Example of publication with Interchim SPE product

Upti-Clean™ CN
Chadi Abbara and all, Laboratoire de Pharmacologie, Service de Pharmacie & Service d'addictologie Hôpital Paul BROUSSE 94800 Villejuif, France ; Journal of Pharmaceutical and Biomedical Analysis 41 (2006) 1011–1016 ; Development and validation of a method for the quantitation of 9tetrahydrocannabinol in human plasma by high performance liquid chromatography after solid-phase extraction.

Upti-Clean™ SI
F. Boudsocq, P. Benaim, Y. Canitrot, M. Knibiehler, F. Ausseil, J. P. Capp, A. Bieth, C. Long, B. David, I. Shevelev, E. Frierich-Heinecken, U. Hubscher, F. Amalric, G. Massiot, J. S. Hoffmann, and C. Cazaux, Equipe Instabilité´ Génétique et Cancer, Institut de Pharmacologie et de Biologie Structurale, Unité´ Mixte Recherche Centre National de la Recherche Scientifique 5089 (F.B., P.B., Y.C., J.P.C., A.B., J.S.H., C.C.), Centre de Recherche en Pharmacologie-Santé´ , Unité´ Mixte Recherche Centre National de la Recherche Scientifique/P. Fabre 2587 (M.K.), Centre de Criblage Pharmacologique, Unité´ Mixte Recherche Centre National de la Recherche Scientifique/P. Fabre 2646 (F.A.), and Chimie des Substances Naturelles Bioactives, Unité´ Mixte Recherche Centre National de la Recherche Scientifique/P. Fabre 2597 (C.L., B.D., G.M.), Institut de Sciences et Technologies du Médicament de Toulouse 3, Toulouse, France; and Institute of Veterinary Biochemistry and Molecular Biology, University of Zurich, Zurich, Switzerland (E.F.-H., U.H.) ; MOLECULAR PHARMACOLOGY Mol Pharmacol 67:1485–1492, 2005 , Modulation of Cellular Response to Cisplatin by a Novel Inhibitor of DNA Polymerase B.

Atoll™ XC
R.Déporte and all, Department of Pharmacokinetic & Department of Biostatistic, Anticancer Centre René Gauducheau 44805 Nantes, France ; Journal of Chromatography B, xxx (2006) xxx–xxx ; High-performance liquid chromatographic assay with UV detection for measurement of dihydrouracil / uracil ratio in plasma.

Upti-Clean™ SI/CN
Roberto Alzaga and all, Environmental Chemistry Department, IIQAB-CSIC, Jordi Girona 18–26, E-08034 Barcelona, Spain ; Journal of Chromatography A, 1025 (2004) 133–138 ; Fast solid-phase extraction–gas chromatography–mass spectrometry procedure for oil fingerprinting Application to the Prestige oil spill.

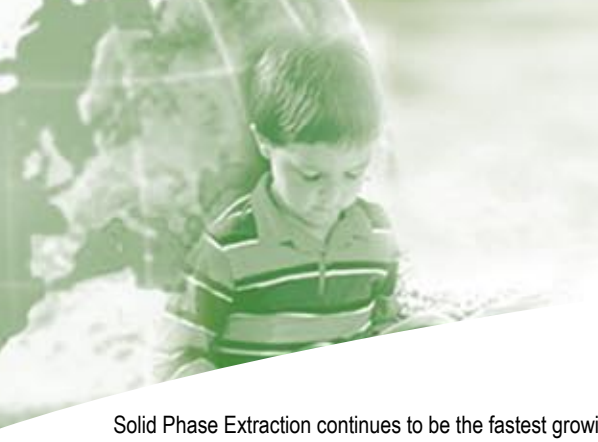
Upti-Clean™ C18U
Sandrine Demanèche and all, Laboratoire de Biochimie et Biophysique des Systèmes Intégrés, Unité Mixte de Recherche CEA-CNRS-Université Joseph Fourier-UMR5092, Laboratoire de Chimie des Protéines, Département de Réponse et Dynamique Cellulaires, CEA-Grenoble, Grenoble, France ; Applied and Environmental Microbiology, 2004 November, p. 6714–6725 ; Identification and Functional Analysis of Two Aromatic-Ring-Hydroxylating Dioxygenases from a Sphingomonas Strain That Degrades Various Polycyclic Aromatic Hydrocarbons.

Upti-Clean™ C18U
Serge Krivobok and all, Laboratoire de Biochimie et Biophysique des Systèmes Intégrés and Laboratoire de Chimie des Protéines, Département de Réponse et Dynamique Cellulaires, CNRS UMR 5092, CEA-Grenoble, 38054 Grenoble Cedex 9, France ; JOURNAL OF BACTERIOLOGY, July 2003, p. 3828–3841; Identification of Pyrene-Induced Proteins in Mycobacterium sp. Strain 6PY1: Evidence for Two Ring-Hydroxylating Dioxygenases.

Atoll™ XC & Upti-Clean™ Florisil
J. Le Faouder, E. Bichon and all, LABERCA, Ecole Nationale Vétérinaire de Nantes, Route de Gachet, Atlanpôle La Chantrerie, BP 50707, 44087 Nantes Cedex 03, France ; Science Direct, Talanta 73 (2007) 710-717, Transfer assessment of fipronil residues from feed to cow milk.

Atoll™ XWP
A.Salvador and all, Université Claude Bernard UMR 5180 69622 Villeurbanne & CEPHAC Europe 86281Saint-Benoit, France ; Chromatographia 2006, 63, 609-615 ; Simultaneous LC-MS-MS Analysis of Capecitabine and its Metabolites (5¢-deoxy-5-fluorocytidine, 5¢-deoxy-5-fluorouridine, 5-fluorouracil) After Off-Line SPE from Human Plasma.

Atoll™ ATH
Séverine Compain, Dimitri Schlemmer, Mikael Levi and all, CEA, Service de Pharmacologie et d'Immunologie, DSV/DRM, CEA/Saclay, 91191 Gif-sur-Yvette Cedex and SPIBIO, Parc d'Activite´ du Pas du Lac, 10 bis avenue Ampère, F-78180 Montigny le Bretonneux, France ; JOURNAL OF MASS SPECTROMETRY, J. Mass Spectrom. 2005; 40: 9–18 ; Development and validation of a liquid chromatographic/tandem mass spectrometric assay for the quantitation of nucleoside HIV reverse transcriptase inhibitors in biological matrices.



Sample Prep - Solid Phase Extraction

Introduction

Solid Phase Extraction continues to be the fastest growing technique utilised for sample preparation. The ease of use and flexibility of SPE means that increasingly, this is the chosen pre-step adopted to clean and concentrate samples prior to analysis in HPLC, HPLC/MS, GC or GC/MS.
Advances in the analytical process are placing greater demands and expectations on sample cleaning and therefore increasing the quality required from SPE products. For this reason, polymeric sorbents with high loading capacities and spherical ultrapure silica have become widespread.

Recovery, capacity, selectivity & reproducibility are the principal sample prep. demands of todays analyst. We have developed a state-of-the-art SPE product range incorporating silica and polymer based technology. Upti-prep™ (silica) and Atoll™ (polymeric) push the boundaries of expectation from modern day sample preparation challenges.

Interchim's full range of SPE products is highlighted within this chapter. The typical procedure for the SPE process is described below and considerations toward sorbent and working format selection follow.

Typical SPE procedure

Bed volume definition :
The bed volume is defined as the minimum volume of solvent necessary to wet the defined quantity of sorbent within the column. This can vary depending on the nature of the sorbent.
e.g. : ~ 120 µl per 100 mg of silica gel sorbent 60 Å
~ 600 µl per 500 mg of silica gel 60 Å

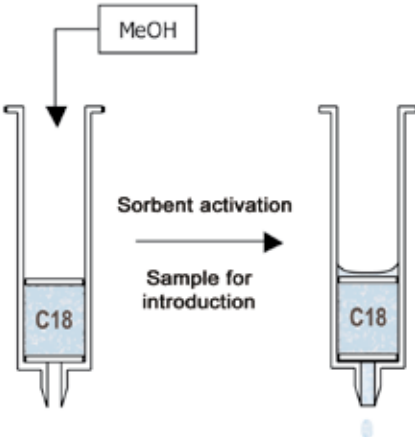
[Incomplete elution of compound of interest will occur if the sorbent mass is too large for the volume of solvent used.
Incomplete retention of compounds of interest will occur if there is an inadequate sorbent mass leading to compound eluting in the fraction or in the washing solvent. Such cases lead to lower recovery rates].

Technical tips

- Check solvent miscibility before using.
- Keep the solvent level beyond the sorbent to maintain its activated status.
- For ion exchange bonded silica, activate with methanol, water and then water buffered to the pH of choice.
- Vacuum & positive pressure manifolds are recommended to achieve more reproducible extractions

1. Conditioning Step

Sorbent activation and functional group activation are achieved by passing a volume of an appropriate solvent or a mixture of solvent, through the column. Column frits are simultaneously solvated.
Methanol or acetonitrile are commonly used for activating hydrophobic sorbents, whilst hexane or dichloromethane activate hydrophilic sorbents. 2 to 4 bed volumes are typically recommended.



2. Sample loading step

Apply sample onto the upper part of the sorbent bed. Matrix contaminants may pass through the column unretained, and additionally, other matrix components may be more or less strongly retained on the sorbent surface. To get a maximum purification efficiency, the sample flow needs to be controlled.
To achieve faster flow of viscous sample through a column, 90 to 140 µm sorbents can be used. The exchange capacity and selectivity are unaffected.
[It is necessary to analyze the unretained fraction to check if all compounds of interest have been retained]

3. Washing step

Passing solvents through columns washes away interfering compounds whilst leaving the analyte undisturbed on the sorbent bed. Different solvents or solvent mixtures may be used to improve the rinsing efficiency.

4. Drying step

Solvent traces are evaporated by circulating air through the column over a 2 to 10 minute time period. This improves the extraction yield.

5. Elution step

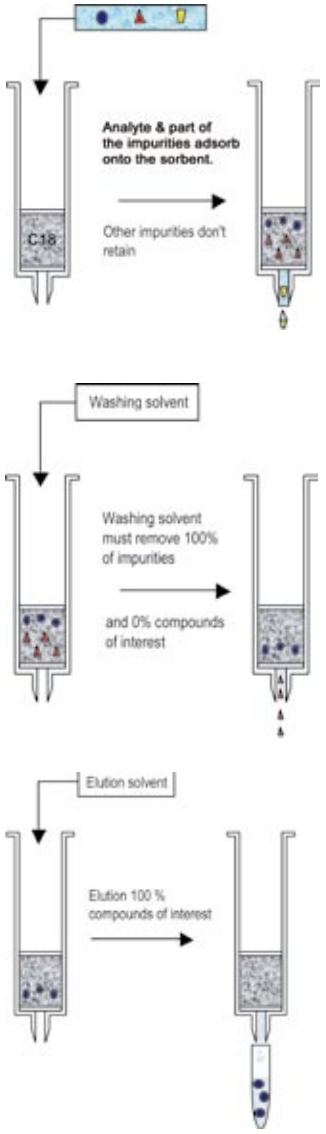
An appropriate solvent is passed through the column to disrupt the analyte-sorbent interaction and to elute 100% of compounds of interest.

The appropriate solvent must have maximum interaction with the compound of interest and a minimal interaction with the remaining impurities, leaving them undisturbed on the sorbent bed. In addition the volume of the elution solvent needs to be as small as possible to maximise the concentration factor.
[Sorbent with low particle size (e.g 30,50 µm) gives a lower elution volume than larger sorbent particle size (e.g 90, 140 µm)].

6. Concentration step

Compounds of interest are concentrated by evaporating a part of the solvent.
If necessary, dry the eluate with anhydrous sulfate to remove possible water traces.The concentrated sample is then ready for analysis.

Interchim recommends that all steps should be carefully optimized according to your specific extraction. This will improve the quality of the final analysis.



Sample Prep - Solid Phase Extraction

Selecting the appropriate sorbent

Sorbent selection requires consideration of sample volume, the nature of the analyte, analyte concentration and the inherent properties of the sorbent itself. For environmental studies, a volume of several hundred millilitres might be necessary for a good pre-concentration (e.g., organic pollutants) whereas in the pharmaceutical industry, the sample volumes that require cleaning may only be millilitres.

The selected sorbent needs to have an excellent affinity for the compounds of interest and at the same time a weak affinity for irrelevant compounds within the matrix. Choosing the correct sorbent results in a specific selectivity for the compounds of interest. A sufficient loading capacity also needs to be identified to optimise retention volumes of the desired compound.

There are four general modes used in Solid Phase Extraction : reversed phase, normal phase and ion exchange that require different sorbent types namely hydrophobic, hydrophilic, ion-exchange and mixed mode.

Hydrophobic sorbents

In reversed phase, the non polar functional groups of the sorbent operate according to Van der Waals forces. Alkyl and aromatic chains are function groups that have affinity with non-polar and mid-polar compounds.
Free silanol groups left on the sorbent favour polar interactions.
For aromatic compounds, eg, pharma-based chemistries, we recommend to use phenyl selectivity (polystyrene divinylbenzene polymers).

Hydrophilic sorbents

Normal phase provides an efficient cleaning of molecules with polar function groups.
Cyano (CN) functional groups can be used either in normal phase to extract polar compounds or in reversed phase for mid-polar compounds.
Diol functional groups can enhance polar compound extraction compared to virgin silica.
Amino sorbent (NH_2) can be used either as weak anion exchangers (for strong acids), or as a polar sorbent that can interact with OH, NH, SH ...

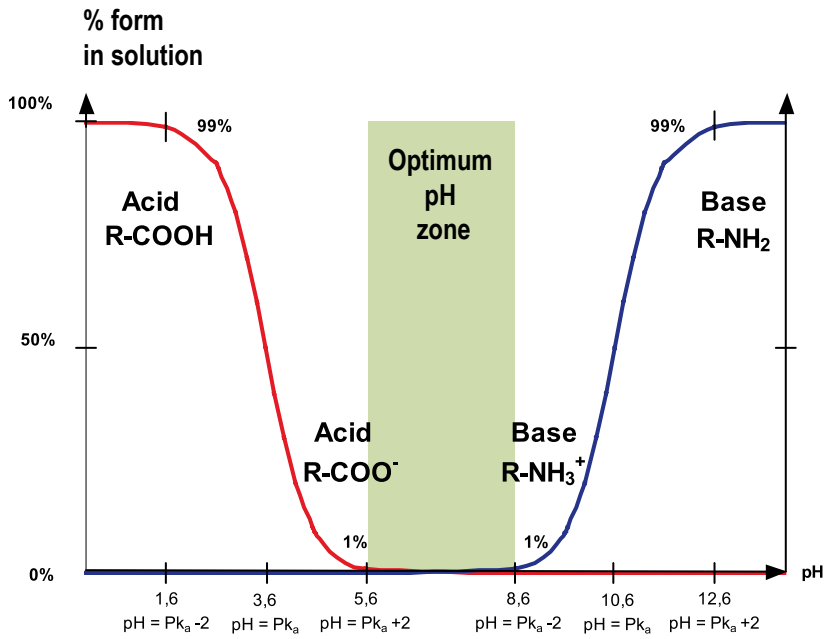
Ion exchange sorbents

Ion-exchange retention is based on ionic interaction. This sorbent creates a strong attraction with opposite functional groups of the sample compounds.
Ion exchange sorbent interactions depend essentially on counter-ion pH and ionic strength.
Strong anion exchange phases (SAX) possess a strong quaternary amine. They are used to extract weak acids which have one or more negative charges.
Strong cation exchange phases (SCX) contain sulfonic acid that are used to extract weak basic compounds which have one or more positive charges.
Weak anion exchange phases (DEAE, NH2) possess a diethyl amino ethyl and amino group. They are used to extract strong acids which have one or more negative charges.
Weak cation exchange phases (WCX) contain carboxylic acid that are used to extract strong basic compounds which have one or more positive charges.

Mixed mode sorbents

Mixed mode sorbents exhibit the greatest selectivity. Ion exchange and hydrophobic chains are bonded onto the surface of silica providing unique selectivity.
This technique is used for basic compound extraction especially for drugs and metabolites within biologic fluids. Initially compounds that possess acid or basic functionality are retained by ion exchange functionality. A washing step with an appropriate pH, removes ionizable impurities. Passing an organic solvent through the column will then remove retained impurities that result from hydrophobic bonding.

Selecting the appropriate sorbent



Ion-exchange capacity

The capacity of ion-exchange or mixed mode sorbent is measured by the mass of ionizable compounds that interact with a pre-defined sorbent mass.

E.g : For 1g of bonded SCX sorbent with an exchange capacity of 0.6 meq/g, it is possible to retain 0.6 mmol of compound.

Optimal pH

Acids and bases in the sample need to be in their ionized form to develop interactions with the sorbent.

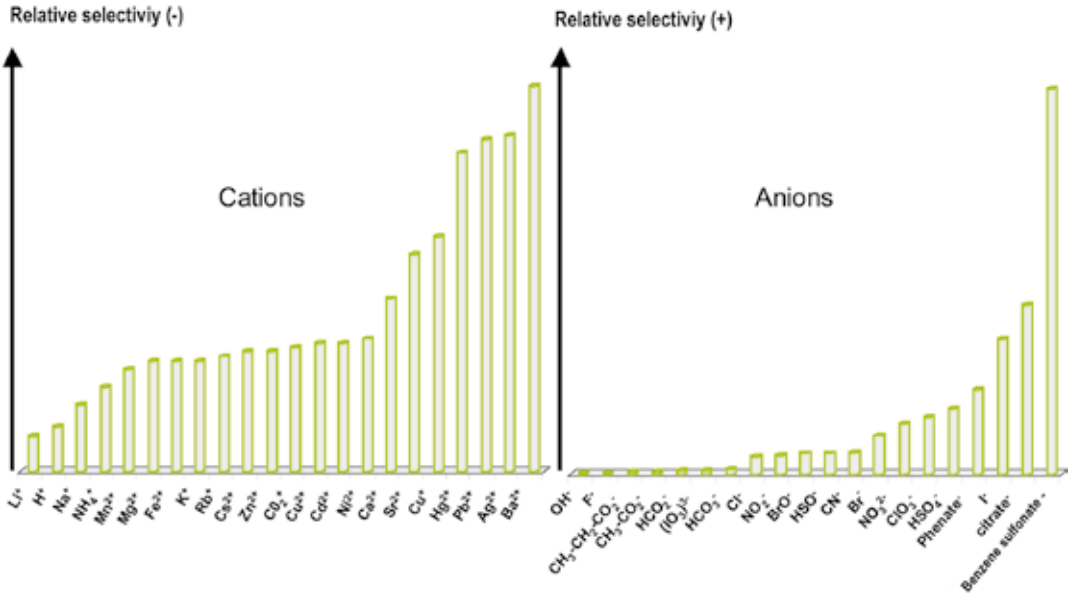
To maintain reproducible and repeatable recovery rates, sample and sorbent need to be buffered at an optimised pH.

Eg : for an acid w/pKa 3.6 & a base w/pKa 10.6, the pH zone should be between pH :5.6 and 8.6.

Relative selectivity of the counter-ions

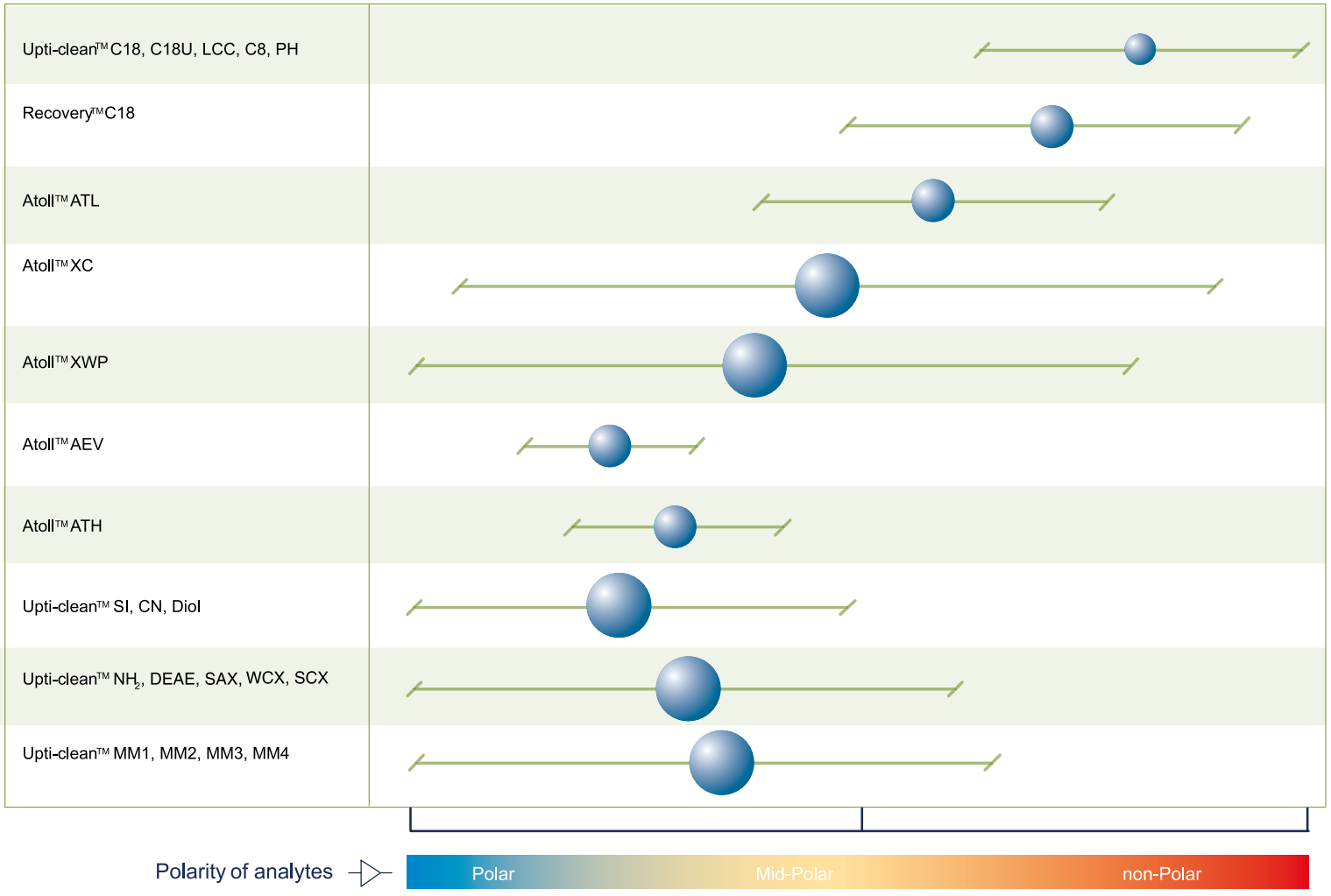
A counter-ion is an ionic entity able to interact with an ion exchange sorbent.

It improves the efficiency of cleaning steps including elution according to its concentration in solution and its affinity with the exchanger sorbent.



Sample Prep - Solid Phase Extraction

Sorbent selection guide



Sorbent Properties & Characteristics

Sorbent Selection

Silicas & Polymers are the most popular sorbents used for Solid Phase Extraction. Polymer loading capacities are higher than silica sorbents, however, silica sorbents exhibit greater selectivity. Sorbent features are highlighted below and provide the analyst with an initial consideration for appropriate sorbent selection.

Polymers :

Polymer sorbents are very stable from pH 1 to 14, they exhibit high loading capacities allowing for the cleaning of a broad range of compounds through a variety of matrices (waters, oils, plasma, urines…). Interchim polymers have a very high specific surface area that maximises pi-pi interactions. The capacity of our polymers are typically 15% greater than competitive polymers and 25% higher than silicas. These polymers are particularly suited for polar compound cleaning. The polymer surface can be easily modified and facilitates a large selectivity range from hydrophobic to hydrophilic interactions.

Silicas :

Silica & bonded silica are rigid supports that do not shrink or swell with solvents. The silica surface can be easily modified, this creates a potential for a large selectivity for SPE from hydrophobic to hydrophilic interactions. The pH stability of bonded silica is limited, typically to within the range of 2 to 7.5, this is chemistry dependant. Interchim offers more than 30 different silica based selectivities. Our sorbents take advantage of our ultra pure spherical silca (Upti-prep), and this achieves greater reproducibility, and establishes repeatable extraction and optimized sample recoveries.

The Interchim Product range :

Atoll™ (polymer), Upti-Clean™ (silica) and Recovery™ (silica) are Interchim's sorbent technologies for Solid Phase Extraction.

Within any sample cleanup process, the analyst has to consider the characteristics of their sample relative to the features of the SPE products available. Interchim provides, on a custom basis, method development kits which combine sorbent type, quantity of media and suitable housing format.

Please contact Interchim's technical support center for assistance in your selection process.

Sample Prep - Solid Phase Extraction

Sorbent Properties & Characteristics

Description	Sorbent	Interchim type	Comment	Exchange capacity	End-capping	Porosity Å	Specific surface area m^2/g	Particle diameter µm	Rank	Purity
Atoll	PSDVB	30XC	High capacity		No	n.a.	1500	30	Spherical	Pure
Atoll	PSDVB	XC	High capacity		No	n.a.	1500	70	Spherical	Pure
Atoll	PSDVB	XWP	High capacity		No	Wide Pore	1200	90	Spherical	Pure
Atoll	n.a.	ATH	Hydrophilic		No	70	800	75	Spherical	Pure
Atoll	n.a.	30ATH	Hydrophiic		No	70	800	30	Spherical	Pure
Atoll	PSHEMA	30AEV	Hydrophilic / hydrophobic		No	70	800	30	Spherical	Pure
Atoll	PSHEMA	AEV	Hydrophilic / hydrophobic		No	70	800	75	Spherical	Pure
Atoll	PSDVB	ATL	Hydrophobic		No	70	800	100	Spherical	Pure
Recovery	Silica Upti-prep	REC	C18		n.a.	n.a.	n.a.	50	Spherical	Pure
Recovery	Silica Upti-prep	RSI	SI		No	n.a.	n.a.	50	Spherical	Pure
Upti-Clean	Silica Upti-prep	C18-S	% C : 18		Yes	60	500	50	Spherical	Pure
Upti-Clean	Silica Upti-prep	C18U-S	% C : 16		No	60	500	50	Spherical	Pure
Upti-Clean	Silica Upti-prep	LCC	% C : 10		Yes	60	500	50	Spherical	Pure
Upti-Clean	Silica Upti-prep	RPAQ	C18, 100% hydrophilic		No	n.a.	n.a.	75	Spherical	Pure
Upti-Clean	Silica Upti-prep	C18-S2F	High flow		Yes	60	500	140	Spherical	Pure
Upti-Clean	Silica Upti-prep	C18U-S2F	High flow		No	60	500	140	Spherical	Pure
Upti-Clean	Silica Upti-prep	C8-S	% C : 11		Yes	60	500	50	Spherical	Pure
Upti-Clean	Silica Upti-prep	C8U-S	% C : 9		No	60	500	50	Spherical	Pure
Upti-Clean	Silica Upti-prep	C8-S2F	High flow		Yes	60	500	140	Spherical	Pure
Upti-Clean	Silica Upti-prep	C2	% C : 6		Yes	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	PH-S	% C : 9		No	60	500	50	Spherical	Pure
Upti-Clean	Silica Upti-prep	CH	% C : 10,5		No	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	SI-S			No	60	500	50	Granular	Pure
Upti-Clean	Silica Upti-prep	NH2-S	% C : 5		No	60	500	50	Spherical	Pure
Upti-Clean	Silica Upti-prep	CN-S	% C : 8		Yes	60	500	50	Spherical	Pure
Upti-Clean	Silica Upti-prep	OH	% C : 7,5		No	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	SCX	Strong acid	0,7 meq/g	No	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	WCX	Weak acid	0,22 meq/g	No	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	DEAE	Weak base	0,33 meq/g	No	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	SAX	Strong base	0,30 meq/g	No	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	MM1	Mixed mode RP / SCX	0,09 meq/g	No	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	MM2	Mixed mode RP / WCX	0,10 meq/g	No	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	MM3	Mixed mode RP / SAX	0,14 meq/g	No	60	450	60	Granular	Pure
Upti-Clean	Silica Upti-prep	MM4	Mixed mode RP / WAX	0,15 meq/g	No	60	450	60	Granular	pure
Upti-Clean	Florisil	FL	Standard grade		No	n.a.	n.a.	200	Granular	Std.
Upti-Clean	Florisil	FLPR	Pesticide Residue grade		No	n.a.	n.a.	200	Granular	Std.
Upti-Clean	Polyamide	P6	6		No	n.a.	n.a.	100	Granular	Std.
Upti-Clean	Amberlite	XAD2	Polystyrene		No	90	330	16-50 mesh	Spherical	Std.
Upti-Clean	Amberlite	XAD4	Polystyrene		No	50	750	16-50 mesh	Spherical	Std.
Upti-Clean	Amberlite	XAD7	Acrylic Ester		No	80	450	16-50 mesh	Spherical	Std.
Upti-Clean	Amberlite	XAD16	Polystyrene		No	100	825	16-50 mesh	Spherical	Std.
Upti-Clean	Alumina	ALA	Acid		No	n.a.	200	32-63	Granular	Std.
Upti-Clean	Alumina	ALN	Neutral		No	n.a.	200	32-63	Granular	Std.
Upti-Clean	Alumina	ALB	Basic		No	n.a.	200	32-63	Granular	Std.
Upti-Clean	Silica	BCD	β-Cyclodextrine		No	n.a.	n.a.	40	n.a.	Std.
Upti-Clean	Carbon	CG	Graphitized		No	non-porous	100	n.a.	Granular	Std.
Upti-Clean	Carbon	CA	Activated		No	n.a.	n.a.	40	Granular	Std.

Sample Prep - Solid Phase Extraction

SPE format

Interchim has developed a comprehensive line of SPE products to support efficient and reproducible cleanup for a wide range of sample type and volume.

Our technological advances ensure our SPE range provide a margin of accuracy to within 1%. 96 well plates are delivered with a weighing certificate as a warranty of the real mass of sorbent within each well.

SPE format	Housing	Nature	Volume	Frits
Standard columns		Polypropylene MG	(1 - 3 - 6 - 15 -25 - 75 - 150) ml	(10 - 20 - 70) µm Polyethylene or Teflon
LRC columns		Polypropylene MG	Robotic Large Capacity (LRC) 15ml	20 µm Polyethylene or Teflon
Glass columns		Glass	6 ml	20 µm Teflon
Cartridges		Polypropylene MG	300 - 600 - 900 mg	20 µm Polyethylene
96 well plates		Polypropylene MG	2 ml square well	20 µm Polyethylene
48 well plates		Polypropylene MG	5 ml square well	20 µm Polyethylene

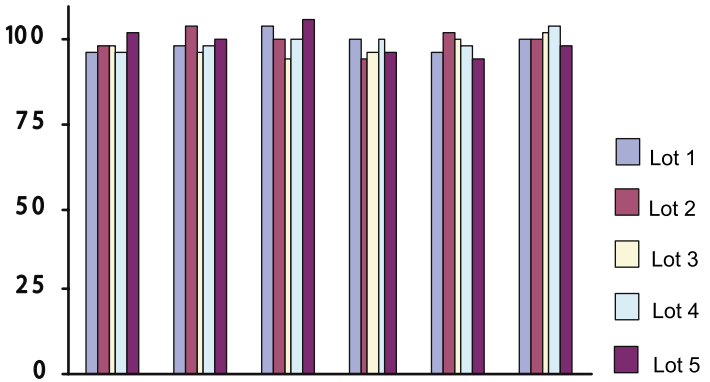
Upti-Clean™ - Silica based

Upti-Clean™ are Interchim's range of silica based SPE products. They have been developed from a spherical high purity (99.9%) silica called Upti-prep™. Upti-prep™ has strictly controlled porosity and particle size (+/- 10A, +/- 5 µm) working in a pH range of 1 to 7.5

Interchim bonding technology ensures greater batch to batch reproducibility for our bonded silica, there is no longer a requirement for batch reservations. Upti-Clean™ products subsequently achieve superior recovery rates relative to traditional irregular silicas, exhibiting excellent reproducibility & consistency

The Upti-Clean™ range achieves accuracy of +/- 1% in mass per column thanks to a strictly controlled packing process. Upti-Clean™ products are thoroughly quality control tested in-house to guarantee tracability. Products are supplied with an individual certificate detailing the specific production number and sorbent batch.

Upti-Clean™ are supplied in a variety of formats relative to current extraction apparatus and automated systems. Packaging has been specifically designed to guarantee the integrity of the product.



Lot to lot reproducibility

Upti-Clean™ cartridges

Upti-Clean™ cartridges are easy to use, efficient SPE cleaning devices with widespread applications throughout the pharmaceutical, toxicology and clinical fields

- Luer inlet & outlet fitting
- No specific SPE apparatus necessary
- Polypropylene MG housing

- C18, C8 bonded chemistries for non and mid-polar (aqueous) compounds
- Virgin silica for polar compound purification in non-polar solvents
- Useful for sample storage & transport

Weight	Qty	C18	C8	Silica
300 mg	25 u	C18-300/SC-25	C8-300/SC-25	SI-300/SC-25
300 mg	50 u	C18-300/SC-50	C8-300/SC-50	SI-300/SC-50
300 mg	100 u	C18-300/SC-100	C8-300/SC-100	SI-300/SC-100
600 mg	25 u	C18-600/SC-25	C8-600/SC-25	SI-600/SC-25
600 mg	50 u	C18-600/SC-50	C8-600/SC-50	SI-600/SC-50
600 mg	100 u	C18-600/SC-100	C8-600/SC-100	SI-600/SC-100
900 mg	25 u	C18-900/SC-25	C8-900/SC-25	SI-900/SC-25
900 mg	50 u	C18-900/SC-50	C8-900/SC-50	SI-900/SC-50
900 mg	100 u	C18-900/SC-100	C8-900/SC-100	SI-900/SC-100

Sample Prep - Solid Phase Extraction

Recovery™ - Silica based

Interchim Recovery™ columns address recovery and reproducibility problems, highlighted in recent studies, that are associated with only a part of the standard 60 Å silica's specific surface area being accessible in SPE silica based cleanup procedures.

Recovery™ columns utilise an optimised version of Upti-prep™ silica. They prevent physical phenomenons associated with older generation silica sorbent and utilise 100% of their specific surface area. Recovery™ can be used in all solvent conditions (including 100% water) achieving greater reproducibility and consistency.

- **Recovery™ REC** : C18, fully end-capped for non-polar, mid-polar & polar compounds in aqueous environment.
- **Recovery™ RSI** : Virgin silica for polar and mid-polar compounds from organic matrices.

Recovery™ columns

Weight	Volume	Qty	Recovery C18	Recovery Silica
Std. columns / PE frits				
50 mg	1 ml	50 u	**REC-50/1**	**RSI-50/1**
100 mg	1 ml	100 u	**REC-100/1**	**RSI-100/1**
100 mg	3 ml	50 u	**REC-100/3**	**RSI-100/3**
200 mg	3 ml	50 u	**REC-200/3**	**RSI-200/3**
500 mg	3 ml	50 u	**REC-500/3**	**RSI-500/3**
500 mg	6 ml	30 u	**REC-500/6**	**RSI-500/6**
1000 mg	6 ml	30 u	**REC-1G/6**	**RSI-1G/6**
2000 mg	6 ml	20 u	**REC-2G/6**	**RSI-2G/6**
2000 mg	15 ml	20 u	**REC-2G/15**	**RSI-2G/15**
2000 mg	25 ml	20 u	**REC-2G/25**	**RSI-2G/25**
LRC columns / PE frits				
100 mg	LRC 15	50 u	**REC-100LRC**	**RSI-100LRC**
200 mg	LRC 15	50 u	**REC-200LRC**	**RSI-200LRC**
500 mg	LRC 15	50 u	**REC-500LRC**	**RSI-500LRC**
Std. columns / PTFE frits				
50 mg	1 ml	50 u	**REC-50/1T**	**RSI-50/1T**
100 mg	1 ml	100 u	**REC-100/1T**	**RSI-100/1T**
100 mg	3 ml	50 u	**REC-100/3T**	**RSI-100/3T**
200 mg	3 ml	50 u	**REC-200/3T**	**RSI-200/3T**
500 mg	3 ml	50 u	**REC-500/3T**	**RSI-500/3T**
500 mg	6 ml	30 u	**REC-500/6T**	**RSI-500/6T**
1000 mg	6 ml	30 u	**REC-1G/6T**	**RSI-1G/6T**
Glass columns / PTFE frits				
200 mg	6 ml	30 u	**REC-200/6G**	**RSI-200/6G**
500 mg	6 ml	30 u	**REC-500/6G**	**RSI-500/6G**
1000 mg	6 ml	30 u	**REC-1G/6G**	**RSI-1G/6G**

Std. columns
PP straight tube + 20µm PE frits

LRC columns
PP tube + 20µm PE frits

Std. columns
PP tube + 20µm PTFE frits

Glass columns
Glass tube + 20µm PTFE frits

Glass tubes and PTFE frits are solvent resistant. These materials guarantee purifications without extractable.

Recovery™ 96 well plates

Automated cleanup procedures are now an integral part of the modern laboratory.

Interchim Recovery™ is available in a 96 well format with a 2 ml volume per well. This high quality unit provides rapid throughput of sample, within an automated process, whilst establishing excellent well-to-well consistency.

Recovery™ 96 well plates utilise Interchim's state of the art automated weight machine.
This packing technology guarantees unprecedented accuracy (+/- 1% mass per column) compared to the commonly utilised competitor volumetric systems. Recovery™ therefore raises the standards & client expectations for sample recovery /reproducibility.

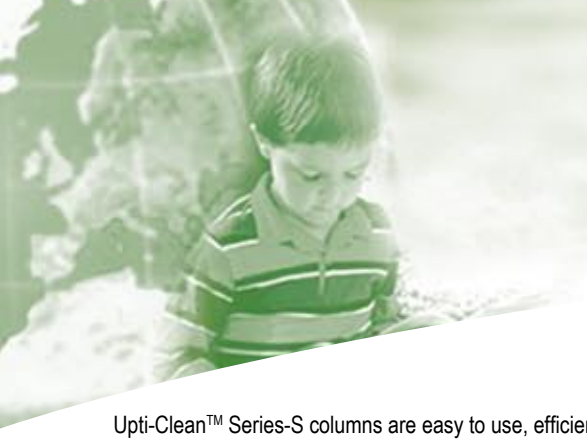
Recovery™ 96 well plates are QC tested in-house to guarantee tracability. Products are supplied with an individual certificate detailing Mfg number, Sorbent batch number & specifications. An additional certificate is supplied that states real sorbent mass in each individual well.

Recovery™ 96 well plates are packed in a PEHD/Al bag for long term integral storage. This prevents potential damage from UV and moisture.

Recovery™ 96 well plates are manufactured from polypropylene, conform to a standard footprint (127,76 mm x 85,47 mm x 19,74 mm) and are compatible with existing systems on the market.

Recovery® 96 Well plate - 2 ml

Weight	Qty	Recovery™ C18	Recovery™ Silica
30 mg	1 u	**REC-30/WP20**	**RSI-30/WP20**
50 mg	1 u	**REC-50/WP20**	**RSI-50/WP20**
60 mg	1 u	**REC-60/WP20**	**RSI-60/WP20**
100 mg	1 u	**REC-100/WP20**	**RSI-100/WP20**
150 mg	1 u	**REC-150/WP20**	**RSI-150/WP20**
200 mg	1 u	**REC-200/WP20**	**RSI-200/WP20**



Sample Prep - Solid Phase Extraction

Upti-Clean™ Series-S - Silica based

Upti-Clean™ Series-S columns are easy to use, efficient SPE cleaning devices with widespread applications throughout the pharmaceutical, toxicology and clinical fields.

- 30 selectivities available
- Polypropylene MG or Glass housing
- Std. PE or PTFE frits
- Luer outlet fitting

Upti-Clean™ Series-S, columns

Hydrophobic bonding

Weight	Volume	Qty	C18-S	C18U-S	LCC	RPAQ	C8-S	C8U-S	C2	PH-S
Std. columns / PE frits										
50 mg	1 ml	50 u	C18-S-50/1	C18U-S-50/1	LCC-50/1	RPAQ-50/1	C8-S-50/1	C8U-S-50/1	C2-50/1	PH-S-50/1
100 mg	1 ml	100 u	C18-S-100/1	C18U-S-100/1	LCC-100/1	RPAQ-100/1	C8-S-100/1	C8U-S-100/1	C2-100/1	PH-S-100/1
100 mg	3 ml	50 u	C18-S-100/3	C18U-S-100/3	LCC-100/3	RPAQ-100/3	C8-S-100/3	C8U-S-100/3	C2-100/3	PH-S-100/3
200 mg	3 ml	50 u	C18-S-200/3	C18U-S-200/3	LCC-200/3	RPAQ-200/3	C8-S-200/3	C8U-S-200/3	C2-200/3	PH-S-200/3
500 mg	3 ml	50 u	C18-S-500/3	C18U-S-500/3	LCC-500/3	RPAQ-500/3	C8-S-500/3	C8U-S-500/3	C2-500/3	PH-S-500/3
500 mg	6 ml	30 u	C18-S-500/6	C18U-S-500/6	LCC-500/6	RPAQ-500/6	C8-S-500/6	C8U-S-500/6	C2-500/6	PH-S-500/6
1000 mg	6 ml	30 u	C18-S-1G/6	C18U-S-1G/6	LCC-1G/6	RPAQ-1G/6	C8-S-1G/6	C8U-S-1G/6	C2-1G/6	PH-S-1G/6
2000 mg	6 ml	20 u	C18-S-2G/6	C18U-S-2G/6	LCC-2G/6	RPAQ-2G/6	C8-S-2G/6	C8U-S-2G/6	C2-2G/6	PH-S-2G/6
2000 mg	15 ml	20 u	C18-S-2G/15	C18U-S-2G/15	LCC-2G/15	RPAQ-2G/15	C8-S-2G/15	C8U-S-2G/15	C2-2G/15	PH-S-2G/15
2000 mg	25 ml	20 u	C18-S-2G/25	C18U-S-2G/25	LCC-2G/25	RPAQ-2G/25	C8-S-2G/25	C8U-S-2G/25	C2-2G/25	PH-S-2G/25
LRC columns / PE frits										
100 mg	LRC 15	50 u	C18-S-100LRC	C18U-S-100LRC	LCC-100LRC	RPAQ-100LRC	C8-S-100LRC	C8U-S-100LRC	C2-100LRC	PH-S-100LRC
200 mg	LRC 15	50 u	C18-S-200LRC	C18U-S-200LRC	LCC-200LRC	RPAQ-200LRC	C8-S-200LRC	C8U-S-200LRC	C2-200LRC	PH-S-200LRC
500 mg	LRC 15	50 u	C18-S-500LRC	C18U-S-500LRC	LCC-500LRC	RPAQ-500LRC	C8-S-500LRC	C8U-S-500LRC	C2-500LRC	PH-S-500LRC
Std. columns / PTFE frits										
50 mg	1 ml	50 u	C18-S-50/1T	C18U-S-50/1T	LCC-50/1T	RPAQ-50/1T	C8-S-50/1T	C8U-S-50/1T	C2-50/1T	PH-S-50/1T
100 mg	1 ml	100 u	C18-S-100/1T	C18U-S-100/1T	LCC-100/1T	RPAQ-100/1T	C8-S-100/1T	C8U-S-100/1T	C2-100/1T	PH-S-100/1T
100 mg	3 ml	50 u	C18-S-100/3T	C18U-S-100/3T	LCC-100/3T	RPAQ-100/3T	C8-S-100/3T	C8U-S-100/3T	C2-100/3T	PH-S-100/3T
200 mg	3 ml	50 u	C18-S-200/3T	C18U-S-200/3T	LCC-200/3T	RPAQ-200/3T	C8-S-200/3T	C8U-S-200/3T	C2-200/3T	PH-S-200/3T
500 mg	3 ml	50 u	C18-S-500/3T	C18U-S-500/3T	LCC-500/3T	RPAQ-500/3T	C8-S-500/3T	C8U-S-500/3T	C2-500/3T	PH-S-500/3T
500 mg	6 ml	30 u	C18-S-500/6T	C18U-S-500/6T	LCC-500/6T	RPAQ-500/6T	C8-S-500/6T	C8U-S-500/6T	C2-500/6T	PH-S-500/6T
1000 mg	6 ml	30 u	C18-S-1G/6T	C18U-S-1G/6T	LCC-1G/6T	RPAQ-1G/6T	C8-S-1G/6T	C8U-S-1G/6T	C2-1G/6T	PH-S-1G/6T
Glass columns / PTFE frits										
200 mg	6 ml	30 u	C18-S-200/6G	C18U-S-200/6G	LCC-200/6G	RPAQ-200/6G	C8-S-200/6G	C8U-S-200/6G	C2-200/6G	PH-S-200/6G
500 mg	6 ml	30 u	C18-S-500/6G	C18U-S-500/6G	LCC-500/6G	RPAQ-500/6G	C8-S-500/6G	C8U-S-500/6G	C2-500/6G	PH-S-500/6G
1000 mg	6 ml	30 u	C18-S-1G/6G	C18U-S-1G/6G	LCC-1G/6G	RPAQ-1G/6G	C8-S-1G/6G	C8U-S-1G/6G	C2-1G/6G	PH-S-1G/6G

Upti-Clean™ Series-S 96 well plates

Automated cleanup procedures are now an integral part of the modern laboratory.

Interchim Upti-Clean™ is available in a 96 well format with a 2 ml volume per well. This high quality unit provides rapid throughput of sample, within an automated process, whilst establishing excellent well-to-well consistency.

Upti-Clean™ 96 well plates utilise Interchim's state of the art automated weight machine.
This packing technology guarantees unprecedented accuracy (+/- 1% mass per column) compared to the commonly utilised competitor volumetric systems. Upti-Clean™ therefore raises the standards & client expectations for sample recovery /reproducibility.

Upti-Clean™ 96 well plates are QC tested in-house to guarantee tracability. Products are supplied with an individual certificate detailing Mfg number, Sorbent batch number & specifications. An additional certificate is supplied that states real sorbent mass in each individual well.

Upti-Clean™ 96 well plates are packed in a PEHD/Al bag for long term integral storage. This prevents potential damage from UV and moisture.

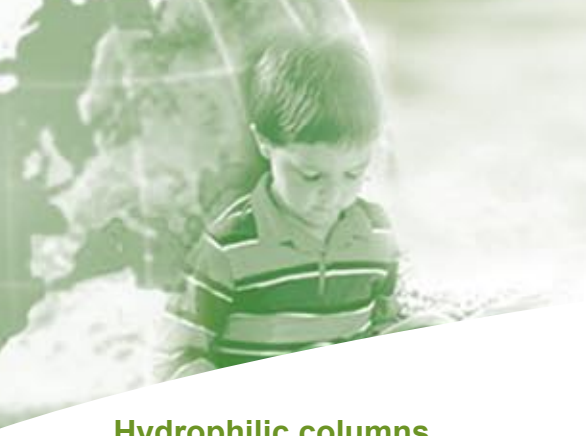
Upti-Clean™ 96 well plates are manufactured from polypropylene, conform to a standard footprint (127,76 mm x 85,47 mm x 19,74 mm) and are compatible with existing systems on the market.

Upti-Clean™ Series-S, 96 well plates - 2 ml

Hydrophobic bonding

Weight	Qty	C18-S	C18U-S	LCC	RPAQ	C8-S
30 mg	1 u	C18-30/WP20	C18U-30/WP20	LCC-30/WP20	RPAQ-30/WP20	C8-30/WP20
50 mg	1 u	C18-50/WP20	C18U-50/WP20	LCC-50/WP20	RPAQ-50/WP20	C8-50/WP20
60 mg	1 u	C18-60/WP20	C18U-60/WP20	LCC-60/WP20	RPAQ-60/WP20	C8-60/WP20
100 mg	1 u	C18-100/WP20	C18U-100/WP20	LCC-100/WP20	RPAQ-100/WP20	C8-100/WP20
150 mg	1 u	C18-150/WP20	C18U-150/WP20	LCC-150/WP20	RPAQ-150/WP20	C8-150/WP20
200 mg	1 u	C18-200/WP20	C18U-200/WP20	LCC-200/WP20	RPAQ-200/WP20	C8-200/WP20

		C8U-S	C2	PH-S	CH
30 mg	1 u	C8U-30/WP20	C2-30/WP20	PH-30/WP20	CH-30/WP20
50 mg	1 u	C8U-50/WP20	C2-50/WP20	PH-50/WP20	CH-50/WP20
60 mg	1 u	C8U-60/WP20	C2-60/WP20	PH-60/WP20	CH-60/WP20
100 mg	1 u	C8U-100/WP20	C2-100/WP20	PH-100/WP20	CH-100/WP20
150 mg	1 u	C8U-150/WP20	C2-150/WP20	PH-150/WP20	CH-150/WP20
200 mg	1 u	C8U-200/WP20	C2-200/WP20	PH-200/WP20	CH-200/WP20



Sample Prep - Solid Phase Extraction

Upti-Clean™ Series-S - Silica based

Hydrophilic columns

Weight	Volume	Qty	SI-S	NH2-S	CN-S	OH
Std. columns / PE frits						
50 mg	1 ml	50 u	SI-S-50/1	NH2-S-50/1	CN-S-50/1	OH-50/1
100 mg	1 ml	100 u	SI-S-100/1	NH2-S-100/1	CN-S-100/1	OH-100/1
100 mg	3 ml	50 u	SI-S-100/3	NH2-S-100/3	CN-S-100/3	OH-100/3
200 mg	3 ml	50 u	SI-S-200/3	NH2-S-200/3	CN-S-200/3	OH-200/3
500 mg	3 ml	50 u	SI-S-500/3	NH2-S-500/3	CN-S-500/3	OH-500/3
500 mg	6 ml	30 u	SI-S-500/6	NH2-S-500/6	CN-S-500/6	OH-500/6
1000 mg	6 ml	30 u	SI-S-1G/6	NH2-S-1G/6	CN-S-1G/6	OH-1G/6
2000 mg	6 ml	20 u	SI-S-2G/6	NH2-S-2G/6	CN-S-2G/6	OH-2G/6
2000 mg	15 ml	20 u	SI-S-2G/15	NH2-S-2G/15	CN-S-2G/15	OH-2G/15
2000 mg	25 ml	20 u	SI-S-2G/25	NH2-S-2G/25	CN-S-2G/25	OH-2G/25
LRC columns / PE frits						
100 mg	LRC 15	50 u	SI-S-100LRC	NH2-S-100LRC	CN-S-100LRC	OH-100LRC
200 mg	LRC 15	50 u	SI-S-200LRC	NH2-S-200LRC	CN-S-200LRC	OH-200LRC
500 mg	LRC 15	50 u	SI-S-500LRC	NH2-S-500LRC	CN-S-500LRC	OH-500LRC
Std. columns / PTFE frits						
50 mg	1 ml	50 u	SI-S-50/1T	NH2-S-50/1T	CN-S-50/1T	OH-50/1T
100 mg	1 ml	100 u	SI-S-100/1T	NH2-S-100/1T	CN-S-100/1T	OH-100/1T
100 mg	3 ml	50 u	SI-S-100/3T	NH2-S-100/3T	CN-S-100/3T	OH-100/3T
200 mg	3 ml	50 u	SI-S-200/3T	NH2-S-200/3T	CN-S-200/3T	OH-200/3T
500 mg	3 ml	50 u	SI-S-500/3T	NH2-S-500/3T	CN-S-500/3T	OH-500/3T
500 mg	6 ml	30 u	SI-S-500/6T	NH2-S-500/6T	CN-S-500/6T	OH-500/6T
1000 mg	6 ml	30 u	SI-S-1G/6T	NH2-S-1G/6T	CN-S-1G/6T	OH-1G/6T
Glass columns / PTFE frits						
200 mg	6 ml	30 u	SI-S-200/6G	NH2-S-200/6G	CN-S-200/6G	OH-200/6G
500 mg	6 ml	30 u	SI-S-500/6G	NH2-S-500/6G	CN-S-500/6G	OH-500/6G
1000 mg	6 ml	30 u	SI-S-1G/6G	NH2-S-1G/6G	CN-S-1G/6G	OH-1G/6G

Ion exchange columns

Weight	Volume	Qty	SCX	WCX	DEAE	SAX
Std. columns / PE frits						
50 mg	1 ml	50 u	SCX-50/1	WCX-50/1	DEAE-50/1	SAX-50/1
100 mg	1 ml	100 u	SCX-100/1	WCX-100/1	DEAE-100/1	SAX-100/1
100 mg	3 ml	50 u	SCX-100/3	WCX-100/3	DEAE-100/3	SAX-100/3
200 mg	3 ml	50 u	SCX-200/3	WCX-200/3	DEAE-200/3	SAX-200/3
500 mg	3 ml	50 u	SCX-500/3	WCX-500/3	DEAE-500/3	SAX-500/3
500 mg	6 ml	30 u	SCX-500/6	WCX-500/6	DEAE-500/6	SAX-500/6
1000 mg	6 ml	30 u	SCX-1G/6	WCX-1G/6	DEAE-1G/6	SAX-1G/6
2000 mg	6 ml	20 u	SCX-2G/6	WCX-2G/6	DEAE-2G/6	SAX-2G/6
2000 mg	15 ml	20 u	SCX-2G/15	WCX-2G/15	DEAE-2G/15	SAX-2G/15
2000 mg	25 ml	20 u	SCX-2G/25	WCX-2G/25	DEAE-2G/25	SAX-2G/25
LRC columns / PE frits						
100 mg	LRC 15	50 u	SCX-100LRC	WCX-100LRC	DEAE-100LRC	SAX-100LRC
200 mg	LRC 15	50 u	SCX-200LRC	WCX-200LRC	DEAE-200LRC	SAX-200LRC
500 mg	LRC 15	50 u	SCX-500LRC	WCX-500LRC	DEAE-500LRC	SAX-500LRC
Std. columns / PTFE frits						
50 mg	1 ml	50 u	SCX-50/1T	WCX-50/1T	DEAE-50/1T	SAX-50/1T
100 mg	1 ml	100 u	SCX-100/1T	WCX-100/1T	DEAE-100/1T	SAX-100/1T
100 mg	3 ml	50 u	SCX-100/3T	WCX-100/3T	DEAE-100/3T	SAX-100/3T
200 mg	3 ml	50 u	SCX-200/3T	WCX-200/3T	DEAE-200/3T	SAX-200/3T
500 mg	3 ml	50 u	SCX-500/3T	WCX-500/3T	DEAE-500/3T	SAX-500/3T
500 mg	6 ml	30 u	SCX-500/6T	WCX-500/6T	DEAE-500/6T	SAX-500/6T
1000 mg	6 ml	30 u	SCX-1G/6T	WCX-1G/6T	DEAE-1G/6T	SAX-1G/6T
Glass columns / PTFE frits						
200 mg	6 ml	30 u	SCX-200/6G	WCX-200/6G	DEAE-200/6G	SAX-200/6G
500 mg	6 ml	30 u	SCX-500/6G	WCX-500/6G	DEAE-500/6G	SAX-500/6G
1000 mg	6 ml	30 u	SCX-1G/6G	WCX-1G/6G	DEAE-1G/6G	SAX-1G/6G

Hydrophilic 96 well plates - 2 ml

Weight	Qty	SI-S	NH2-S	CN-S	OH
30 mg	1 u	SI-30/WP20	NH2-30/WP20	CN-30/WP20	OH-30/WP20
50 mg	1 u	SI-50/WP20	NH2-50/WP20	CN-50/WP20	OH-50/WP20
60 mg	1 u	SI-60/WP20	NH2-60/WP20	CN-60/WP20	OH-60/WP20
100 mg	1 u	SI-100/WP20	NH2-100/WP20	CN-100/WP20	OH-100/WP20
150 mg	1 u	SI-150/WP20	NH2-150/WP20	CN-150/WP20	OH-150/WP20
200 mg	1 u	SI-200/WP20	NH2-200/WP20	CN-200/WP20	OH-200/WP20

Ion exchange :es - 2 ml

Weight	Qty	SCX	WCX	DEAE	SAX
30 mg	1 u	SCX-30/WP20	WCX-30/WP20	DEAE-30/WP20	SAX-30/WP20
50 mg	1 u	SCX-50/WP20	WCX-50/WP20	DEAE-50/WP20	SAX-50/WP20
60 mg	1 u	SCX-60/WP20	WCX-60/WP20	DEAE-60/WP20	SAX-60/WP20
100 mg	1 u	SCX-100/WP20	WCX-100/WP20	DEAE-100/WP20	SAX-100/WP20
150 mg	1 u	SCX-150/WP20	WCX-150/WP20	DEAE-150/WP20	SAX-150/WP20
200 mg	1 u	SCX-200/WP20	WCX-200/WP20	DEAE-200/WP20	SAX-200/WP20

Upti-Clean™ Series-S - Silica based

Mixed mode columns

Weight	Volume	Qty	MM1	MM2	MM3	MM4
Std. columns / PE frits						
50 mg	1 ml	50 u	**MM1-50/1**	**MM2-50/1**	**MM3-50/1**	**MM4-50/1**
100 mg	1 ml	100 u	**MM1-100/1**	**MM2-100/1**	**MM3-100/1**	**MM4-100/1**
100 mg	3 ml	50 u	**MM1-100/3**	**MM2-100/3**	**MM3-100/3**	**MM4-100/3**
200 mg	3 ml	50 u	**MM1-200/3**	**MM2-200/3**	**MM3-200/3**	**MM4-200/3**
500 mg	3 ml	50 u	**MM1-500/3**	**MM2-500/3**	**MM3-500/3**	**MM4-500/3**
500 mg	6 ml	30 u	**MM1-500/6**	**MM2-500/6**	**MM3-500/6**	**MM4-500/6**
1000 mg	6 ml	30 u	**MM1-1G/6**	**MM2-1G/6**	**MM3-1G/6**	**MM4-1G/6**
2000 mg	6 ml	20 u	**MM1-2G/6**	**MM2-2G/6**	**MM3-2G/6**	**MM4-2G/6**
2000 mg	15 ml	20 u	**MM1-2G/15**	**MM2-2G/15**	**MM3-2G/15**	**MM4-2G/15**
2000 mg	25 ml	20 u	**MM1-2G/25**	**MM2-2G/25**	**MM3-2G/25**	**MM4-2G/25**
LRC columns / PE frits						
100 mg	LRC 15	50 u	**MM1-100LRC**	**MM2-100LRC**	**MM3-100LRC**	**MM4-100LRC**
200 mg	LRC 15	50 u	**MM1-200LRC**	**MM2-200LRC**	**MM3-200LRC**	**MM4-200LRC**
500 mg	LRC 15	50 u	**MM1-500LRC**	**MM2-500LRC**	**MM3-500LRC**	**MM4-500LRC**
Std. columns / PTFE frits						
50 mg	1 ml	50 u	**MM1-50/1T**	**MM2-50/1T**	**MM3-50/1T**	**MM4-50/1T**
100 mg	1 ml	100 u	**MM1-100/1T**	**MM2-100/1T**	**MM3-100/1T**	**MM4-100/1T**
100 mg	3 ml	50 u	**MM1-100/3T**	**MM2-100/3T**	**MM3-100/3T**	**MM4-100/3T**
200 mg	3 ml	50 u	**MM1-200/3T**	**MM2-200/3T**	**MM3-200/3T**	**MM4-200/3T**
500 mg	3 ml	50 u	**MM1-500/3T**	**MM2-500/3T**	**MM3-500/3T**	**MM4-500/3T**
500 mg	6 ml	30 u	**MM1-500/6T**	**MM2-500/6T**	**MM3-500/6T**	**MM4-500/6T**
1000 mg	6 ml	30 u	**MM1-1G/6T**	**MM2-1G/6T**	**MM3-1G/6T**	**MM4-1G/6T**
Glass columns - PTFE frits						
200 mg	6 ml	30 u	**MM1-200/6G**	**MM2-200/6G**	**MM3-200/6G**	**MM4-200/6G**
500 mg	6 ml	30 u	**MM1-500/6G**	**MM2-500/6G**	**MM3-500/6G**	**MM4-500/6G**
1000 mg	6 ml	30 u	**MM1-1G/6G**	**MM2-1G/6G**	**MM3-1G/6G**	**MM4-1G/6G**

Std. columns
PP straight tube + 20µm PE frits

LRC columns
PP tube + 20µm PE frits

Std. columns
PP straight tube + 20µm PTFE frits

Glass columns
Glass tube + 20µm PTFE frits

Mixed mode 96 well plates - 2 ml

Weight	Qty	MM1	MM2	MM3	MM4
30 mg	1 u	**MM1-30/WP20**	**MM2-30/WP20**	**MM3-30/WP20**	**MM4-30/WP20**
50 mg	1 u	**MM1-50/WP20**	**MM2-50/WP20**	**MM3-50/WP20**	**MM4-50/WP20**
60 mg	1 u	**MM1-60/WP20**	**MM2-60/WP20**	**MM3-60/WP20**	**MM4-60/WP20**
100 mg	1 u	**MM1-100/WP20**	**MM2-100/WP20**	**MM3-100/WP20**	**MM4-100/WP20**
150 mg	1 u	**MM1-150/WP20**	**MM2-150/WP20**	**MM3-150/WP20**	**MM4-150/WP20**
200 mg	1 u	**MM1-200/WP20**	**MM2-200/WP20**	**MM3-200/WP20**	**MM4-200/WP20**

Sample Prep - Solid Phase Extraction

Upti-Clean™ Series-S2F - Silica based

Upti-Clean™ Series-S2F columns are easy to use, efficient SPE cleaning devices. 140 µm particle size achieves faster flow and helps to achieve non-polar and mid-polar compound extraction from crude matrices without clogging.

- 3 selectivities available
- Polypropylene MG or Glass housing
- Std. PE or PTFE frits
- Luer outlet fitting

Applications : urines, plasmas, oils…

Upti-Clean™ Series-S2F, columns

Weight	Volume	Qty	C18-S2F	C18U-S2F	C8-S2F
Std. columns / PE frits					
50 mg	1 ml	50 u	**C18-S2F-50/1**	**C18U-S2F-50/1**	**C8-S2F-50/1**
100 mg	1 ml	100 u	**C18-S2F-100/1**	**C18U-S2F-100/1**	**C8-S2F-100/1**
100 mg	3 ml	50 u	**C18-S2F-100/3**	**C18U-S2F-100/3**	**C8-S2F-100/3**
200 mg	3 ml	50 u	**C18-S2F-200/3**	**C18U-S2F-200/3**	**C8-S2F-200/3**
500 mg	3 ml	50 u	**C18-S2F-500/3**	**C18U-S2F-500/3**	**C8-S2F-500/3**
500 mg	6 ml	30 u	**C18-S2F-500/6**	**C18U-S2F-500/6**	**C8-S2F-500/6**
1000 mg	6 ml	30 u	**C18-S2F-1G/6**	**C18U-S2F-1G/6**	**C8-S2F-1G/6**
2000 mg	6 ml	20 u	**C18-S2F-2G/6**	**C18U-S2F-2G/6**	**C8-S2F-2G/6**
2000 mg	15 ml	20 u	**C18-S2F-2G/15**	**C18U-S2F-2G/15**	**C8-S2F-2G/15**
2000 mg	25 ml	20 u	**C18-S2F-2G/25**	**C18U-S2F-2G/25**	**C8-S2F-2G/25**
LRC columns / PE frits					
100 mg	LRC 15	50 u	**C18-S2F-100LRC**	**C18U-S2F-100LRC**	**C8-S2F-100LRC**
200 mg	LRC 15	50 u	**C18-S2F-200LRC**	**C18U-S2F-200LRC**	**C8-S2F-200LRC**
500 mg	LRC 15	50 u	**C18-S2F-500LRC**	**C18U-S2F-500LRC**	**C8-S2F-500LRC**
Std. columns / PTFE frits					
50 mg	1 ml	50 u	**C18-S2F-50/1T**	**C18U-S2F-50/1T**	**C8-S2F-50/1T**
100 mg	1 ml	100 u	**C18-S2F-100/1T**	**C18U-S2F-100/1T**	**C8-S2F-100/1T**
100 mg	3 ml	50 u	**C18-S2F-100/3T**	**C18U-S2F-100/3T**	**C8-S2F-100/3T**
200 mg	3 ml	50 u	**C18-S2F-200/3T**	**C18U-S2F-200/3T**	**C8-S2F-200/3T**
500 mg	3 ml	50 u	**C18-S2F-500/3T**	**C18U-S2F-500/3T**	**C8-S2F-500/3T**
500 mg	6 ml	30 u	**C18-S2F-500/6T**	**C18U-S2F-500/6T**	**C8-S2F-500/6T**
1000 mg	6 ml	30 u	**C18-S2F-1G/6T**	**C18U-S2F-1G/6T**	**C8-S2F-1G/6T**
Glass columns / PTFE frits					
200 mg	6 ml	30 u	**C18-S2F-200/6G**	**C18U-S2F-200/6G**	**C8-S2F-200/6G**
500 mg	6 ml	30 u	**C18-S2F-500/6G**	**C18U-S2F-500/6G**	**C8-S2F-500/6G**
1000 mg	6 ml	30 u	**C18-S2F-1G/6G**	**C18U-S2F-1G/6G**	**C8-S2F-1G/6G**

Std. columns
PP straight tube + 20µm PE frits

LRC columns
PP tube + 20µm PE frits

Std. columns
PP straight tube + 20µm PTFE frits

Glass columns
Glass tube + 20µm PTFE frits

Upti-Clean™ Specialty

The Upti-Clean™ Specialty Series columns complete the Series S range. The Specialty series are designed for specific applications highlighted below.

- Polypropylene MG housing
- Std. PE or PTFE frits
- Luer outlet fitting

Florisil® columns

Florisil is a magnesia-loaded silica gel used to trap polar impurities within non-polar matrices. Florisil can also be used as an alternative to traditional virgin silica when working with viscous solvents.
Florisil PR is a grade for Pesticide applications

Weight	Volume	Qty	FL	FLPR
Std. columns / PE frits				
500 mg	3 ml	50 u	**FL-500/3**	**FLPR-500/3**
500 mg	6 ml	30 u	**FL-500/6**	**FLPR-500/6**
1000 mg	6 ml	30 u	**FL-1G/6**	**FLPR-1G/6**
2000 mg	6 ml	20 u	**FL-2G/6**	**FLPR-2G/6**
2000 mg	15 ml	20 u	**FL-2G/15**	**FLPR-2G/15**
2000 mg	25 ml	20 u	**FL-2G/25**	**FLPR-2G/25**
Std. columns / PTFE frits				
500 mg	3 ml	50 u	**FL-500/3T**	**FLPR-500/3T**
500 mg	6 ml	30 u	**FL-500/6T**	**FLPR-500/6T**
1000 mg	6 ml	30 u	**FL-1G/6T**	**FLPR-1G/6T**

Alumina columns

The aluminium atom lacks two electrons within its center that are responsible for ion pair interaction.
The acidic treatment of Alumina favors the retention of cationic species whilst a basic treatment of Alumina leads to the retention of anionic species.
Neutral Alumina is suitable to clean non ionisable compounds with polar function.

Applications : Environmental (dioxines, PCB,..)

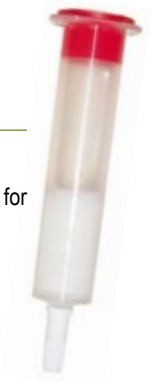
Weight	Volume	Qty	ALA	ALB	ALN
Std. columns / PE frits					
500 mg	3 ml	50 u	**ALA-500/3**	**ALB-500/3**	**ALN-500/3**
500 mg	6 ml	30 u	**ALA-500/6**	**ALB-500/6**	**ALN-500/6**
1000 mg	6 ml	30 u	**ALA-1G/6**	**ALB-1G/6**	**ALN-1G/6**
2000 mg	6 ml	20 u	**ALA-2G/6**	**ALB-2G/6**	**ALN-2G/6**
2000 mg	15 ml	20 u	**ALA-2G/15**	**ALB-2G/15**	**ALN-2G/15**
2000 mg	25 ml	20 u	**ALA-2G/25**	**ALB-2G/25**	**ALN-2G/25**
Std. columns / PTFE frits					
500 mg	3 ml	50 u	**ALA-500/3T**	**ALB-500/3T**	**ALN-500/3T**
500 mg	6 ml	30 u	**ALA-500/6T**	**ALB-500/6T**	**ALN-500/6T**
1000 mg	6 ml	30 u	**ALA-1G/6T**	**ALB-1G/6T**	**ALN-1G/6T**

Upti-Clean™ DRY columns

These columns remove trace water found in organic solvents or non aqueous samples. They contain a treated, high purity sodium sufate group within the structure.

Description	Weight	Volume	Qty	P/N
Upti-Clean DRY	300 mg	1 ml	50 u	**DRY-300/1**
Upti-Clean DRY	500 mg	3 ml	50 u	**DRY-500/3**
Upti-Clean DRY	2000 mg	3 ml	50 u	**DRY-2G/3**

Upti-Clean™ Specialty



Amberlite™ columns

Amberlite® is the first generation of polymer resins. They are used for fast separation of a variety of compounds from biological fluids. Amberlite® suffer from weak selectivity.

Weight	Volume	Qty	XAD-2	XAD-4	XAD-7	XAD-16
Std. columns / PE frits						
100 mg	1 ml	100 u	**XAD2-100/1**	**XAD4-100/1**	**XAD7-100/1**	**XAD16-100/1**
200 mg	3 ml	50 u	**XAD2-200/3**	**XAD4-200/3**	**XAD7-200/3**	**XAD16-200/3**
500 mg	3 ml	50 u	**XAD2-500/3**	**XAD4-500/3**	**XAD7-500/3**	**XAD16-500/3**
500 mg	6 ml	30 u	**XAD2-500/6**	**XAD4-500/6**	**XAD7-500/6**	**XAD16-500/6**
1000 mg	6 ml	30 u	**XAD2-1G/6**	**XAD4-1G/6**	**XAD7-1G/6**	**XAD16-1G/6**
1000 mg	12 ml	20 u	**XAD2-1G/12**	**XAD4-1G/12**	**XAD7-1G/12**	**XAD16-1G/12**
2000 mg	6 ml	30 u	**XAD2-2G/6**	**XAD4-2G/6**	**XAD7-2G/6**	**XAD16-2G/6**
2000 mg	12 ml	20 u	**XAD2-2G/12**	**XAD4-2G/12**	**XAD7-2G/12**	**XAD16-2G/12**
5000 mg	35 ml	20 u	**XAD2-5G/35**	**XAD4-5G/35**	**XAD7-5G/35**	**XAD16-5G/35**
10000 mg	60 ml	12 u	**XAD2-10G/60**	**XAD4-10G/60**	**XAD7-10G/60**	**XAD16-10G/60**
20000 mg	60 ml	12 u	**XAD2-20G/60**	**XAD4-20G/60**	**XAD7-20G/60**	**XAD16-20G/60**

Polyamide columns

Amide functionality upon a Nylon support. Polyamide columns are typically used for aromatic and natural compound extraction such as PAH or flavanoids

Weight	Volume	Qty	P6
Std. columns / PE frits			
100 mg	1 ml	100 u	**P6-100/1**
100 mg	3 ml	50 u	**P6-100/3**
200 mg	3 ml	50 u	**P6-200/3**
500 mg	3 ml	50 u	**P6-500/3**
500 mg	6 ml	30 u	**P6-500/6**
1000 mg	6 ml	30 u	**P6-1G/6**
2000 mg	6 ml	20 u	**P6-2G/6**
2000 mg	15 ml	20 u	**P6-2G/15**
2000 mg	25 ml	20 u	**P6-2G/25**

β-Cyclodextrine columns

β-Cyclodextrine is useful for cleaning small molecular mass oligosaccharides.

Weight	Volume	Qty	BCD
Std. columns / PE frits			
100 mg	1 ml	100 u	**B-CD-100/1**
100 mg	3 ml	50 u	**B-CD-100/3**
200 mg	3 ml	50 u	**B-CD-200/3**
500 mg	3 ml	50 u	**B-CD-500/3**
500 mg	6 ml	30 u	**B-CD-500/6**
1000 mg	6 ml	30 u	**B-CD-1G/6**

Graphitized carbon columns

The electronic interactions of graphitized carbon assure the retention of a large variety of compounds.This sorbent is especially suited to polar compound extraction within an aqueous matrix.

Weight	Volume	Qty	CG-ENV	CG
Std. columns / PE frits				
50 mg	1 ml	100 u	**CG-ENV-50/1**	**CG-50/1**
100 mg	1 ml	100 u	**CG-ENV-100/1**	**CG-100/1**
150 mg	3 ml	50 u		**CG-150/3**
200 mg	3 ml	50 u	**CG-ENV-200/3**	**CG-200/3**
250 mg	3 ml	50 u		**CG-250/3**
250 mg	6 ml	30 u		**CG-250/6**
500 mg	3 ml	50 u	**CG-ENV-500/3**	**CG-500/3**
500 mg	6 ml	30 u	**CG-ENV-500/6**	**CG-500/6**
1000 mg	6 ml	-	**CG-ENV-1G/6**	**CG-1G/6**
1000 mg	15 ml	20 u	**CG-ENV-1G/15**	**CG-1G/1**

Florisil & Alumina 96 well plate

Weight	Qty	FL	FLPR	ALA	ALB	ALN
50 mg	1 u	**FL-50/WP20**	**FLPR-50/WP20**	**ALA-50/WP20**	**ALB-50/WP20**	**ALN-50/WP20**
100 mg	1 u	**FL-100/WP20**	**FLPR-100/WP20**	**ALA-100/WP20**	**ALB-100/WP20**	**ALN-100/WP20**
150 mg	1 u	**FL-150/WP20**	**FLPR-150/WP20**	**ALA-150/WP20**	**ALB-150/WP20**	**ALN-150/WP20**

Sample Prep - Solid Phase Extraction

Upti-Clean™ 48 well plates

The Upti-Clean® 48 well-plate is a flash purification device for chemists working in Drug Discovery Laboratories and Medicinal Chemistry Departments.
The 48 well format maximises sample purification throughput and is an essential tool for library purification.The large volume wells (5 & 7 ml) allow high sample volume load.

Interchim silica and bonded silica are rigid supports that do not shrink or swell with solvents. The pH stability of bonded silica is limited, typically to within the range of 2 to 7.5. This is dependant on the chemisty and Interchim offers 8 different selectivities in this format. Our sorbents take advantage of our ultra pure spherical silca (Upti-prep™), and this achieves greater purification, and establishes optimized sample recovery.

Upti-Clean™ 48 well plates utilise Interchim's state of the art automated weight machine. This packing technology guarantees unprecedented accuracy (+/- 1% mass per column) compared to the commonly utilised competitor volumetric systems. Upti-Clean™ therefore raise the standards & client expectations for sample recovery /reproducibility.

Upti-Clean™ 48 well plates are QC tested in-house to guarantee tracability. Products are supplied with an individual certificate detailing Mfg number, Sorbent batch number & specifications. An additional certificate is supplied that states real sorbent mass in each individual well.

Upti-Clean™ 48 well plates are packed in a PEHD/Al bag for long term integral storage. This prevents potential damage from UV and moisture.

Upti-Clean® 48 well plates are manufactured from polypropylene MG, conform to a standard footprint (127,76 mm x 85,47 mm) and are compatible with existing systems on the market.

Sorbent	Mass / well 100 mg / 5 ml	Mass / well 250 mg / 5 ml	Mass / well 500 mg / 7 ml	Mass / well 1000 mg / 7 ml
Silica	**SI-100/WP50**	**SI-250/WP50**	**SI-500/WP70**	**SI-1G/WP70**
C18	**C18-100/WP50**	**C18-250/WP50**	**C18-500/WP70**	**C18-1G/WP70**
Penyl	**PH-100/WP50**	**PH-250/WP50**	**PH-500/WP70**	**PH-1G/WP70**
Amino	**NH2-100/WP50**	**NH2-250/WP50**	**NH2-500/WP70**	**NH2-1G/WP70**
Strong Anion Exchanger	**SAX-100/WP50**	**SAX-250/WP50**	**SAX-500/WP70**	**SAX-1G/WP70**
Strong Canion Exchanger	**SCX-100/WP50**	**SCX-250/WP50**	**SCX-500/WP70**	**SCX-1G/WP70**
Alumina basic	**ALB-100/WP50**	**ALB-250/WP50**	**ALB-500/WP70**	**ALB-1G/WP70**
Florisil	**FL-100/WP50**	**FL-250/WP50**	**FL-500/WP70**	**FL-1G/WP70**

Sample Prep - Solid Phase Extraction

Atoll™ - Polymer based

Atoll™ is a comprehensive product range based upon porous polymers consisting of ultra pure spherical particles with strictly controlled particle & pore size distribution. Atoll™ is the latest generation of polymer that does not shrink or swell with a range of standard solvents.

Atoll™ can be used through a wide range of pH (1-14) and is compatible with all solvents and existing samples. It has a very high surface area, Atoll™ XC exhibiting the highest surface area currently available on market (1500 sq M /g) approximately three times greater loading capacity than traditional silica sorbents. The higher capacity of Atoll™ allows for smaller bed masses.

Interchim bonding technology ensures greater batch to batch reproducibility for the Atoll™ family of products, therefore there is no longer a need for batch reservations. Our products subsequently achieve superior recovery rates relative to traditional media, exhibiting excellent reproducibility & consistency.

The Atoll™ family of products : Atoll Xtrem™ Capacity (XC) - Atoll™ Xtrem Capacity Wide Pore (XWP) - Atoll™ Hydrophilic (ATH) - Atoll™ Environment (AEV) - Atoll™ Lipophilic (ATL)

The Atoll™ range achieves accuracy of +/- 1% in mass per column thanks to a strictly controlled packing process. Atoll™ products are thoroughly quality control tested in-house to guarantee tracability. Products are supplied with an individual certificate detailing the specific production number and sorbent batch.

Atoll™ columns are packed in a PEHD/Al bag for long term integral storage. This prevents potential damage from UV and moisture.

Typical Atoll procedure

Conditioning
100 % MeOH : 1 ml
100 % H2O : 1 ml

Sample loading
0,2 - 1000 ml

Washing
H2O/MeOH (95/5) : 1 ml

Drying
2 min

Elution
100 % MeOH : 1 ml

Analysis

Type	Product code	Sorbent	Particle size	Porosity	Surface area
Atoll Xtrem Capacity	30XC	PSDVB	30 µm	n.a.	1500 m^2/g
	XC	PSDVB	70 µm	n.a.	1500 m^2/g
Atoll Xtrem Capacity Wide Pore	XWP	PSDVB	90 µm	n.a.	1200 m^2/g
Atoll Hydrophile	30ATH	n.a.	30 µm	70 Å	800 m^2/g
	ATH	n.a.	75 µm	70 Å	800 m^2/g
Atoll Environment	AEV	PSHEMA	75 µm	70 Å	800 m^2/g
Atoll Lipophile	ATL	PSDVB	100 µm	70 Å	800 m^2/g

Sample Prep - Solid Phase Extraction

Atoll™ XC columns - Polymer based

Atoll™ Xtrem Capacity (XC)

Atoll™ XC exhibits the highest surface area currently available on the market (1500 sq M /g), approximately three times greater loading capacity than traditional silica sorbents. Atoll XC improves, 2 to 3 fold, the retention of a compound of interest, compared to traditional silica.
Atoll XC polymer is a versatile sorbent for the extraction and pre-concentration of non-polar, polar, acidic, basic or neutral compounds.

- Std. 70 µm and 30 µm
- pH stability : 1 to 14
- Pharmaceutical applications : drugs & metabolites in biological fluids
- Environmental applications : PAH, PCB, carbamates, phenyl-ureas, acrylamide, glyphosate

Weight	Volume	Qty	Atoll XC	Atoll 30 µm XC
Std. columns / PE frits				
30 mg	1 ml	50 u	**XC-30/1**	**30XC-30/1**
50 mg	1 ml	50 u	**XC-50/1**	**30XC-50/1**
60 mg	1 ml	50 u	**XC-60/1**	**30XC-60/1**
75 mg	1 ml	50 u	**XC-75/1**	**30XC-75/1**
100 mg	1 ml	50 u	**XC-100/1**	**30XC-100/1**
100 mg	3 ml	50 u	**XC-100/3**	**On request**
150 mg	3 ml	50 u	**XC-150/3**	**On request**
200 mg	3 ml	50 u	**XC-200/3**	**On request**
250 mg	3 ml	50 u	**XC-250/3**	**On request**
500 mg	6 ml	30 u	**XC-500/6**	**On request**
LRC columns / PE frits				
50 mg	LRC 15	50 u	**XC-50LRC**	**30XC-50LRC**
75 mg	LRC 15	50 u	**XC-75LRC**	**30XC-75LRC**
100 mg	LRC 15	50 u	**XC-100LRC**	**30XC-100LRC**
200 mg	LRC 15	50 u	**XC-200LRC**	**On request**
Std. columns / PTFE frits				
30 mg	1 ml	50 u	**XC-30/1T**	**30XC-30/1T**
50 mg	1 ml	50 u	**XC-50/1T**	**30XC-50/1T**
60 mg	1 ml	50 u	**XC-60/1T**	**30XC-60/1T**
75 mg	1 ml	50 u	**XC-75/1T**	**30XC-75/1T**
100 mg	1 ml	50 u	**XC-100/1T**	**30XC-100/1T**
100 mg	3 ml	50 u	**XC-100/3T**	**On request**
150 mg	3 ml	50 u	**XC-150/3T**	**On request**
200 mg	3 ml	50 u	**XC-200/3T**	**On request**
250 mg	3 ml	50 u	**XC-250/3T**	**On request**
Glass columns / PTFE frits				
200 mg	6 ml	30 u	**XC-200/6G**	**On request**
500 mg	6 ml	30 u	**XC-500/6G**	**On request**

Std. columns
PP straight tube + 20µm PE frits

LRC columns
PP tube + 20µm PE frits

Std. columns
PP straight tube + 20µm PTFE frits

Glass columns
Glass tube + 20µm PTFE frits

Atoll™ Hydrophilic (ATH)

Atoll™ Hydrophilic contains proprietary chemical modifications that achieve unsurpassed compound extraction within 100% aqueous matrices. This technology facilitates mixed hydrophilic /hydrophobic interactions.

- Std. 70 µm
- pH stability : 2 to 12
- Pharmaceutical applications : drugs & metabolites in biological fluids
- Environmental applications : PAH, PCB, carbamates, phenyl-ureas, acrylamide, glyphosate

Weight	Volume	Qty	Atoll ATH	Atoll 30 µm ATH
Std. columns / PE frits				
30 mg	1 ml	50 u	**ATH-30/1**	**30ATH-30/1**
50 mg	1 ml	50 u	**ATH-50/1**	**30ATH-50/1**
60 mg	1 ml	50 u	**ATH-60/1**	**30ATH-60/1**
75 mg	1 ml	50 u	**ATH-75/1**	**30ATH-75/1**
100 mg	1 ml	50 u	**ATH-100/1**	**30ATH-100/1**
100 mg	3 ml	50 u	**ATH-100/3**	**On request**
150 mg	3 ml	50 u	**ATH-150/3**	**On request**
200 mg	3 ml	50 u	**ATH-200/3**	**On request**
250 mg	3 ml	50 u	**ATH-250/3**	**On request**
500 mg	6 ml	30 u	**ATH-500/6**	**On request**
1000 mg	6 ml	30 u	**ATH-1G/6**	**On request**
LRC columns / PE frits				
50 mg	LRC 15	50 u	**ATH-50LRC**	**30ATH-50LRC**
75 mg	LRC 15	50 u	**ATH-75LRC**	**30ATH-75LRC**
100 mg	LRC 15	50 u	**ATH-100LRC**	**30ATH-100LRC**
200 mg	LRC 15	50 u	**ATH-200LRC**	**On request**
Std. columns / PTFE frits				
30 mg	1 ml	50 u	**ATH-30/1T**	**30ATH-30/1T**
50 mg	1 ml	50 u	**ATH-50/1T**	**30ATH-50/1T**
60 mg	1 ml	50 u	**ATH-60/1T**	**30ATH-60/1T**
75 mg	1 ml	50 u	**ATH-75/1T**	**30ATH-75/1T**
100 mg	1 ml	50 u	**ATH-100/1T**	**30ATH-100/1T**
100 mg	3 ml	50 u	**ATH-100/3T**	**On request**
150 mg	3 ml	50 u	**ATH-150/3T**	**On request**
200 mg	3 ml	50 u	**ATH-200/3T**	**On request**
250 mg	3 ml	50 u	**ATH-250/3T**	**On request**
500 mg	6 ml	30 u	**ATH-500/6T**	**On request**
1000 mg	6 ml	30 u	**ATH-1G/6T**	**On request**
Glass columns / PTFE frits				
200 mg	6 ml	30 u	**ATH-200/6G**	**On request**
500 mg	6 ml	30 u	**ATH-500/6G**	**On request**

Atoll™ AEV columns - Polymer based

Atoll™ Environment (AEV)

Atoll™ AEV is a hydroxyethlmethacrylate - polystyrene polymer that supports the extraction of compounds weakly retained on C18. Atoll™ AEV exhibits high extraction flow of non-polar and mid-polar compounds that allows to clean and collect multi-residue samples in a single fraction prior to analysis. These characteristics identify this support as suitable to perform environmental extractions.

- 75 µm
- pH stability : 1 to 12
- Environmental applications : PAH, PCB, carbamates, phenyl-ureas

Weight	Volume	Qty	AEV
Std. columns / PE frits			
30 mg	1 ml	50 u	**AEV-30/1**
50 mg	1 ml	50 u	**AEV-50/1**
60 mg	1 ml	50 u	**AEV-60/1**
75 mg	1 ml	50 u	**AEV-75/1**
100 mg	1 ml	50 u	**AEV-100/1**
100 mg	3 ml	50 u	**AEV-100/3**
150 mg	3 ml	50 u	**AEV-150/3**
200 mg	3 ml	50 u	**AEV-200/3**
250 mg	3 ml	50 u	**AEV-250/3**
500 mg	6 ml	30 u	**AEV-500/6**
1000 mg	6 ml	30 u	**AEV-1G/6**
LRC columns / PE frits			
50 mg	LRC 15	50 u	**AEV-50LRC**
75 mg	LRC 15	50 u	**AEV-75LRC**
100 mg	LRC 15	50 u	**AEV-100LRC**
200 mg	LRC 15	50 u	**AEV-200LRC**
Std. columns / PTFE frits			
30 mg	1 ml	50 u	**AEV-30/1T**
50 mg	1 ml	50 u	**AEV-50/1T**
60 mg	1 ml	50 u	**AEV-60/1T**
75 mg	1 ml	50 u	**AEV-75/1T**
100 mg	1 ml	50 u	**AEV-100/1T**
100 mg	3 ml	50 u	**AEV-100/3T**
150 mg	3 ml	50 u	**AEV-150/3T**
200 mg	3 ml	50 u	**AEV-200/3T**
250 mg	3 ml	50 u	**AEV-250/3T**
500 mg	6 ml	30 u	**AEV-500/6T**
1000 mg	6 ml	30 u	**AEV-1G/6T**
Glass columns / PTFE frits			
200 mg	6 ml	30 u	**AEV-200/6G**
500 mg	6 ml	30 u	**AEV-500/6G**

Std. columns
PP straight tube + 20µm PE frits

LRC columns
PP tube + 20µm PE frits

Std. columns
PP straight tube + 20µm PTFE frits

Glass columns
Glass tube + 20µm PTFE frits

Atoll™ Lipophilic (ATL)

Atoll™ ATL is a 100 µm PSDVB optimized for the extraction of hydrophobic compounds in a large variety of matrices and is an excellent alternative to high flow silica for crude samples.

- pH stability : 1 to 14
- Applications : oils, muds, reactional environment after synthesis, …

Weight	Volume	Qty	Atoll ATL
Std. columns / PE frits			
30 mg	1 ml	50 u	**ATL-30/1**
50 mg	1 ml	50 u	**ATL-50/1**
60 mg	1 ml	50 u	**ATL-60/1**
75 mg	1 ml	50 u	**ATL-75/1**
100 mg	1 ml	50 u	**ATL-100/1**
100 mg	3 ml	50 u	**ATL-100/3**
150 mg	3 ml	50 u	**ATL-150/3**
200 mg	3 ml	50 u	**ATL-200/3**
250 mg	3 ml	50 u	**ATL-250/3**
500 mg	6 ml	30 u	**ATL-500/6**
1000 mg	6 ml	30 u	**ATL-1G/6**
LRC columns / PE frits			
50 mg	LRC 15	50 u	**ATL-50LRC**
75 mg	LRC 15	50 u	**ATL-75LRC**
100 mg	LRC 15	50 u	**ATL-100LRC**
200 mg	LRC 15	50 u	**ATL-200LRC**
Std. columns / PTFE frits			
30 mg	1 ml	50 u	**ATL-30/1T**
50 mg	1 ml	50 u	**ATL-50/1T**
60 mg	1 ml	50 u	**ATL-60/1T**
75 mg	1 ml	50 u	**ATL-75/1T**
100 mg	1 ml	50 u	**ATL-100/1T**
100 mg	3 ml	50 u	**ATL-100/3T**
150 mg	3 ml	50 u	**ATL-150/3T**
200 mg	3 ml	50 u	**ATL-200/3T**
250 mg	3 ml	50 u	**ATL-250/3T**
500 mg	6 ml	30 u	**ATL-500/6T**
1000 mg	6 ml	30 u	**ATL-1G/6T**
Glass columns / PTFE frits			
200 mg	6 ml	30 u	**ATL-200/6G**
500 mg	6 ml	30 u	**ATL-500/6G**

Sample Prep - Solid Phase Extraction

Atoll™ XWP columns - Polymer based

Atoll™ Xtrem Capacity Wide Pore (XWP)

Atoll™ XWP is a highly cross linked PSDVB exhibiting a very high surface area (1200 m^2/g) and a 90 µm particle size. The apparent porosity of Atoll™ XWP makes it particularly suitable for protein & peptide cleaning from biologic fluids within a cut-off limit of ~ 500 KD. Its characteristics guarantee an excellent throughput and achieve efficient extractions without clogging.

- pH stability : 1 to 14
- Applications : proteins and peptides in polar matrices, molecules with high molecular weight in all solvent types.

Weight	Volume	Qty	Atoll XWP
Std. columns / PE frits			
30 mg	1 ml	50 u	**XWP-30/1**
50 mg	1 ml	50 u	**XWP-50/1**
60 mg	1 ml	50 u	**XWP-60/1**
75 mg	1 ml	50 u	**XWP-75/1**
100 mg	1 ml	50 u	**XWP-100/1**
100 mg	3 ml	50 u	**XWP-100/3**
150 mg	3 ml	50 u	**XWP-150/3**
200 mg	3 ml	50 u	**XWP-200/3**
250 mg	3 ml	50 u	**XWP-250/3**
500 mg	6 ml	30 u	**XWP-500/6**
LRC columns / PE frits			
50 mg	LRC 15	50 u	**XWP-50LRC**
75 mg	LRC 15	50 u	**XWP-75LRC**
100 mg	LRC 15	50 u	**XWP-100LRC**
200 mg	LRC 15	50 u	**XWP-200LRC**
Std. columns / PTFE frits			
30 mg	1 ml	50 u	**XWP-30/1T**
50 mg	1 ml	50 u	**XWP-50/1T**
60 mg	1 ml	50 u	**XWP-60/1T**
75 mg	1 ml	50 u	**XWP-75/1T**
100 mg	1 ml	50 u	**XWP-100/1T**
100 mg	3 ml	50 u	**XWP-100/3T**
150 mg	3 ml	50 u	**XWP-150/3T**
200 mg	3 ml	50 u	**XWP-200/3T**
250 mg	3 ml	50 u	**XWP-250/3T**
Glass columns / PTFE frits			
200 mg	6 ml	30 u	**XWP-200/6G**
500 mg	6 ml	30 u	**XWP-500/6G**

Std. columns
PP straight tube + 20µm PE frits

LRC columns
PP tube + 20µm PE frits

Std. columns
PP straight tube + 20µm PTFE frits

Glass columns
Glass tube + 20µm PTFE frits

Atoll™ Bio-Ion Exchange

Atoll™ Bio-Ion Exchange bonded chemistry exhibits Ion exchange interaction and offers distinct selectivity to support the extraction and purification of proteins in aqueous matrices, such as biological fluids.

Adsorbent vol.	Volume	Qty	SPCE	WPCE	WPAE	SPAE
0,5 ml	3 ml	50 u	**SPCE-0.5/3**	**WPCE-0.5/3**	**WPAE-0.5/3**	**SPAE-0.5/3**
1 ml	3 ml	50 u	**SPCE-1X/3**	**WPCE-1X/3**	**WPAE-1X/3**	**SPAE-1X/3**
2 ml	6 ml	50 u	**SPCE-2X/6**	**WPCE-2X/6**	**WPAE-2X/6**	**SPAE-2X/6**

Sample Prep - Solid Phase Extraction

Atoll™ 96 well plates - Polymer based

Atoll™ is a comprehensive product range based upon porous polymers consisting of ultra pure spherical particles with strictly controlled particle & pore size distribution. Atoll™ is the latest generation of polymer that does not shrink or swell within a range of standard solvents. The Atoll™ family of products : Atoll Xtrem™ Capacity (XC) - Atoll™ Xtrem Capacity Wide Pore (XWP) - Atoll™ Hydrophilic (ATH) - Atoll™ Environment (AEV) - Atoll™ Lipophilic (ATL)
See page A.43 to A.49 for relevant information about Atoll™ characteristics.

Automated cleanup procedures are now an integral part of the modern laboratory.

Atoll™ is available in a 96 well format with a 2 ml volume per well. This high quality unit provides rapid throughput of sample, within an automated process, whilst establishing excellent well-to-well consistency.

Atoll™ 96 well plates utilise Interchim's state of the art automated weight machine.
This packing technology guarantees unprecedented accuracy (+/- 1% mass per column) compared to the commonly utilised competitor volumetric systems. Atoll™ therefore raises the standards & client expectations for sample recovery /reproducibility.

Atoll™ 96 well plates are QC tested in-house to guarantee tracibility. Products are supplied with an individual certificate detailing Mfg number, Sorbent batch number and specifications. An additional certificate is supplied that states real sorbent mass in each individual well.

Atoll™ 96 well plates are packed in a PEHD/Al bag for long term integral storage. This prevents potential damage from UV and moisture.

Atoll™ 96 well plates are manufactured from polypropylene, conform to a standard footprint (127,76 mm x 85,47 mm x 19,74 mm) and are compatible with existing systems on the market.

Weight	Qty	Atoll XC	Atoll 30XC	Atoll ATH	Atoll 30ATH
30 mg	1 u	**XC-30/WP20**	**30XC-30/WP20**	**ATH-30/WP20**	**30ATH-30/WP20**
50 mg	1 u	**XC-50/WP20**	**30XC-50/WP20**	**ATH-50/WP20**	**30ATH-50/WP20**
60 mg	1 u	**XC-60/WP20**	**30XC-60/WP20**	**ATH-60/WP20**	**30ATH-60/WP20**
75 mg	1 u	**XC-75/WP20**	**30XC-75/WP20**	**ATH-75/WP20**	**30ATH-75/WP20**
100 mg	1 u	**XC-100/WP20**	**30XC-100/WP20**	**ATH-100/WP20**	**30ATH-100/WP20**
150 mg	1 u	**XC-150/WP20**	**n.a.**	**n.a.**	**n.a.**
200 mg	1 u	**XC-200/WP20**	**n.a.**	**n.a.**	**n.a.**

Weight	Qty	Atoll AEV	Atoll ATL	Atoll XWP
30 mg	1 u	**AEV-30/WP20**	**ATL-30/WP20**	**XWP-30/WP20**
50 mg	1 u	**AEV-50/WP20**	**ATL-50/WP20**	**XWP-50/WP20**
60 mg	1 u	**AEV-60/WP20**	**ATL-60/WP20**	**XWP-60/WP20**
75 mg	1 u	**AEV-75/WP20**	**ATL-75/WP20**	**XWP-75/WP20**
100 mg	1 u	**AEV-100/WP20**	**ATL-100/WP20**	**XWP-100/WP20**

Sample Prep - Solid Phase Extraction

Polymer/ Silica kits - method development & optimization

The rapid development of robust, reproducible & repeatable Solid Phase Extraction methods is a primary challenge for todays analyst. To assist with the achievement of this goal Interchim has developed a complete range of kits. The analyst can combine, within the kits, sorbent nature (silicas or polymers), mass and container volume. The combination of these parameters is critical to obtain optimum extraction yield as well as achieving good reproducibility.

Method development kits provide quick and efficient selection of the most suitable column. The analyst should know a basic background of information regarding the nature of the compound of interest, the impurities and the matrix. Upon identification of these parameters the optimization kit should optimize extraction yield and elution volume.

Interchim is happy to assist you in building an appropriate kit for method development and optimization.

Pharmaceutical 1

Qty	P/N SPE-D9 Kit 100 mg / 1 mL	P/N SPE-D10 Kit 200 mg / 3 mL
6 columns C18-S	**C18-S-100/1**	**C18-S-200/3**
6 columns C8-S	**C8-S-100/1**	**C8-S-200/3**
6 columns CN-S	**CN-S-100/1**	**CN-S-200/3**
6 columns MM1	**MM1-100/1**	**MM1-200/3**
6 columns RPAQ	**RPAQ-100/1**	**RPAQ-200/3**
6 columns SCX	**SCX-100/1**	**SCX-200/3**
6 columns SAX	**SAX-100/1**	**SAX-200/3**

Pharmaceutical 2

Qty	P/N SPE-D11 Kit 100 mg / 1 mL	P/N SPE-D12 Kit 200 mg / 3 mL
6 columns C18-S	**C18-S-100/1**	**C18-S-200/3**
6 columns C8-S	**C8-S-100/1**	**C8-S-200/3**
6 columns RPAQ	**RPAQ-100/1**	**RPAQ-200/3**
6 columns MM1	**MM1-100/1**	**MM1-200/3**
6 columns SCX	**SCX-100/1**	**SCX-200/3**
6 columns XC	**XC-100/1**	**XC-200/3**
6 columns AEV	**AEV-100/1**	**AEV-200/3**

Sample Prep - Solid Phase Extraction

Polymer/ Silica kits - method development & optimization

Non-polar kit

P/N SPE-D54 100 mg / 1 mL	P/N SPE-D55 200 mg / 3 mL	P/N SPE-D56 500 mg / 6 mL
6 columns C18-S	6 columns C18-S	6 columns C18-S
6 columns C18U-S	6 columns C18U-S	6 columns C18U-S
6 columns RPAQ	6 columns RPAQ	6 columns RPAQ
6 columns C8-S	6 columns C8-S	6 columns C8-S
6 columns C2	6 columns C2	6 columns C2
6 columns PH-S	6 columns PH-S	6 columns PH-S
6 columns CH	6 columns CH	6 columns CH
6 columns ATH	6 columns ATH	6 columns ATH
6 columns XC	6 columns XC	6 columns XC

Ion exchange & mixed mode kit

P/N SPE-D57 200 mg / 3 mL	P/N SPE-D58 500 mg / 6 mL
6 columns SCX	6 columns SCX
6 columns SAX	6 columns SAX
6 columns WCX	6 columns WCX
6 columns DEAE	6 columns DEAE
6 columns NH2	6 columns NH2
6 columns MM1	6 columns MM1
6 columns MM2	6 columns MM2
6 columns MM3	6 columns MM3
6 columns MM4	6 columns MM4

Polymer kit

P/N SPE-D15 100 mg / 1 mL	P/N SPE-D59 50 mg / 1 mL
6 columns XC	6 columns XC
6 columns XWP	6 columns XWP
6 columns AEV	6 columns AEV
6 columns ATH	6 columns ATH
6 columns ATL	6 columns ATL
	6 columns 30ATH
	6 columns 30XC

Optimization kit

QtyP/N SPE-DO60	P/N SPE-DO61
6 columns C18-S, 30mg/1ml	6 columns XC, 20mg/1ml
6 columns C18-S, 40mg/1ml	6 columns XC, 30mg/1ml
6 columns C18-S, 50mg/1ml	6 columns XC, 40mg/1ml
6 columns C18-S, 60mg/1ml	6 columns XC, 50mg/1ml
6 columns C18-S, 70mg/1ml	6 columns XC, 60mg/1ml
6 columns C18-S, 80mg/1ml	6 columns XC, 70mg/1ml
6 columns C18-S, 90mg/1ml	6 columns XC, 80mg/1ml
6 columns C18-S, 100mg/1ml	

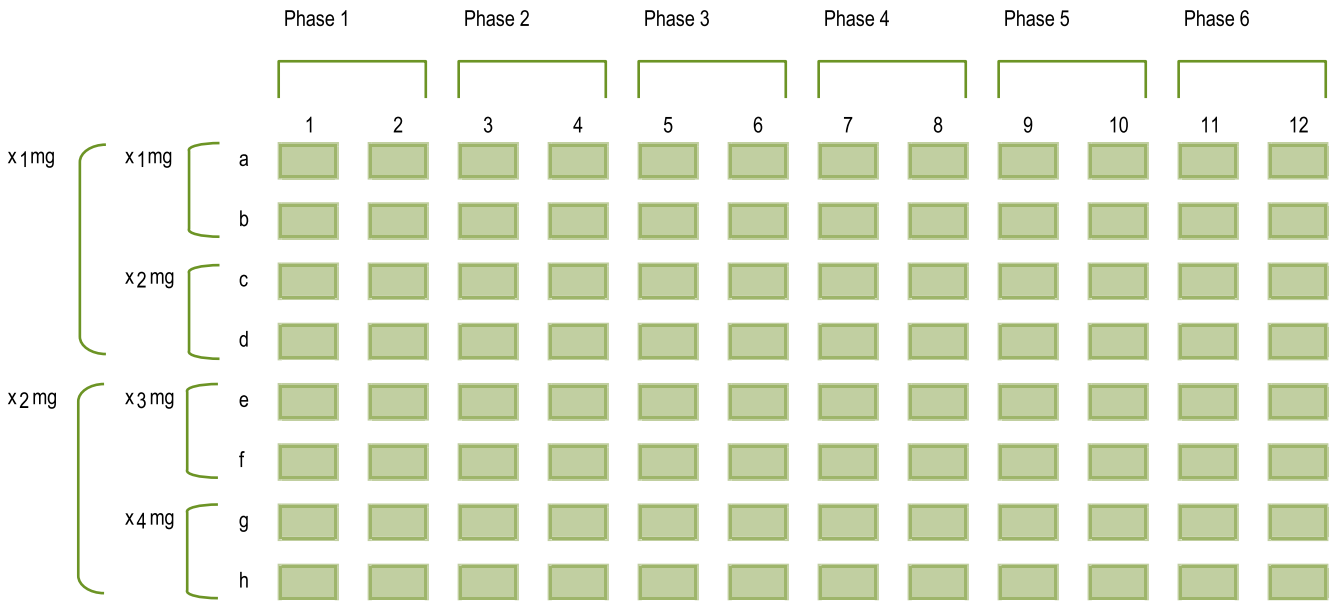
Polymer/ Silica - 96 well plate custom kits

The 96 well format allows for a faster, easier process of SPE method development. Kit selection should be based upon selection of appropriate sorbent and the identification of appropriate sorbent mass per well (20 to 200 mg relative to sorbent density).

Interchims technical center can assist with identification of your specific requirements. Plate proposals are provided within 2 working days of receiving your enquiry.
Your specified plate is supplied with a weight certificate that specifies exact sorbent mass in every well to a tolerance of +/- 1% .

Description	P/N
96 well plate development kit	**96WP-DO63191**

E.g. 96 well-plate pharmaceutical method development



Upti-clean™ silica media

Hydrophobic & Hydrophilic

C18-S	end capped
C18U-S	non-end capped
LCC	end capped
RP.AQ	hydrophilic
C8-S	end capped
C8U-S	non-end capped
CN-S	Cyano
PH-S	Phenyl
SI-S	Silica

Ion Exchange & Mixed

NH_2	weak anion exchanger
DEAE	medium anion exchanger
SAX	strong anion exchanger
MM4	hydrophobic /weak anion exchanger
MM2	hydrophobic /strong anion exchanger
WCX	weak cation exchanger
SCX	strong cation exchanger
MM3	hydrophobic /weak cation exchanger
MM1	hydrophobic /strong cation exchanger

Atoll® Polymer

Hydrophobic, Hydrophilic & Mixed

ATL	Medium hydrophobic
XC	Strong hydrophobic, 70 µm
30XC	Strong hydrophobic, 30 µm
XWP	Strong hydrophobic, wide pore
AEV	Hydrophobic /hydrophilic
ATH	Medium hydrophilic, 70 µm
30ATH	Medium hydrophilic, 30 µm

Sample Prep - Solid Phase Extraction

Interchim custom packing capabilities

Interchim's state of the art automated weight machine facilitates the custom packing of columns and multi-well plates that guarantees unprecedented accuracy (+/- 1% mass per column) compared to the commonly utilised competitor volumetric systems.

Our systems therefore raise the standards & client expectations for sample recovery /reproducibility.

Interchim is able to assist clients in identification of the necessary parameters for custom supply i.e.

- Sorbent type
- Sorbent mass

- Column, plate or container format
- Column, plate or container volume
- Frit type and porosity

- Quantity of units
- Weight certification

Considerations toward production parameters are outlined on the following page.

Proposals

Proposals are provided within 2 working days of receiving your enquiry.
This will incorporate a confidentiality agreement to maintain the integrity of both parties.

Interchim custom packing capabilities

Sorbent considerations

A number of client enquiries are for the packing of their own sorbent or from a third party manufacturer. In such instances, sorbent type, physical characteristics and a safety data sheet need to be specified.

The Sorbent Mass is, in part, governed by the parameters of the column/ plate to be packed. The current range for this service is between 15 mg and 70 g with a +/- 1% guaranteed accuracy (according to our standard 1 ml to 150 ml containers).

Interchim's sorbent selection guide on page A.28 can assist your selection of appropriate sorbent. The guide highlights a range of ~ 50 silica or polymer based selectivities.

Sorbent columns or plates

Column

- Polypropylene straight reservoir 1 - 3 - 6 - 15 - 25 - 75 - 150 ml
- Polypropylene LRC (Large Reservoir Capacity) 15 ml
- Glass straight reservoir 6 ml

Plate

- 96 Well plates 2 ml
- 48 Well plates 5 - 7 ml

Frit type and porosity

- PTFE, Teflon® or glass fiber frits for polypropylene straight tubes & LRC reservoirs
- Teflon® frits for straight glass tubes
- PTFE frits for 48 & 96 plates

Miscellaneous

The packing of specialty containers are considered relative to the parameters of our packing system.

Sample Prep - Solid Phase Extraction

Vacuum manifold for SPE columns

Vacuum manifold systems are time saving devices for sample preparation that establish greater consistency and reproducibility.

Interchim manifolds are compatible with all Luer fitting SPE columns existing on the market and allow the simultaneous processing of 12-to-24 samples.

Units are easy to set up, with a simple vacuum adjustment. Stop cocks are installed on each path.

Vacuum pumps minimize flow problems associated with crude sample or insufficient vacuum.

Vacuum manifold protocol P/N 518100

1. Screw the black lid of the upper part of the manifold
2. Introduce the plastic waste in the Glass basin
3. Insert collection needles on male Luer outlets under the lid
4. Set taps on the lids female Luer inlets
5. Place lid cover on the glass basin
6. Install SPE columns on closed taps
7. Close unused lids on female Luer inlets
8. Open vacuum on the Glass basin outlet valve
9. Establish SPE steps at constant flow and depression (the vacuum may be monitored with the Glass basin valve)
10. Remove waste after the rinsing step & insert collection rack with glass tubes
11. Replace lid cover, add vacuum to Glass basin, elute to collect sample
12. Insert dry cover instead of the lid. re-apply vacuum
13. Attach dry cover (with heated nitrogen outlet) for evaporation and sample concentration.

Description	12 position P/N	Qty	16 position P/N	Qty	24 position P/N	Qty
Vacuum manifold Set-Complete	**518100**	u	**336570**	u	**Q72030**	u
Glass chamber	**Q71530**	u	**Q71900**	u	**Q72230**	u
Cover, gasket, & 12 stopcocks	**Q71540**	u	**Q71910**	u	**Q72240**	u
Gaskets	**Q71550**	2 u	**Q71920**	2 u	**Q72250**	2 u
Vacuum gauge, valve, & glass chamber	**Q71560**	u	**Q71930**	u	**Q72260**	u
Needles - Polypropylene	**Q57820**	12 u	**Q71940**	16 u	**Q57830**	24 u
Needles - Stainless Steel	**Q71570**	12 u	**Q71950**	16 u	**Q72270**	24 u
Collection Rack-shelves, legs, clips, & posts	**Q71580**	u	**Q71960**	u	**Q72280**	u
Plate - 13 mm	**Q71590**	u	**Q71970**	u	**Q72290**	u
Plate - volumetric flask	**Q71600**	u				
Plate - 16 mm test tube	**Q71610**	u	**Q71980**	u	**Q72300**	u
Plate - autosampler vial	**Q71640**	u				
Plate - dimple	**Q71660**	u	**Q71990**	u	**Q72310**	u
Plate - base	**Q71670**	u	**Q72000**	u	**Q72320**	u
Stopcocks	**Q71680**	12 u	**Q72010**	16 u	**Q72330**	24 u
Drying attachment	**Q71690**	u	**Q72020**	u	**Q72340**	u
PP vacuum waste container	**Q71700**	10 u				
Support posts for rack	**BI4330**	u	**BI4340**	u	**BI4340**	u

Accessories

Description	P/N	Qty
Female Luer Fittings	**Q72360**	2 u
Male Luer Fittings	**Q72370**	2 u
Support posts for rack	**Q72380**	3 u
Legs for cover - black	**Q72390**	4 u
Vacuum gauge & valve assembly	**Q72400**	u
Valve assembly only	**Q72420**	u
Vacuum gauge	**Q72440**	u
Retaining clips	**Q72450**	12 u
Vacuum manifold plugs	**Q72460**	50 u
Glass collection tube 12 x 75 mm	**CD9520**	1000 u
Glass collection tube 16 x 100 mm	**CD9530**	1000 u

Needles and control valve

Description	P/N	Qty
Control Valve	**Q72470**	25 u
Control Valve	**Q72471**	50 u
Teflon Needles	**Q72500**	100 u
Teflon Needles	**Q72501**	500 u
Teflon Flow Needle	**CD7022**	100 u
Teflon Flow Needle	**CD7023**	500 u

Flash Purification

Vacuum manifold system - 10 position

accepts large capacity columns (25, 75 & 150 ml).

Description	P/N	Qty
Flash Vacuum Manifold Set-Complete	**BU3010**	u
Glass chamber	**BU3020**	u
Cover, gasket, & 10 stopcocks	**BU3030**	u
Gaskets	**BU3040**	2 u
Vacuum gauge, valve, & glass chamber	**BU3050**	u
Needles - Polypropylene	**BU3060**	10 u
Needles - Stainless Steel	**BU3070**	10 u
Collection Rack-shelves, legs, clips, & posts	**BU3080**	u
Plate - 19 mm	**BU3090**	u
Plate - 25 mm	**BU3100**	u
Plate - dimple	**BU3110**	u
Plate - base	**BU3120**	u
Stopcocks	**BU3140**	10 u
Drying attachment	**BU3160**	u
Support posts for rack	**BI4340**	u

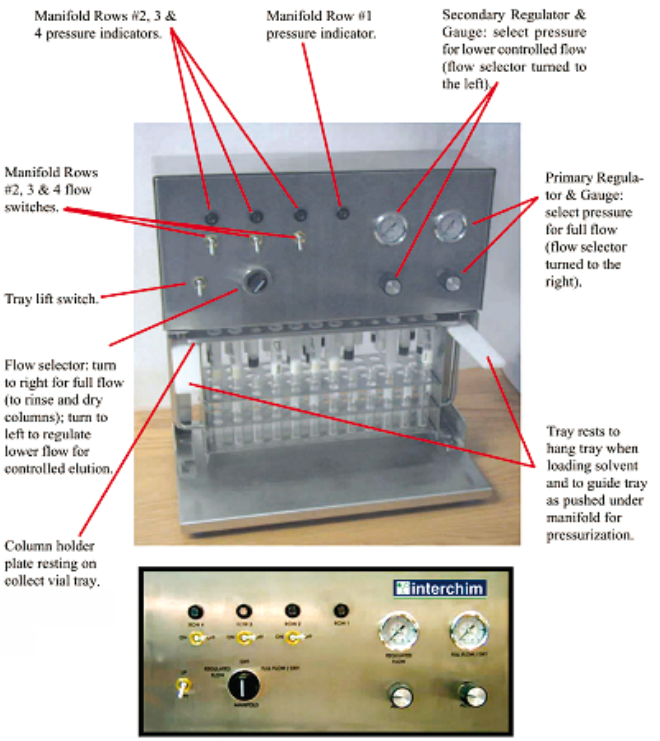
Sample Prep - Solid Phase Extraction

Positive pressure manifold

The positive pressure manifold provides an ultra efficient, reproducible, simple robust way to simultaneously process up to 48 samples. Individually regulated positions provide even pressure to each column. Manifolds can accommodate a large range of column sizes whilst providing an even flow for each position.

- Individually regulated positions to provide even pressure to each column.
- Four banks - 12 positions each. Flow is always provided to bank one. User can control flow to each of the other three banks.
- Capacity - 1-to-48 columns of either 1 mL, 3 mL, 6 mL, 10 mL or 15 mL. Switch between column sizes by using appropriate adaptor plate.
- Air Supply : N_2 or compressed air regulated to 75 psi & filtered to 10 µm.
- Dual pressure regulators allow users different pressure setting for extraction and column drying.
- Waste reservoir included that can be emptied between each waste step if required.
- Single switch raises & lowers sample racks and creates an airtight seal.

Description	P/N	Qty
Completed manifold system with 10 mL / 15 mL rack, collection rack, waste rack and waste bin	**BY9950**	1 u
10 mL & 15 mL SPE rack	**CD3550**	1 u
Adapter extraction plates for 1 mL columns	**CD3520**	1 u
Adapter extraction plates for 3 mL columns	**CD3530**	1 u
Adapter extraction plates for 6 mL columns	**CD3540**	1 u
Installation kit	**CK4570**	1 u
Waste rack	**CD3570**	1 u
Collection rack 13 x 100 mm glass tubes	**CH6220**	1 u
Collection rack 16 x 100 mm glass tubes	**CD3560**	1 u
Replacement in-line air filter	**CD3580**	1 u



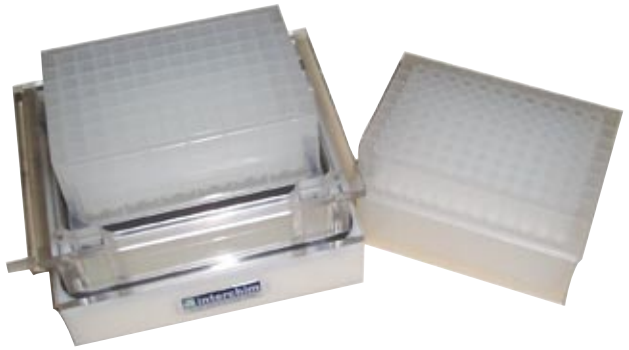
Universal vacuum manifold for 48 & 96 well plates

The universal well plate vacuum manifold is a versatile and effective vacuum manifold system suited to both 48 & 96 well plates for fast and efficient automated sample processing techniques.

- Filtration
- Protein crash filtration
- Solid Phase Extraction (SPE)

Description	P/N	Qty
Well plate manifold (48 &96), complete system	**AN1530**	1 u
24 well collection plates 10 ml	**BN9650**	25 u
24 well pre-pierced lid cover	**CA2320**	100 u
24 well collection holder	**BM4880**	1 u
24 well extraction holder	**BM4890**	1 u
24 well rack collection tubes 16 x 60 mm	**CE3800**	24 u
48 well collection plate 5 ml	**BG7400**	25 u
48 well pre-pierced lid cover	**BG7410**	100 u
48 well collection holder	**BM4900**	1 u
48 well extraction holder	**BM4910**	1 u
48 well rack collection tubes 11 x 60 mm	**CE3790**	48 u
96 well collection plates 2 ml	**U90380**	50 u
96 well pre-pierced lid cover	**BD7730**	100 u
Standard base	**BM4930**	1 u
Up cover	**CD3250**	1 u
Universal Tube	**CD3270**	1 u
EPDM Gasket	**CD3300**	1 u
Neoprene Gasket	**CD3330**	1 u
Wedge 12.7 mm	**CD3360**	1 u
Wedge 25.4 mm	**CD3390**	1 u
Gauge (Manometer) / Liquid trap	**CD3420**	1 u
48 wells manifold for 3 ml tubes without flange	**CD3500**	1 u
24 wells manifold for 3 ml tubes without flange	**CD3510**	1 u
24 well plate caps	**CH6230**	24 u
48 well plate caps	**CH6240**	48 u

[Circular flanges are necessary for 3 & 6 ml formats. A wedge can be added to tighten the upper holder higher and allows to collect sample in approp. glass tubes. 24 & 48 postion collecting plates can also be used.]



Sample Prep - Solid Phase Extraction

Vacuum manifold for 47 & 90 mm disc

These vacuum manifold sytems allows 47 and 90 mm membrane filtration. The KEL-F membrane holder is suited for many solvents without filtrate contamination (80°c limit).

Manifolds are available with 1, 3 or 6 independent stations with a stop valve on each path. Aluminium clamps ensure a very tight seal between loading reservoir, the base and membrane holder.

Description	P/N	Qty
1 station manifold assembly (47 mm). Includes : 1 station manifold, KEL-F screen, funnel, base, clamp	**BX4370**	1 u
1 station manifold assembly (90 mm). Includes : 1 station manifold, KEL-F screen, funnel, base, clamp	**BX4380**	1 u
3 station manifold assembly (47 mm). Includes : 3 station manifold, KEL-F screen, funnel, base, clamp	**BX4350**	1 u
3 station manifold assembly (90 mm). Includes : 3 station manifold, KEL-F screen, funnel, base, clamp	**BX4360**	1 u
6 station manifold assembly (47 mm). Includes : 6 station manifold, KEL-F screen, funnel, base, clamp	**BX2030**	1 u
6 station manifold assembly (90 mm). Includes : 6 station manifold, KEL-F screen, funnel, base, clamp	**BX4340**	1 u
1 station manifold	**BX4400**	1 u
3 station manifold	**BX4410**	1 u
6 station manifold	**BX4420**	1 u
47 mm aluminum clamp	**BX4430**	1 u
90 mm aluminum clamp	**BX4440**	1 u
47 mm support base	**BX4450**	1 u
47 mm 300 ml funnel	**BX4460**	1 u
90 mm support base	**BX4470**	1 u
90 mm 1000 ml funnel	**BX4480**	1 u
47 mm KEL-F screen	**BX4490**	1 u
90 mm KEL-F screen	**BX4500**	1 u
Cartridge adaptor	**BX4510**	1 u
Teflon stopcocks for block manifolds	**CH6260**	6 u

Polypropylene tubes

Volume	Qty	P/N
Empty column		
1 ml	100 u	**541410**
4 ml	100 u	**541420**
8 ml	100 u	**541430**
15 ml	100 u	**541440**
25 ml	100 u	**541450**
75 ml	50 u	**823370**
150 ml	25 u	**S28581**
Column + one polyethylene 20 µm frits		
1 ml	100 u	**F97660**
4 ml	100 u	**F97710**
8 ml	100 u	**F97730**
15 ml	100 u	**F97750**
25 ml	100 u	**F97760**
75 ml	50 u	**F97780**
Column + one polyethylene 20 µm frits + caps		
1 ml	100 u	**F97800**
4 ml	100 u	**F97810**
8 ml	100 u	**F97820**
15 ml	100 u	**F97830**
25 ml	100 u	**F97840**
75 ml	50 u	**F97860**
Column + one PTFE 20 µm frits + caps		
1 ml	100 u	**F97870**
4 ml	100 u	**F97890**
8 ml	100 u	**F97900**
15 ml	100 u	**F97910**
25 ml	100 u	**F97920**
75 ml	50 u	**F97940**
Column + two polyethylene 20 µm frits		
1 ml	100 u	**F97960**
4 ml	100 u	**F97970**
8 ml	100 u	**F97980**
15 ml	100 u	**F97990**
25 ml	100 u	**F98000**
75 ml	50 u	**F98020**

Polypropylene tubes

Volume	Porosity	Membranes	Qty	P/N
Column + two polyethylene 20 µm frits				
1 ml			100 u	**F98040**
4 ml			100 u	**F98050**
8 ml			100 u	**F98060**
15 ml			100 u	**F98070**
25 ml			100 u	**F98080**
75 ml			50 u	**F98100**
1/16" PE frits				
1 ml	20 µm	PE	100 u	**779530**
4 ml	20 µm	PE	100 u	**841880**
8 ml	20 µm	PE	100 u	**858750**
15 ml	20 µm	PE	100 u	**823280**
25 ml	20 µm	PE	100 u	**885460**
75 ml	20 µm	PE	50 u	**823380**
1 ml	20 µm	PTFE	100 u	**F97520**
4 ml	20 µm	PTFE	100 u	**F97550**
8 ml	20 µm	PTFE	100 u	**F97560**
15 ml	20 µm	PTFE	100 u	**F97570**
25 ml	20 µm	PTFE	100 u	**F97580**
75 ml	20 µm	PTFE	50 u	**F97600**
1/8" PE frits				
3 ml	20 µm	PE	100 u	**AM2340**
8 ml	20 µm	PE	100 u	**AZ3340**
15 ml	20 µm	PE	100 u	**S08600**
1/8" PE frits				
25 ml	20 µm	PE	100 u	**S08610**
75 ml	20 µm	PE	50 u	**S08620**
150 ml	20 µm	PE	50 u	**S28600**
Caps				
1 ml			100 u	**F97350**
4 ml			100 u	**F97360**
8 ml			100 u	**F97370**
15 ml			100 u	**F97440**
25 ml			100 u	**F97470**
75 ml			50 u	**F97490**
End caps			100 u	**F97510**


20 µm PE frits
(polyethylene)


Frits

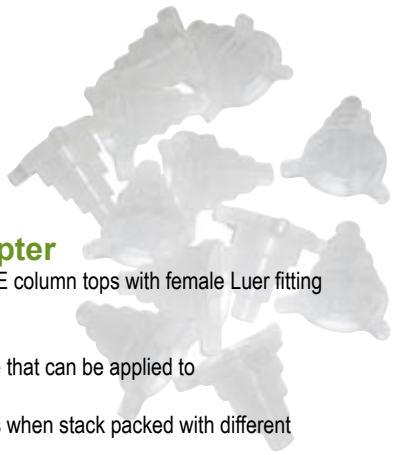

Caps


End caps

SPE Accessories

Glass columns

- Length : 300 mm
- Internal Ø : 20.4 mm
- Fitting : male Luer
- Option : PTFE or PE taps



SPE column adapter

Suitable for 1, 3 and 6 ml SPE column tops with female Luer fitting

Applications :

- Increase reservoir volume that can be applied to the SPE column.
- Allow multiple selectivities when stack packed with different sorbent columns.

Uptiplate Collection Plate & Tools for Chemistry

Uptiplate collection plates are compatible with all vacuum manifolds and SPE /filtration automated systems for the collection of solvents & samples. Manufactured from high quality polymer, they are available in round or square well formats and the well bottoms have a “U” or “V” shape design for sample management.

Interchim generally recommends the square “U” shape format. The “U” format enhances sample collection whilst the square well design assists the introduction of a flexible sealing lid.

Collection plate	Well	Well bottom	Max. volume	Qty	P/N
24 well 10 ml	Square	V	10 ml	25 u	**BN9650**
24 well 10 ml	Square	U	9 ml	10 u	**CA2260**
48 well 5 ml	Square	V	5 ml	25 u	**BG7400**
48 well 7,5 ml	Square	V	7,3 ml	30 u	**BG7430**
96 well 2 ml	Square	V	2,1 ml	50 u	**U90380**
96 well 1 ml	Square	U	1 ml	50 u	**U90370**
96 well 350 µl	Square	U	350 µl	50 u	**U90360**
96 well 1,3 ml	Square	V	1,35 ml	25 u	**BN1940**
96 well 1 ml	Round	U	1 ml	50 u	**U90350**
384 well 150 µl	Square	V	160 µl	25 u	**BD3390**
384 well 50 µl	Square	U	55 µl	60 u	**BM4970**
384 well 50 µl	Square	U	55 µl	30 u	**BM4971**

Uptiplate soft cover

Uptiplate soft covers maintain sample integrity during delivery and storage. They are compatible with all collection plates on the market.

Pre-pierced covers are available to avoid needle clogging during automated analysis.

Santoprene is currently the soft cover of choice exhibiting a chemical resistance similar to Neoprene. They are not compatible with chlorinated or aromatic solvents such as Benzene, CCl_4,$CHCl_3$, $CHCl_2$, CH_3Cl, Chlorobenzene, Cyclohexane, Toluene, Xylene. In such instances Teflon /Silicone lids are usually more suitable.

Collection plate	Well bottom	Pierceable	Nature	Qty	P/N
24 well	Square	Yes	Santoprene	100 u	**CA2320**
48 well	Square	Yes	Santoprene	100 u	**BG7410**
48 well	Square	No	Santoprene	100 u	**BG7420**
96 well	Square	Yes	Santoprene	100 u	**BD7730**
96 well	Square	Yes	Santoprene	50 u	**BD7731**
96 well	Square	Yes	Teflon /Silicone	20 u	**CD9840**
96 well	Square	No	Santoprene	100 u	**AP3131**
96 well	Square	No	Santoprene	50 u	**AP3130**
96 well	Round	No	Elastomer	50 u	**BB2740**
96 well	Round	Yes	Silicone encased Teflon	50 u	**CD9490**
96 well	Round	Yes	Teflon /Silicone	20 u	**CD9510**
384 well	Square	Yes	Silicone encased Teflon	30 u	**CD9500**

96 Vial plates

96 Vial plates are polymer based holders for type 1 borosilicate glass collection vials. They are compatible with all solvents and facilitate the collection of samples after filtration or extraction to 380 µm.

An elastomer coated PTFE soft cover is inserted on every vial for sample delivery & storage. This is easily achieved with a Mat Capper. Vials can be directly accessed with a syringe. A knife can be used to access one or several closed vials.

Description	Qty	P/N
Plate + 96 vials	5 u	**863610**
Glass vials	500 u	**863620**
Soft cover	5 u	**863640**
Cutter	1 u	**863660**
Mat Capper	1 u	**AL5880**

Tools for Chemistry

Uptiplate solvent storage plates

Polypropylene reagent reservoirs are generally used for reagent & solvent storage. They are suitable for a number of liquid handling configurations, from 8 or 12 channel pipettes, to 96 or 384 pipette tip heads.

Plate wells have a pyramid construction to reduce dead volume. Suited to any robotic system.


BJ0870


BJ9450


BM8760


BM8790


BM8780

Description	Qty	P/N
Uptiplate solvent storage		
24 square well - 7,5 ml PP	30 u	**BG7430**
96 square well - 0,7 ml PP - Flat Bottom	50 u	**CD2210**
96 square well - 1,5 ml PP - Flat Bottom	50 u	**CD9810**
Universal lid - Robotic - Polystyrene - 127,8 x 85,5 mm	100 u	**BU4410**
Universal lid - Polystyrene - 127 x 84,7 mm	100 u	**BV0090**
Reservoir Baffle 105,7 x 69,7 mm	10 u	**CA2280**
Low Profile - PP - Flat Bottom	25 u	**BM4550**
Uptiplate solvent storage - partitioned		
PP - 12 columns - Pyramid Bottom - 4,4 cm height	25 u	**BM8790**
PP - 8 Row - Pyramid Bottom - 4,4 cm height	25 u	**BM8730**
PP - 8 Row - Pyramid Bottom - Low Profile - 1,9 cm height	25 u	**BM8780**
PP - 12 columns - Pyramid Bottom - Low Profile - 1,9 cm height	25 u	**BJ9450**
PP - 12 columns - Pyramid Bottom - Low Profile - 4,4 cm height	25 u	**BJ0870**
PP - 2 x 12 columns - Pyramid Bottom - Low Profile - 1,9 cm height - 3,5 ml max vol.	25 u	**CA2170**
PP - 16 Row - Pyramid Bottom - Low Profile - 1,9 cm height	25 u	**BM8830**
PP - 24 columns - Pyramid Bottom - Low Profile - 1,9 cm height	25 u	**BM8860**
PP - 4 columns + Reservoir equivalent to 20 columns - Pyramid Bottom Low Profile - 1,9 cm height	25 u	**BM8760**
PP - 4 columns - Pyramid Bottom - 73 ml max vol. per well	25 u	**CG7170**

Micro Extraction - UptiTip™

UptiTip™ pipette tips are for the management of very small (0.1 µl) sample volumes and are an excellent alternative to packed cartridges.

UptiTip™ Coated

UptiTip™ coated pipette tips are chemically activated with a range of SPE media for ultra-efficient clean-up of small sample volumes.

Features :

- Faster sample preparation with reduced sample loss
- Maximised surface area-to-sample for ultra-efficient clean-up
- Direct coating removes potential sample contamination from the support
- Sample volumes as small as 0.1 µl
- Available in volumes of : 0.1-10 µl and 10-200 µl

Applications :

- Desalting
- MALDI
- Mass spectroscopy
- Electrophoresis
- Protein purification
- HPCE, HPLC, CEC

UptiTip™ Coated

UptiTip™ Packed

UptiTip™ Packed

UptiTip™ capped tips are filled with a range of activated sorbents for a variety of selectivities. The fine slit on the tip bottom (1-2 µm) allows liquid to pass through whilst chromatographic material (20-30 µm diameter) is retained.

No filter is required so dead volume is minimal.

The UptiTip™ can also be used as centrifugal spin column. Centrifuge adaptors are provided.

Features :

- Faster sample preparation with minimal sample loss
- Sample volumes as small as 0.1 µl
- Available in volumes of : 0.1-10 µl and 10-200 µl

Media	UptiTip™ -Coated* 1-10 µl	UptiTip™ -Coated* 10-200 µl	UptiTip™-Packed* 1-10 µl	UptiTip™-Packed* 10-200 µl
C-18	BI5010	BI5020	BI5270	BI5280
C-08	BI5030	BI5040	BI5290	BI5300
C-04	BI5050	BI5060	BI5310	BI5320
Carbon	BV7460	BV7470	BU3190	BU3210
HILIC	CC6880	CC6890	CH7060	CH7070
HILIC SDS Removal	BI5100	BI5110	BI5390	BI5400
PolyCAT A	BI5120	BI5130	BI5410	BI5420
SDS-Removal	BI5150	BI1130	BI5440	BI5450
TiO_2	BH3750	BH3760	BT3530	BU3630
ZrO_2	BH3730	BH3740	CA8260	BX5810
Affinity Media				
Silica IMAC	BI5170	BI5180	BI5460	BI5470
Ni IMAC	BI5190	BI5200	BI5480	BI5500
Fe	CA8080	CH7580	CA8100	CH7490
Protein A	BI5210	BI5220	BI5510	BI5520
Protein G			BI5540	BI5560
Lectin ConA			BJ3650	BJ3770
Lectin WGA			BJ3780	BJ3790
Trypsin	BH3770	BI5230	BI5570	BI5580
Streptavidin	CH5900			

Upti-trap™ On-line extraction

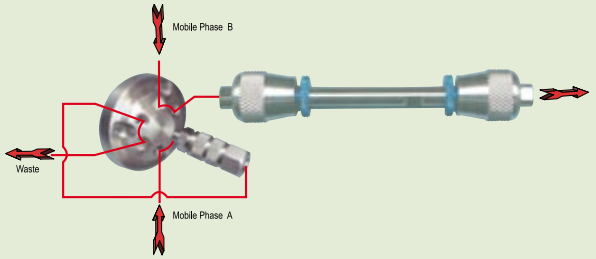
Upti-trap™ ensures extraction and /or sample pre-concentration, prior to HPLC injection.

Upti-trap™ units are available either in 15 x 4.0 mm or 15 x 2.1 mm configurations. The loading capacity for a 15 x 4.0mm unit is approximately 8 to 12 mg whilst the 15 x 2.1 mm unit is approximately 1.5 to 3 mg.

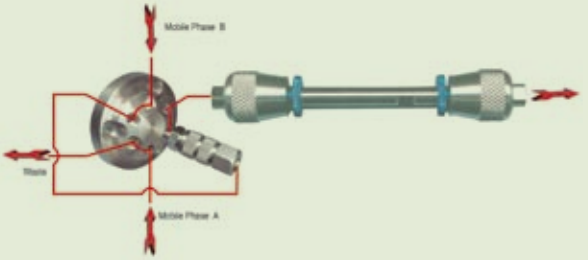
The speed and efficiency of Upti-trap™ make this an excellent device for medicinal research & DMPK Labs whilst Upti-traps™ pre-concentration characteristics make it suitable to environmental applications.

This technique allows for a fast, robust and reproducible method development process that can easily be automated.

1. Extraction mode
The compound of interest is trapped on the sorbent. Impurities are washed by the mobile phase A.



2. Elution mode
The compound of interest is eluted by the mobile phase B.



(This example requires a 6 port - two position valve and two HPLC pumps).

A 10 port, 2 position valve increases productivity as one sample can be extracted while the other is analyzed.

Sorbent	Functionality /comment	Particle size	P/N 15 x 4,0 mm	P/N 15 x 2,1 mm
Upti-clean™ C18	C18 end-capped	50 µm	**U25750**	**U25840**
Upti-clean™ C8	C18 end-capped	50 µm	**BG6090**	**CE0580**
Upti-clean™ RPAQ	C18 100% hydrophile	75 µm	**U25760**	**U25850**
Upti-clean™ NH_2	Amino	50 µm	**BV3700**	**BV3720**
Upti-clean™ SCX	Strong cation exchange	60 µm	**U25770**	**U25860**
Upti-clean™ SAX	Strong anion exchange	60 µm	**BB8650**	**BG6950**
Upti-clean™ MM1	RP / Strong cation exchange	60 µm	**U25780**	**U25870**
Atoll™ XC	Hydrophobic	30 µm	**U70480**	**U70500**
Atoll™ ATH	Hydrophilic	30 µm	**CE0560**	**CE0590**
Atoll™ AEV	Hydrophilic /Hydrophobic	75 µm	**U25820**	**U25910**
Atoll™ ATL	Hydrophobic	75 µm	**U25800**	**U25890**
Atoll™ XWP	Hydrophobic	90 µm	**BU5550**	**BU5560**