 & 6ml, 15u. Varian	ADAPTS00-E	Top adapter for 1,3 and 6ml, 15u. ExtraBond®
01213-1003	Adapter - 12ml 20ml & LRC, 10u. Varian	ADAPTL00-S	Top adapter for LR, 12, 20 and 60ml, 6u. ExtraBond®
01213-1007	Reservoir-1ml capacidad, 100u. Varian	EMPTY0-01C	Empty SPE tube 1ml ExtraBond® 100u. Scharlau
01213-1008	Reservoir-4ml capacidad, 100u. Varian	EMPTY0-03C	Empty SPE tube 3ml ExtraBond® 100u. Scharlau
01213-1009	Reservoir-8ml capacidad, 100u. Varian	EMPTY0-06C	Empty SPE tube 6ml ExtraBond® 100u. Scharlau
01213-1010	Reservoir-15ml capacidad, 100u. Varian	EMPTY0-12C	Empty SPE tube 12ml ExtraBond® 100u. Scharlau
01213-1011	Reservoir-25ml capacidad, 100u. Varian	EMPTY0-20C	Empty SPE tube 20ml ExtraBond® 100u. Scharlau
01213-1012	Reservoir-75ml capacidad, 100u. Varian	EMPTY0-60C	Empty SPE tube 60ml ExtraBond® 100u. Scharlau
01213-1013	Reservoir-2 frits 1ml, 100u. Varian	EMP2FR-01C	Empty SPE tube 1ml with 2 frits ExtraBond® 100u. Scharlau
01213-1014	Reservoir-2 frits 4ml, 100u. Varian	EMP2FR-03C	Empty SPE tube 3ml with 2 frits ExtraBond® 100u. Scharlau
01213-1015	Reservoir-1 frit thick 6ml, 100u. Varian	EMP2FR-06C	Empty SPE tube 6ml with 2 frits ExtraBond® 100u. Scharlau
01213-1016	Reservoir-2 frits 15ml, 100u. Varian	EMP2FR-12C	Empty SPE tube 12ml 2 frits 100u. ExtraBond®
01213-1017	Reservoir-2 frits 25ml, 100u. Varian	EMP2FR-20C	Empty SPE tube 20ml with 2 frits ExtraBond® 100u. Scharlau
01213-1018	Reservoir-2 frits 75ml, 100u. Varian	EMP2FR-60C	Empty SPE tube 60ml with 2 frits ExtraBond® 100u. Scharlau
01213-1019	Frits 1ml, 100u. Varian	FRITPE-01C	Frit 20µm PE 1ml ExtraBond® 100u. Scharlau
01213-1020	Frits-4ml 3/8, 100u. Varian	FRITPE-03C	Frit 20µm PE 3ml ExtraBond® 100u. Scharlau

Alternative parts are based on a direct technical comparison. Part number alternatives are based upon closest pack quantity. Inclusion of parts is no guarantee of identical performance.

## Cross references: Agilent (Varian) (continuation)

Agilent (Varian) Art. No.	Varian Description	Scharlau Art. No.	Scharlau Description
01213-1021	Frits-8ml 1 2, 100u. Varian	FRITPE-06C	Frit 20µm PE 6ml ExtraBond® 100u. Scharlau
01213-1022	Frits-15ml 5 8, 100u. Varian	FRITPE-12C	Frit 20µm PE 12ml ExtraBond® 100u. Scharlau
01213-1023	Frits-20ml, 100u. Varian	FRITPE-20C	Frit 20µm PE 20ml ExtraBond® 100u. Scharlau
01213-1024	Frits-60ml, 100u. Varian	FRITPE-60L	Frit 20µm PE 60ml ExtraBond® 100u. Scharlau
01213-1115	Reservoir-2 frit 6ml, 100u. Varian	EMP2FR-06C	Empty SPE tube 6ml with 2 frits ExtraBond® 100u. Scharlau
01219-8003	Chem Elut 3ml, 100u. Varian	LLE-03C000	ExtraBond® LLE 3ml, 100u. Scharlau
01219-8007	Chem Elut 10ml, 100u. Varian	LLE-10C000	ExtraBond® LLE 10ml, 100u. Scharlau
01219-8008	Chem Elut 20ml, 100u. Varian	LLE-20C000	ExtraBond® LLE 20ml, 100u. Scharlau
01221-3012	BONDESIL-C18, 40UM, 100GM	000C18100G	ExtraBond® Bulk C18 100g Scharlau
01221-3021	BONDESIL-NH2, 40UM, 100GM	000NH2100G	ExtraBond® Bulk NH2 100g Scharlau
01221-3024	BONDESIL-PSA, 40UM, 100GM	000PSA100G	ExtraBond® Bulk PSA 100g Scharlau
01221-3076	BONDESIL-AL-N, 100GM	000ALN100G	ExtraBond® Bulk AL-N 100g Scharlau
01221-4013	Florisil 100g Varian	000FLO100G	ExtraBond® Bulk FL 100g Scharlau
01223-4004	SPS 24 for tubes 16x100mm, u. Varian	EXTRAVAC20	Vacuum Manifold ExtraVac 20 ExtraBond®
01223-4103	VacElut 20 for tubes 16x100, u. Varian	EXTRAVAC20	Vacuum Manifold ExtraVac 20 ExtraBond®
01223-4520	Luer stop cock valves for VacElut 20 20u. Varian	STOPCOCKVA	Luer stop-cock valves ExtraBond® 12u. Scharlau
01225-6001	Mega Bond Elut C18 1g 6ml, 30u. Varian	C1801G-06T	ExtraBond® C18 1g 6ml, 30u. Scharlau
01225-6008	Mega Bond Elut Si 1g 6ml, 30u. Varian	SIL01G-06T	ExtraBond® Si 1g 6ml, 30u. Scharlau
01225-6010	Mega Bond Elut PRS 1g 6ml, 30u. Varian	PRS01G-06L	ExtraBond® PRS 1g 6ml, 30u. Scharlau
01225-6011	Mega Bond Elut SCX 1g 6ml, 30u. Varian	SCX01G-06T	ExtraBond® SCX 1g 6ml, 30u. Scharlau
01225-6012	Mega Bond Elut NH2 1g 6ml, 30u. Varian	NH201G-06T	ExtraBond® NH2 1g 6ml, 30u. Scharlau
01225-6013	Mega Bond Elut SAX 1g 6ml, 30u. Varian	SAX01G-06T	ExtraBond® SAX 1g 6ml, 30u. Scharlau
01225-6014	Mega Bond Elut FL 1g 6ml, 30u. Varian	FLO01G-06T	ExtraBond® FL 1g 6ml, 30u. Scharlau
01225-6015	Mega Bond Elut C18 2g 12ml, 20u. Varian	C1802G-12A	ExtraBond® C18 2g 12ml, 20u. Scharlau
01225-6018	Mega Bond Elut Si 2g 12ml, 20u. Varian	SIL02G-12A	ExtraBond® Si 2g 12ml, 20u. Scharlau
01225-6022	Mega Bond Elut FL 2g 12ml, 20u. Varian	FLO02G-12A	ExtraBond® FL 2g 12ml, 20u. Scharlau
01225-6023	Mega Bond Elut C18 5g 20ml, 20u. Varian	C1805G-20A	ExtraBond® C18 5g 20ml, 20u. Scharlau
01225-6026	Mega Bond Elut Si 5g 20ml, 20u. Varian	SIL05G-20A	ExtraBond® Si 5g 20ml, 20u. Scharlau
01225-6027	Mega Bond Elut SCX 5g 20ml, 20u. Varian	SCX05G-20A	ExtraBond® SCX 5g 20ml, 20u. Scharlau
01225-6031	Mega Bond Elut C18 10g 60ml, 16u. Varian	C1810G-60B	ExtraBond® C18 10g 60ml, 16u. Scharlau
01225-6045	Mega Bond Elut NH2 500mg 6ml, 30u. Varian	NH2500-06T	ExtraBond® NH2 500mg 6ml, 30u. Scharlau
01225-8506	Bond Elut PLEXA PCX 500mg 6ml 30u. Varian	ECX500-06T	ExtraBond® ECX SPE 40um 500mg 6ml, 30u. Scharlau
01225-9506	Mega Bond Elut PLEXA 500mg 6ml 30u. Varian	EBH500-06T	ExtraBond® EBH SPE 500mg 6ml, 30u. Scharlau
05982-5056	QuEChERS Dispersive, EN Tubes, 50u. Agilent	QUDISENAK2	QuEChERS Dispersive Kit EN2A ExtraBond®
05982-5156	QuEChERS Dispersive, EN (fatty/waxy) Tubes, 50u. Agilent	QUDISENCK2	QuEChERS Dispersive Kit EN2C ExtraBond®
05982-6650	QuEChERS Extraction Packets, EN, 50u. Agilent	QUEXTENAK1	QuEChERS Extractive Kit EN1A ExtraBond®
1216-2028B	Bond Elut Jr C18 500mg, 100u. Varian	C18500-00L	ExtraBond® C18 500mg, 50u. Scharlau
1216-2037B	Bond Elut Jr Si 500mg, 100u. Varian	SIL500-00L	ExtraBond® Si 500mg, 50u. Scharlau
1216-6001B	Bond Elut Jr C18 1000mg, 100u. Varian	C181000-0L	ExtraBond® C18 1000mg, 50u. Scharlau
1216-6008B	Bond Elut Jr Si 1000mg, 100u. Varian	SIL1000-0L	ExtraBond® Si 1000mg, 50u. Scharlau

Alternative parts are based on a direct technical comparison. Part number alternatives are based upon closest pack quantity. Inclusion of parts is no guarantee of identical performance.

## Cross references: Waters

Waters Art. No.	Waters Description	Scharlau Art. No.	Scharlau Description
176001903	DiSQuE Dispersive Sample Preparation Kit, 100u.	QUEXTENAK1 + QUDISENAK2	QuEChERS Extractive Kit EN1A ExtraBond® QuEChERS Dispersive Kit EN2A ExtraBond®
186000115	Oasis HLB Extraction Cartridge 60µm 500mg 6ml; Box of 30	EBH500-06T	ExtraBond® EBH SPE 500mg 6ml, 30u. Scharlau
186000116	Oasis HLB Extraction Cartridge 60µm 500mg 12ml; Box of 20	EBH500-06T	ExtraBond® EBH SPE 500mg 6ml, 30u. Scharlau
186000252	Oasis MCX Extraction Cartridge 30µm 30mg 1ml; Box of 100	ECX030-01C	ExtraBond® ECX SPE 40um 30mg 1ml, 100u. Scharlau
186000253	Oasis MCX Extraction Cartridge 60µm 60mg 3ml; Box of 100	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
186000254	Oasis MCX Extraction Cartridge 30µm 60mg 3ml; Box of 100	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
186000255	Oasis MCX Extraction Cartridge 60µm 150mg 6ml; Box of 30	ECX200-06T	ExtraBond® ECX SPE 40um 200mg 6ml, 30u. Scharlau
186000256	Oasis MCX Extraction Cartridge 30µm 150mg 6ml; Box of 30	ECX200-06T	ExtraBond® ECX SPE 40um 200mg 6ml, 30u. Scharlau
186000261	Oasis MCX Extraction Cartridge Vac RC 30µm 60mg; Box of 50	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
186000308	Sep-Pak C18 Vac Type 50mg 1ml; Box of 2000	C18050-01C	ExtraBond® C18 50mg 1ml, 100u. Scharlau
186000366	Oasis MAX Extraction Cartridge 30µm 30mg 1ml; Box of 100	EAX030-01C	ExtraBond® EAX SPE 40um 30mg 1ml, 100u. Scharlau
186000367	Oasis MAX Extraction Cartridge 30µm 60mg 3ml; Box of 100	EAX060-03L	ExtraBond® EAX SPE 40um 60mg 3ml, 50u. Scharlau
186000368	Oasis MAX Extraction Cartridge 60µm 60mg 3ml; Box of 100	EAX060-03L	ExtraBond® EAX SPE 40um 60mg 3ml, 50u. Scharlau
186000369	Oasis MAX Extraction Cartridge 30µm 150mg 6ml; Box of 30	EAX200-06T	ExtraBond® EAX SPE 40um 200mg 6ml, 30u. Scharlau
186000370	Oasis MAX Extraction Cartridge 60µm 150mg 6ml; Box of 30	EAX200-06T	ExtraBond® EAX SPE 40um 200mg 6ml, 30u. Scharlau
186000371	Oasis MAX Extraction Cartridge Vac RC 30µm 60mg; Box of 50	EAX060-03L	ExtraBond® EAX SPE 40um 60mg 3ml, 50u. Scharlau
186000372	Oasis MAX Extraction Cartridge Vac RC 30µm 30mg; Box of 50	EAX030-01C	ExtraBond® EAX SPE 40um 30mg 1ml, 100u. Scharlau
186000378	Oasis MAX Extraction Cartridge Vac RC 60µm 60mg; Box of 50	EAX060-03L	ExtraBond® EAX SPE 40um 60mg 3ml, 50u. Scharlau
186000380	Oasis MCX Extraction Cartridge Vac RC 60µm 60mg; Box of 50	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
186000381	Oasis HLB Extraction Cartridge Vac RC 30µm 60mg; Box of 50	EBH060-03L	ExtraBond® EBH SPE 40um 60mg 3ml, 50u. Scharlau
186000382	Oasis HLB Extraction Cartridge Vac RC 30µm 30mg; Box of 50	EBH030-01C	ExtraBond® EBH SPE 40um 30mg 1ml, 100u. Scharlau
186000383	Oasis HLB Extraction Cartridge 30µm 10mg 1ml; Box of 100	EBH030-01C	ExtraBond® EBH SPE 40um 30mg 1ml, 100u. Scharlau
186000776	Oasis MCX Extraction Cartridge 60µm 500mg 6ml; Box of 30	ECX500-06T	ExtraBond® ECX SPE 40um 500mg 6ml, 30u. Scharlau
186000782	Oasis MCX Extraction Cartridge 60µm 30mg 1ml; Box of 100	ECX030-01C	ExtraBond® ECX SPE 40um 30mg 1ml, 100u. Scharlau
186000865	Oasis MAX Extraction Cartridge 60µm 500mg 6ml; Box of 30	EAX500-06T	ExtraBond® EAX SPE 40um 500mg 6ml, 30u. Scharlau
186001216	Oasis MCX Extraction Cartridge flangeless 400mg 6ml; Box of 500	ECX200-06T	ExtraBond® ECX SPE 40um 200mg 6ml, 30u. Scharlau
186001879	Oasis HLB Extraction Cartridge flangeless 30mg 1ml; Box of 100	EBH030-01C	ExtraBond® EBH SPE 40um 30mg 1ml, 100u. Scharlau
186001880	Oasis HLB Extraction Cartridge flangeless 60mg 3ml; Box of 100	EBH060-03L	ExtraBond® EBH SPE 40um 60mg 3ml, 50u. Scharlau
186001881	Oasis MCX Extraction Cartridge flangeless 30mg 1ml; Box of 100	ECX030-01C	ExtraBond® ECX SPE 40um 30mg 1ml, 100u. Scharlau
186001882	Oasis MCX Extraction Cartridge flangeless 60mg 3ml; Box of 100	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
186001883	Oasis MAX Extraction Cartridge flangeless 30mg 1ml; Box of 100	EAX030-01C	ExtraBond® EAX SPE 40um 30mg 1ml, 100u. Scharlau
186001884	Oasis MAX Extraction Cartridge flangeless 60mg 3ml; Box of 100	EAX060-03L	ExtraBond® EAX SPE 40um 60mg 3ml, 50u. Scharlau
186002115	Sep-Pak C18 Vac Type 500mg 3ml; Box of 2000	C18500-03L	ExtraBond® C18 500mg 3ml, 50u. Scharlau
186002489	Oasis WAX Extraction Cartridge 30µm 30mg 1ml; Box of 100	EAX030-01C	ExtraBond® EAX SPE 40um 30mg 1ml, 100u. Scharlau
186002490	Oasis WAX Extraction Cartridge 30µm 60mg 3ml; Box of 100	EAX060-03L	ExtraBond® EAX SPE 40um 60mg 3ml, 50u. Scharlau
186002491	Oasis WAX Extraction Cartridge 60µm 30mg 1ml; Box of 100	EAX030-01C	ExtraBond® EAX SPE 40um 30mg 1ml, 100u. Scharlau
186002492	Oasis WAX Extraction Cartridge 60µm 60mg 3ml; Box of 100	EAX060-03L	ExtraBond® EAX SPE 40um 60mg 3ml, 50u. Scharlau
186002493	Oasis WAX Extraction Cartridge 30µm 150mg 6ml; Box of 30	EAX200-06T	ExtraBond® EAX SPE 40um 200mg 6ml, 30u. Scharlau
186002494	Oasis WCX Extraction Cartridge 30µm 30mg 1ml; Box of 100	ECX030-01C	ExtraBond® ECX SPE 40um 30mg 1ml, 100u. Scharlau
186002495	Oasis WCX Extraction Cartridge 30µm 60mg 3ml; Box of 100	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
186002496	Oasis WCX Extraction Cartridge 60µm 30mg 1ml; Box of 100	ECX030-01C	ExtraBond® ECX SPE 40um 30mg 1ml, 100u. Scharlau
186002497	Oasis WCX Extraction Cartridge 60µm 60mg 3ml; Box of 100	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
186002498	Oasis WCX Extraction Cartridge 30µm 150mg 6ml; Box of 30	ECX200-06T	ExtraBond® ECX SPE 40um 200mg 6ml, 30u. Scharlau
186003365	Oasis HLB Extraction Cartridge 30µm 150mg 6ml; Box of 100	EBH200-06T	ExtraBond® EBH SPE 40um 200mg 6ml, 30u. Scharlau
186003379	Oasis HLB Extraction Cartridge 60µm 150mg 6ml; Box of 100	EBH060-03L	ExtraBond® EBH SPE 40um 60mg 3ml, 50u. Scharlau
186003518	Oasis WCX Extraction Cartridge Plus Type 60µm 225mg; Box of 50	ECX200-06T	ExtraBond® ECX SPE 40um 200mg 6ml, 30u. Scharlau
186003519	Oasis WAX Extraction Cartridge Plus Type 60µm 225mg; Box of 50	EAX200-06T	ExtraBond® EAX SPE 40um 200mg 6ml, 30u. Scharlau
186003828	SEPPAK Vac C18 6cc 1G 300/Box	C1801G-06T	ExtraBond® C18 1g 6ml, 30u. Scharlau
186003849	Oasis HLB Extraction Cartridge 60µm 400mg 3ml; Box of 30	EBH500-06T	ExtraBond® EBH SPE 500mg 6ml, 30u. Scharlau
186003852	Oasis HLB Extraction Cartridge flangeless 60µm 400mg 3ml; Box of 30	EBH500-06T	ExtraBond® EBH SPE 500mg 6ml, 30u. Scharlau
186003974	SEP-PAK NH2 3CC/500mg Cart 500/BX	NH2500-03L	ExtraBond® NH2 500mg 3ml, 50u. Scharlau

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## Cross references: Waters (continuation)

Waters Art. No.	Waters Description	Scharlau Art. No.	Scharlau Description
186004134	Oasis HLB 60µm 3cc/540mg 100/box	EBH500-06T	ExtraBond® EBH SPE 500mg 6ml, 30u. Scharlau
186004833	DiSQuE 15ml tube Dispersive Kit, 100u.	QUDISENAK2	QuEChERS Dispersive Kit EN2A ExtraBond®
186004834	DiSQuE Dispersive Sample Preparation Kit, 100u.	QUDISENCK2	QuEChERS Dispersive Kit EN2C ExtraBond®
186004837	DiSQuE 50ml tube Extraction Kit, 100u.	QUEXTENAK1	QuEChERS Extractive Kit EN1A ExtraBond®
WAT020805	Sep-Pak C18 Vac Type 500mg 3ml; Box of 50	C18500-03L	ExtraBond® C18 500mg 3ml, 50u. Scharlau
WAT020810	Sep-Pak Silica Vac Type 500mg 3ml; Box of 50	SIL500-03L	ExtraBond® Si 500mg 3ml, 50u. Scharlau
WAT020815	Sep-Pak Florisil Vac Type 500mg 3ml; Box of 50	FLO500-03L	ExtraBond® FL 500mg 3ml, 50u. Scharlau
WAT020840	Sep-Pak NH2 Vac Type 500mg 3ml; Box of 50	NH2500-03L	ExtraBond® NH2 500mg 3ml, 50u. Scharlau
WAT020845	Sep-Pak Diol Vac Type 500mg 3ml; Box of 50	20H500-03L	ExtraBond® 20H 500mg 3ml, 50u. Scharlau
WAT020850	Sep-Pak Accell Plus QMA Vac Type 500mg 3ml; Box of 50	SAX500-03L	ExtraBond® SAX 500mg 3ml, 50u. Scharlau
WAT023590	Sep-Pak C18 Vac Type 100mg 1ml; Box of 100	C18100-01C	ExtraBond® C18 100mg 1ml, 100u. Scharlau
WAT023595	Sep-Pack Silica VacType 100g 1ml, 100 u.	SIL100-01C	ExtraBond® SIL 100g 1ml, 100u. Scharlau
WAT023620	Sep-Pak Accell Plus QMA Vac Type 100mg 1ml; Box of 100	SAX100-01C	ExtraBond® SAX 100mg 1ml, 100u. Scharlau
WAT023635	Sep-Pak C18 Environmental Long Body Type; Box of 50	C181000-0L	ExtraBond® C18 1000mg, 50u. Scharlau
WAT036580	Sep-Pak Silica Plus Type; Box of 2000	SIL1000-0L	ExtraBond® Si 1000mg, 50u. Scharlau
WAT036780	Sep-Pack C8 VacType 500g 3ml, 50 u.	C8E500-03L	ExtraBond® C8 500g 3ml, 50u. Scharlau
WAT036905	Sep-Pak C18 Vac Type 1g 6ml; Box of 30	C1801G-06T	ExtraBond® C18 1g 6ml, 30u. Scharlau
WAT036910	Sep-Pak Silica Vac Type 1g 6ml; Box of 30	SIL01G-06T	ExtraBond® Si 1g 6ml, 30u. Scharlau
WAT036915	Sep-Pak C18 Vac Type 2g 12ml; Box of 20	C1802G-12A	ExtraBond® C18 2g 12ml, 20u. Scharlau
WAT036920	Sep-Pak Silica Vac Type 2g 12ml; Box of 30	SIL02G-12A	ExtraBond® Si 2g 12ml, 20u. Scharlau
WAT036925	Sep-Pack C18 VacType 5g 20ml, 20 u.	C1805G-20A	ExtraBond® C18 5g 20ml, 20u. Scharlau
WAT036930	Sep-Pak Silica Vac Type 5g 20ml; Box of 20	SIL05G-20A	ExtraBond® Si 5g 20ml, 20u. Scharlau
WAT036945	Sep-Pak RC C18 Vac Type 500mg 26ml; Box of 50	C18500-10L	ExtraBond® C18 500mg 10ml, 50u. Scharlau
WAT036950	Sep-Pak RC Silica Vac Type 500mg 26ml; Box of 50	SIL500-15L	ExtraBond® Si 500mg 10ml, 50u. Scharlau
WAT043385	Sep-Pak Florisil Vac Type 2g 12ml; Box of 30	FLO02G-12A	ExtraBond® FL 2g 12ml, 20u. Scharlau
WAT043390	Sep-Pak Florisil Vac Type 1g 6ml; Box of 30	FLO01G-06T	ExtraBond® FL 1g 6ml, 30u. Scharlau
WAT043395	Sep-Pak C18 Vac Type 500mg 6ml; Box of 30	C18500-06T	ExtraBond® C18 500mg 6ml, 30u. Scharlau
WAT043415	Sep-Pak RC C8 Vac Type 100mg 26ml; Box of 50	C8E100-15L	ExtraBond® C8 100mg 10ml, 50u. Scharlau
WAT051900	Sep-Pak Silica Classic Type; Box of 50	SIL1000-0L	ExtraBond® Si 1000mg, 50u. Scharlau
WAT051910	Sep-Pak C18 Classic Type; Box of 50	C18500-00L	ExtraBond® C18 500mg, 50u. Scharlau
WAT052710	Sep-Pak tC2 Vac Type 100mg 1ml; Box of 100	C2E100-01C	ExtraBond® C2 100mg 1ml, 100u. Scharlau
WAT054394	Sep-Pak Silica Vac Type 500mg 3ml; Box of 1000	SIL500-03L	ExtraBond® Si 500mg 3ml, 50u. Scharlau
WAT054395	Sep-Pak C18 Vac Type 500mg 3ml; Box of 1000	C18500-03L	ExtraBond® C18 500mg 3ml, 50u. Scharlau
WAT054515	Sep-Pak RC NH2 Vac Type 500mg 26ml; Box of 50	NH2500-15L	ExtraBond® NH2 500mg 10ml, 50u. Scharlau
WAT054550	Sep-Pak Accell Plus QMA Vac Type 500mg 6ml; Box of 30	SAX500-06T	ExtraBond® SAX 500mg 6ml, 30u. Scharlau
WAT054560	Sep-Pak NH2 Vac Type 500mg 6ml; Box of 30	NH2500-06T	ExtraBond® NH2 500mg 6ml, 30u. Scharlau
WAT054595	Sep-Pak Accell Plus QMA Vac Type 1g 6ml; Box of 30	SAX01G-06T	ExtraBond® SAX 1g 6ml, 30u. Scharlau
WAT054605	Sep-Pak NH2 Vac Type 1g 6ml; Box of 30	NH201G-06T	ExtraBond® NH2 1g 6ml, 30u. Scharlau
WAT054945	Sep-Pak C18 Vac Type 200mg 3ml; Box of 50	C18200-03L	ExtraBond® C18 200mg 3ml, 50u. Scharlau
WAT054955	Sep-Pak C18 Vac Type 50mg 1ml; Box of 100	C18050-01C	ExtraBond® C18 50mg 1ml, 100u. Scharlau
WAT054980	Sep-Pack Silica VacType 50mg 1ml, 100 u.	SIL050-01C	ExtraBond® SIL 50mg 1ml, 100u. Scharlau
WAT091139	Sep-Pak C18 Classic Type; Box of 2000	C18500-00L	ExtraBond® C18 500mg, 50u. Scharlau
WAT091197	Sep-Pak Silica Classic Type; Box of 2000	SIL1000-0L	ExtraBond® Si 1000mg, 50u. Scharlau
WAT094225	Oasis HLB Extraction Cartridge 30µm 30mg 1ml; Box of 100	EBH030-01C	ExtraBond® EBH SPE 40µm 30mg 1ml, 100u. Scharlau
WAT094226	Oasis HLB Extraction Cartridge 30µm 60mg 3ml; Box of 100	EBH060-03L	ExtraBond® EBH SPE 40µm 60mg 3ml, 50u. Scharlau
WAT200606	Extraction Manifold, 20 pos, 13x75 mm tubes	EXTRAVAC20	Vacuum Manifold ExtraVac 20 ExtraBond®
WAT200607	Extraction Manifold, 20 pos, 13x100mm tubes	EXTRAVAC20	Vacuum Manifold ExtraVac 20 ExtraBond®
WAT200608	Extraction Manifold, 20pos, 16x75mm tubes	EXTRAVAC20	Vacuum Manifold ExtraVac 20 ExtraBond®
WAT200609	Extraction Manifold, 20pos, 16x100mm tubes	EXTRAVAC20	Vacuum Manifold ExtraVac 20 ExtraBond®

Alternative parts are based on a direct technical comparison. Part number alternatives are based upon closest pack quantity. Inclusion of parts is no guarantee of identical performance.



## Cross references: Phenomenex

Phenomenex Art. No.	Phenomenex Description	Scharlau Art. No.	Scharlau Description
8B-S001-DAK	Strata C18-E 50mg/1ml, tubes, 100u.	C18050-01C	ExtraBond® C18 50mg 1ml, 100u. Scharlau
8B-S001-EAK	Strata C18-E 100mg/1ml, 100u.	C18100-01C	ExtraBond® C18 100mg 1ml, 100u. Scharlau
8B-S001-FBJ	Strata C18-E 200mg/3ml, tubes, 50u.	C18200-03L	ExtraBond® C18 200mg 3ml, 50u. Scharlau
8B-S001-HBJ	Strata C18-E 500mg/3ml, tubes, 50u.	C18500-03L	ExtraBond® C18 500mg 3ml, 50u. Scharlau
8B-S001-HCH	Strata C18-E 500mg/6ml, tubes, 30u.	C18500-06T	ExtraBond® C18 500mg 6ml, 30u. Scharlau
8B-S001-HDG	Strata C18-E 500mg/12ml, Giga tubes, 20u.	C18500-10L	ExtraBond® C18 500mg 10ml, 50u. Scharlau
8B-S001-JCH	Strata C18-E 1g/6ml, tubes, 30u.	C1801G-06T	ExtraBond® C18 1g 6ml, 30u. Scharlau
8B-S001-KDG	Strata C18-E 2g/12ml, Giga tubes 20u.	C1802G-12A	ExtraBond® C18 2g 12ml, 20u. Scharlau
8B-S001-LEG	Strata C18-E 5g 20ml, tubes, 20u.	C1805G-20A	ExtraBond® C18 5g 20ml, 20u. Scharlau
8B-S001-MFF	Strata C18-E 10g 60ml, tubes, 16u.	C1810G-60B	ExtraBond® C18 10g 60ml, 16u. Scharlau
8B-S005-EAK	Strata C8 100mg/1ml 100u.	C8E100-15L	ExtraBond® C8 100mg 10ml, 50u. Scharlau
8B-S005-FBJ	Strata C8 200mg/3ml 50u.	C8E200-15L	ExtraBond® C8 200mg LR 50u. Scharlau
8B-S005-HBJ	Strata C8 500mg/3ml, tubes, 50u.	C8E500-03L	ExtraBond® C8 500mg 3ml 50u. Scharlau
8B-S008-EAK	Strata SAX 100mg 1ml, 100u.	SAX100-01C	ExtraBond® SAX 100mg 1ml, 100u. Scharlau
8B-S008-HBJ	Strata SAX 500mg 3ml, 50u.	SAX500-03L	ExtraBond® SAX 500mg 3ml, 50u. Scharlau
8B-S008-HCH	Strata SAX 500mg 6ml, 30u.	SAX500-06T	ExtraBond® SAX 500mg 6ml, 30u. Scharlau
8B-S008-JCH	Strata SAX 1g 6ml, 30u.	SAX01G-06T	ExtraBond® SAX 1g 6ml, 30u. Scharlau
8B-S009-HBJ	Strata NH2 500mg 3ml, 50u.	NH2500-03L	ExtraBond® NH2 500mg 3ml, 50u. Scharlau
8B-S009-HCH	Strata NH2 500mg 6ml, 30u.	NH2500-06T	ExtraBond® NH2 500mg 6ml, 30u. Scharlau
8B-S009-HDG	Strata NH2 500mg 12ml, 20u.	NH2500-15L	ExtraBond® NH2 500mg 10ml, 50u. Scharlau
8B-S009-JCH	Strata NH2 1g 6ml, 30u.	NH201G-06T	ExtraBond® NH2 1g 6ml, 30u. Scharlau
8B-S010-HBJ	Strata SCX 500mg 3ml, 50u.	SCX500-03L	ExtraBond® SCX 500mg 3ml, 50u. Scharlau
8B-S010-JCH	Strata SCX 1g 6ml, 30u.	SCX01G-06T	ExtraBond® SCX 1g 6ml, 30u. Scharlau
8B-S010-LEG	Strata SCX 5g 20ml, 20u.	SCX05G-20A	ExtraBond® SCX 5g 20ml, 20u. Scharlau
8B-S012-EAK	Strata Si 100mg 1ml, tubes, 100u.	SIL100-01C	ExtraBond® Si 100mg 1ml, 100u. Scharlau
8B-S012-HBJ	Strata Si 500mg 3ml, 50u.	SIL500-03L	ExtraBond® Si 500mg 3ml, 50u. Scharlau
8B-S012-HDG	Strata Si 500mg 12ml, 20u.	SIL500-15L	ExtraBond® Si 500mg 10ml, 50u. Scharlau
8B-S012-JCH	Strata Si 1g 6ml, 30u.	SIL01G-06T	ExtraBond® Si 1g 6ml, 30u. Scharlau
8B-S012-KDG	Strata Si 2g 12ml, 20u.	SIL02G-12A	ExtraBond® Si 2g 12ml, 20u. Scharlau
8B-S012-LEG	Strata Si 5g 20ml, 20u.	SIL05G-20A	ExtraBond® Si 5g 20ml, 20u. Scharlau
8B-S013-HBJ	Strata FL 500mg 3ml, 50u.	FLO500-03L	ExtraBond® FL 500mg 3ml, 50u. Scharlau
8B-S013-JCH	Strata FL 1g 6ml, 30u.	FLO01G-06T	ExtraBond® FL 1g 6ml, 30u. Scharlau
8B-S013-KDG	Strata FL-PR Florisil (170µm, 80Å) 2g/12ml, Giga tubes, 20u.	FLO02G-12A	ExtraBond® FL 2g 12ml, 20u. Scharlau
8B-S016-FBJ	Strata Screen-C 200mg/3ml, tubes, 50u.	DRG200-03L	ExtraBond® Drug 200mg 3ml, 50u. Scharlau
8B-S016-HCH	Strata Screen-C 500mg/6ml, tubes, 30u.	DRG500-06T	ExtraBond® Drug 500mg 6ml, 30u. Scharlau
8B-S016-RDN	Strata Screen-C (55 µm, 70Å) 300mg/12ml, Giga tubes 80/Pk	DRG300-10L	ExtraBond® Drug 300mg LR, 50u. Scharlau
8B-S016-SCL	Strata Screen-C (55 µm, 70Å) 150mg/6ml, tubes	DRG130-10L	ExtraBond® Drug 130mg LR, 50u. Scharlau
8B-S019-FCH	Strata Screen-A 200mg/6ml, tubes, 30u.	SA2200-10L	ExtraBond® SA8-2 200mg LR, 50u. Scharlau
8B-S019-HCH	Strata Screen-A 500mg/6ml, tubes, 30u.	SA2500-06T	ExtraBond® SA8-2 500mg 6ml, 30u. Scharlau
8B-S029-FBJ	Strata™X-C (33µm, 85Å) Polymeric SCX 200mg/3ml, tubes	ECX200-06T	ExtraBond® ECX SPE 40um 200mg 6ml, 30u. Scharlau
8B-S029-FCH	Strata™X-C (33µm, 85Å) Polymeric SCX 200mg/6ml, tubes	ECX200-06T	ExtraBond® ECX SPE 40um 200mg 6ml, 30u. Scharlau
8B-S029-HBJ	Strata™X-C (33µm, 85Å) Polymeric SCX 500mg/3ml, tubes	ECX500-06T	ExtraBond® ECX SPE 40um 500mg 6ml, 30u. Scharlau
8B-S029-HCH	Strata™X-C (33µm, 85Å) Polymeric SCX 500mg/6ml, tubes	ECX500-06T	ExtraBond® ECX SPE 40um 500mg 6ml, 30u. Scharlau
8B-S029-TAK	Strata XC 30mg/1ml, tubes, 100u.	ECX030-01C	ExtraBond® ECX SPE 40um 30mg 1ml, 100u. Scharlau
8B-S029-UBJ	Strata™X-C (33µm, 85Å) Polymeric SCX 60mg/3ml, tubes	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
8B-S035-FBJ	Strata™X-CW (33µm, 85Å) Polymeric WCX 200mg/3ml, tubes	ECX200-06T	ExtraBond® ECX SPE 40um 200mg 6ml, 30u. Scharlau
8B-S035-HBJ	Strata™X-CW (33µm, 85Å) Polymeric WCX 500mg/3ml, tubes	ECX500-06T	ExtraBond® ECX SPE 40um 500mg 6ml, 30u. Scharlau
8B-S035-TAK	Strata™X-CW (33µm, 85Å) Polymeric WCX 30mg/1ml, tubes	ECX030-01C	ExtraBond® ECX SPE 40um 30mg 1ml, 100u. Scharlau
8B-S035-UBJ	Strata™X-CW (33µm, 85Å) Polymeric WCX 60mg/3ml, tubes	ECX060-03L	ExtraBond® ECX SPE 40um 60mg 3ml, 50u. Scharlau
8B-S038-FBJ	Strata™X-AW (33µm, 85Å) Polymeric WAX 200mg/3ml, tubes	EAX200-06T	ExtraBond® EAX SPE 40um 200mg 6ml, 30u. Scharlau
8B-S038-HBJ	Strata™X-AW (33µm, 85Å) Polymeric WAX 500mg/3ml, tubes	EAX500-06T	ExtraBond® EAX SPE 40um 500mg 6ml, 30u. Scharlau
8B-S038-HCH	Strata™X-AW (33µm, 85Å) Polymeric WAX 500mg/6ml, tubes	EAX500-06T	ExtraBond® EAX SPE 40um 500mg 6ml, 30u. Scharlau
8B-S038-UBJ	Strata™X-AW (33µm, 85Å) Polymeric WAX 60mg/3ml, tubes	EAX060-03L	ExtraBond® EAX SPE 40um 60mg 3ml, 50u. Scharlau
8B-S100-FBJ	Strata™X (33µm, 85Å) Polymeric RP 200mg/3ml, tubes	EB2200-06T	ExtraBond® EB2 SPE 40um 200mg 6ml, 30u. Scharlau
8B-S100-FCH	Strata™X (33µm, 85Å) Polymeric RP 200mg/6ml, tubes	EB2200-06T	ExtraBond® EB2 SPE 40um 200mg 6ml, 30u. Scharlau

Alternative parts are based on a direct technical comparison. Part number alternatives are based upon closest pack quantity. Inclusion of parts is no guarantee of identical performance.

## Cross references: Phenomenex (continuation)

Phenomenex Art. No.	Phenomenex Description	Scharlau Art. No.	Scharlau Description
8B-S100-HBJ	Strata <sup>TM</sup> X (33µm, 85Å) Polymeric RP 500mg/3ml, tubes	EB2500-06T	ExtraBond <sup>®</sup> EB2 SPE 500mg 6ml, 30u. Scharlau
8B-S100-HCH	Strata <sup>TM</sup> X (33µm, 85Å) Polymeric RP 500mg/6ml, tubes (30/Box)	EB2500-06T	ExtraBond <sup>®</sup> EB2 SPE 500mg 6ml, 30u. Scharlau
8B-S100-TAK	Strata <sup>TM</sup> X (33µm, 85Å) Polymeric RP 30mg/1ml, tubes	EB2030-01C	ExtraBond <sup>®</sup> EB2 SPE 40um 30mg 1ml, 100u. Scharlau
8B-S100-UAK	Strata <sup>TM</sup> X (33µm, 85Å) Polymeric RP 60mg/1ml, tubes	EB2060-03L	ExtraBond <sup>®</sup> EB2 SPE 40um 60mg 3ml, 50u. Scharlau
8B-S100-UBJ	Strata <sup>TM</sup> X (33µm, 85Å) Polymeric RP 60mg/3ml, tubes	EB2060-03L	ExtraBond <sup>®</sup> EB2 SPE 40um 60mg 3ml, 50u. Scharlau
8B-S123-FBJ	Strata-X-A 33 µm Polymeric Strong Anion 200mg/3ml	EAX200-06T	ExtraBond <sup>®</sup> EAX SPE 40um 200mg 6ml, 30u. Scharlau
8B-S123-FCH	Strata-X-A 33 µm Polymeric Strong Anion 200mg/6ml	EAX200-06T	ExtraBond <sup>®</sup> EAX SPE 40um 200mg 6ml, 30u. Scharlau
8B-S123-HBJ	Strata-X-A 33 µm Polymeric Strong Anion 500mg/3ml	EAX500-06T	ExtraBond <sup>®</sup> EAX SPE 40um 500mg 6ml, 30u. Scharlau
8B-S123-TAK	Strata-X-A 33 µm Polymeric Strong Anion 30 mmg/1ml	EAX030-01C	ExtraBond <sup>®</sup> EAX SPE 40um 30mg 1ml, 100u. Scharlau
8B-S123-UBJ	Strata-X-A 33 µm Polymeric Strong Anion 60mg/3ml	EAX060-03L	ExtraBond <sup>®</sup> EAX SPE 40um 60mg 3ml, 50u. Scharlau





CATCHROM12 (3-2012)



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