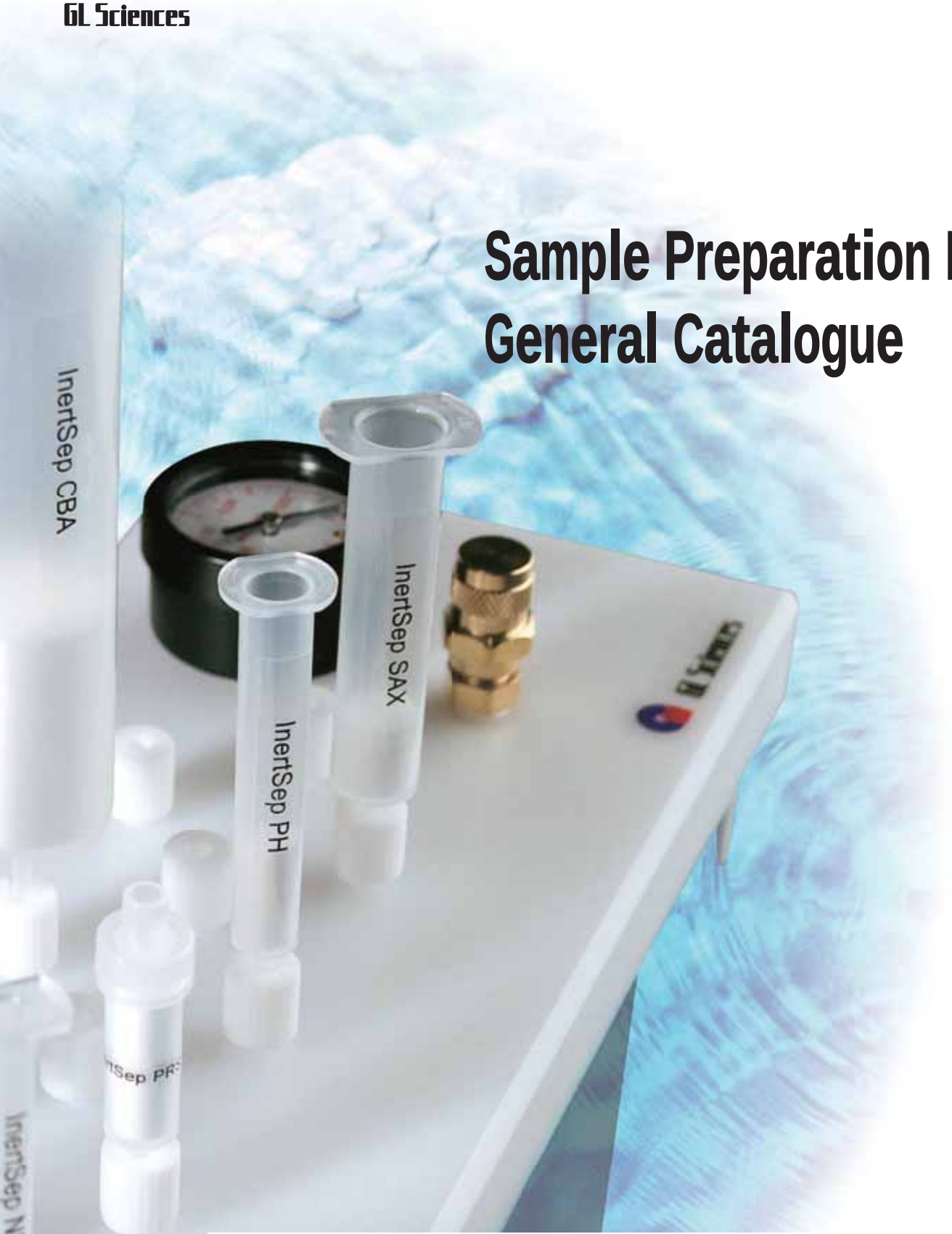
GL Sciences

Sample Preparation Products General Catalogue



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GL Sciences Inc.

Contents

Solid Phase Cross Reference

Separation Mode		Base Gel	Functional Group	End Capped	GL Sciences Products	Alternative to
Polymer Base	Reversed Phase	SDB	–	×	InertSep PLS-2	Sep-Pak PS-2, Supelclean ENVI-Chrom-P,Bond Elut ENV, Bond Elut LMS, Bond Elut Plexa
		N-MA-DVB		×	InertSep PLS-3	Oasis HLB
		MA-SDB	–	×	InertSep RP-1	NEXUS
		MA-SDB	–	×	InertSep RP-2	—
		N-MA-DVB	–	×	InertSep Pharma	Oasis HLB
		N-MA-DVB	–	×	InertSep Pharma FF	—
		SDB	Octadecyl	×	InertSep RP-C18	—
	Ion Exchange	MA	Quaternary amine	×	InertSep MA-1	—
			Diethyl amine	×	InertSep MA-2	—
			Sulfonic acid	×	InertSep MC-1	—
			Carboxylic acid	×	InertSep MC-2	—
		SDB	Sulfonic acid, Octadecyl	×	InertSep MPC	Oasis MCX, Bond Elut Plexa PCX
	Chelate	MA	Iminodiacetic acid	×	InertSep ME-1	—
Silica Base, Other Phases	Reversed Phase	SiO_2	Octadecyl(Tri-functional)	AA	InertSep C18	Sep-Pak tC18
			Octadecyl(Tri-functional)	AA	InertSep C18 FF	—
			Octadecyl(Mono-functional)	A	InertSep C18-B	Sep-Pak C18, Supelclean LC-18, Bond Elut C18 OH
			Octadecyl(Mono-functional)	A	InertSep C18-B FF	—
			Octadecyl(Tri-functional)	B	InertSep C18-C	Supelclean ENVI-18, Bond Elut C18
			Octadecyl(Tri-functional)	B	InertSep C18-C FF	—
			Octyl	A	InertSep C8	Sep-Pak C8, Supelclean ENVI-8, Supelclean LC-8, Bond Elut C8
			Octyl	A	InertSep C8 FF	—
			Octyl	×	InertSep C8-NE	—
			Ethyl	A	InertSep C2	Sep-Pak tC2, Bond Elut C2
			Ethyl	A	InertSep C2 FF	—
			Ethyl	×	InertSep C2-NE	—
			Cyclohexyl	A	InertSep CH	Bond Elut CH
			Phenyl	A	InertSep PH	Supelclean LC-Phenyl, Bond Elut PH
			Phenyl	A	InertSep PH FF	—
	Normal Phase	SiO_2	Cyano	×	InertSep CN	Sep-Pak CN, Supelclean LC-CN, Bond Elut CN-U
			Diol	×	InertSep 2OH	Sep-Pak Diol, Supelclean LC-Diol, Bond Elut Diol
			–	×	InertSep SI	Sep-Pak Silica, Supelclean LC-Si, Bond Elut Silica
			–	×	InertSep SI FF	—
		Al_2O_3	–	×	InertSep AL-A	Sep-Pak Alumina-A, Supelclean LC-Alumina-A, Bond Elut AL-A
			–	×	InertSep AL-B	Sep-Pak Alumina-B, Supelclean LC-Alumina-B, Bond Elut AL-B
			–	×	InertSep AL-N	Sep-Pak Alumina-N, Supelclean LC-Alumina-N, Bond Elut AL-N
		Florisil (Magnesium silicate)	–	×	InertSep FL	Sep-Pak Florisil, Supelclean ENVI-Florisil, Bond Elut FL
			–	×	InertSep FL-PR	—
	Cation Exchange	SiO_2	Carboxylic acid	×	InertSep CBA	Sep-Pak Accell Plus CM, Supelclean LC-WCX, Bond Elut CBA
			Propylsulfonic acid	×	InertSep PRS	Bond Elut PRS
			Benzenesulfonic acid	×	InertSep SCX	Bond Elut SCX
	Anion Exchange	SiO_2	Aminopropyl	×	InertSep NH2	Sep-Pak NH2, Supelclean LC-NH2, Bond Elut NH2
			Aminopropyl	×	InertSep NH2 FF	—
			Ethylenediamine-N-Propyl	×	InertSep PSA	Supelclean PSA, Bond Elut PSA
			Quaternary amine	×	InertSep SAX	Sep-Pak Accell Plus QMA, Supelclean LC-SAX, Bond Elut SAX
Specific Phase		Polyamide	–	×	InertSep PA	—
		Chitin	Phthalocyanine	×	InertSep Aroma-Blue	—
		Graphite Carbon (GC)	–	×	InertSep GC	Supelcean Envi-Carb, Bond Elut Carbon
		Na_2SO_4	–	×	InertSep Dry	Bond Elut Dry

MA:Methacrylate polymer
DVB:Divinylbenzene copolymer
SDB:Styrene divinylbenzene copolymer

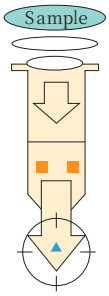
AA:Strongly end-capped
A:Moderately end-capped
B:Weakly end-capped
×:Not end-capped

Objective of Solid Phase Extraction

Separation of Target Analyte

Making use of solid phase extraction to separate and purify a target analyte is described in the following two methods.

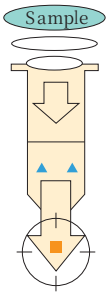
① Retaining the target analyte



Mainly used to concentrate target analytes in aqueous based samples.

① Typical method for general use

② Retaining the sample matrix and passing the target analyte



Used in preparation of samples such as agrochemical residues, where there are sample matrix and compound in the soil.

■ Target analyte
▲ Sample matrix

② Typical method for use in the food industry

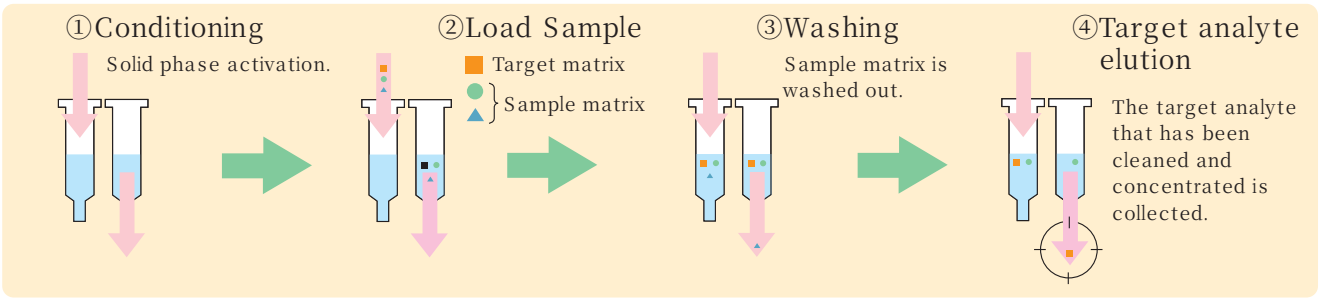
Solid Phase Extraction Cartridge Type

Currently, there are the following types of solid phase extraction cartridge available.

Type	Application		Product
Loading Method	Syringe Type	All solid phase extraction (general purpose type)	InertSep, InertSep LSC
	Luer Type	Agrochemical and chemical analysis in clean water and environmental water	InertSep mini, InertSep Slim, InertSep SlimJ

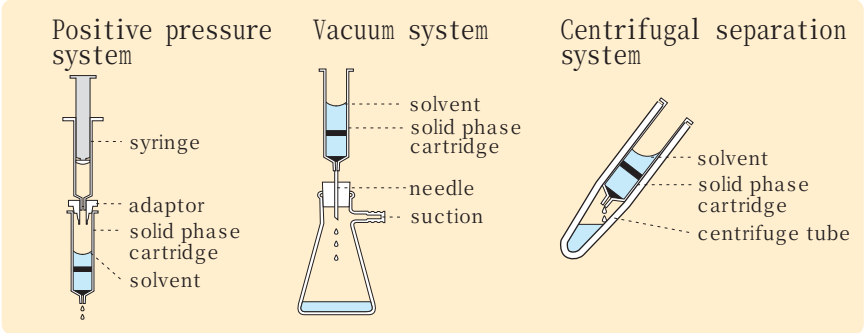
Four Basic Steps

Procedure for solid phase extraction – the four steps are described in the diagram below.



Range of Sample Loading For Solid Phase Extraction Cartridges

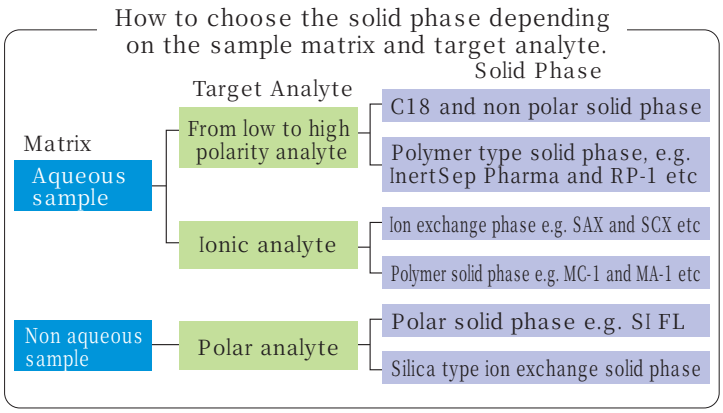
In general, there are 3 solid phase extraction sampling methods(as shown in the figure right)as well as a gravity based system to perform sample pre-treatment quickly, easily and reproducibly. It is essential to select the appropriate method according to the sample type or analysis.



Choosing a Suitable Solid Phase

①How to choose the solid phase depending on the sample matrix and target analyte.

One of the most important elements in the success of solid phase extraction is to select a solid phase that is suitable for both the sample matrix and the target analyte. The solid phase material should be carefully selected, taking into account the chemical properties of the target analyte, such as its solvent solubility and the physical nature of the sample matrix. In addition, it is important to develop conditions that are optimal for retaining the target analyte, whilst removing the sample matrix, then selecting an elution solvent for maximum recovery of the target analyte.



②Selectivity of the solid phase

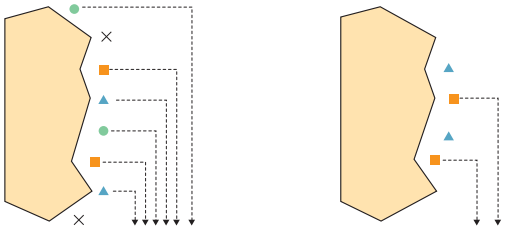
The solid phases are divided into the range of the functional groups as shown below.

- ●Non-polar phase/reversed phase(C18 and SDB etc)
- ●Polar phase/normal phase(SI and FL etc)
- ●Ion exchange phase (SAX and SCX etc)
- ●Special binder phase (PA and Aroma-Blue etc)
- ●Mixed bed phase (SAX/PSA etc)

Generally, using a mixed phase or special binder phase it is possible to obtain higher selectivity and with a selection of retention parameters depending on the properties of the washing solvent. In addition, as a pretreatment before making a measurement with HPLC, using an ion exchange phase can be effective for increasing selectivity.
For successful solid phase extraction, the nature of the target analyte e.g. presence of hydrophobic or ionic structures and the presence of functional groups such as OH, COOH and N etc should be considered. It is also necessary to select a solid phase that is compatible with the sample matrix. In addition, even when using the most common non-polar phases, because the selectivity differs according to the type of solid phase(as shown in the figure on the right), the most appropriate type should be selected.

C18 Solid Phase
Non-selective retention and low selectivity with elution.

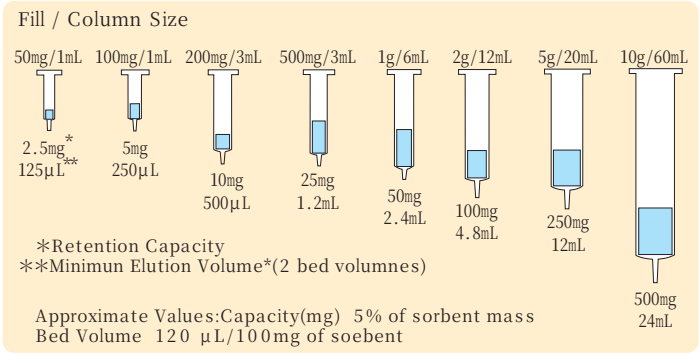
C2 Solid Phase
Highly selective retention due to more specific elution of target analyte, resulting in high sample cleanup



③Fill volume and retention volume of solid phase (capacity)

In order to use the solid phase extraction process effectively, it is important to select the correct cartridge size to match the target analyte and sample matrix. Generally, when using C18 type solid phase cartridges, the sample should not be greater than 5% (including sample matrix) of the solid phase material. Select the appropriate cartridge size to avoid overloading.

General index of cartridge size and sample load size



※Bed volume, this is the quantity of the solvent necessary to replace the air trapped in the solid phase.Void volume is equivalent to the bed volume

④Recommendation for selecting an ion exchange type solid phase

Target Analyte	InertSep		pKa*	Structure	Target Compound	
					Weak Ion	Strong Ion
Acidic Analyte	Anion Exchange	MA-1 4Class Amine	—	$-CH_2-N^+(R)_3$	○	×
		MA-2 2Class Amine	11.0	$-CH_2-N(R)_2$	○	×
		NH2 Aminopropyl	9.8	$-CH_2CH_2CH_2NH_2$	×	○
		PSA 1Class, 2Class Amine	10.1,10.9	$-CH_2CH_2CH_2NHCH_2CH_2NH_2$	×	○
		SAX Tri-Methylaminopropyl	—	$-CH_2CH_2CH_2N^+(CH_3)_3$	○	×
Basic Analyte	Cation Exchange	MC-1 Sulfonic Acid	1.0	$-CH_2-SO_3^-$	○	×
		MC-2 Carboxylic Acid	4.5	$-CH_2-COO^-$	○	×
		CBA Ethyl Carboxylic Acid	4.8	$-CH_2CH_2COO^-$	×	○
		PRS Propyl Sulfonic Acid	1.0	$-CH_2CH_2CH_2SO_3^-$	○	×
		SCX Benzen Sulfonic Acid	1.0	$-CH_2CH_2C_6H_4SO_3^-$	○	×

＊ pKa reference value for each functional group.

Usage of Solid Phase Extraction

①Conditioning

The solid phase must be conditioned(activated)before loading a sample. If the sample is loaded directly onto the SPE cartridge without conditioning, the solid phase will not be fully activated and the target analyte will be poorly retained. Depending upon the type of solid phase being used and because the conditioning solvents can be quite different, select and use the correct solvents with reference to the following guidelines.

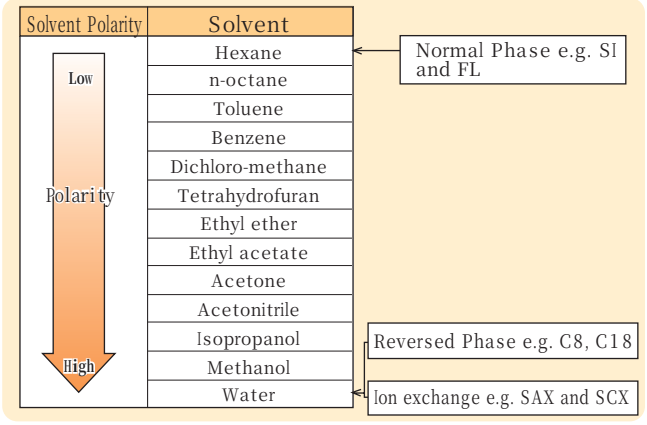
Solid Phase Type	Conditioning Solvent
Reversed Phase (C18, C8 etc)	(1) Fill with methanol in equal volume to the cartridge capacity. (2) Wash with water 2 x the cartridge capacity. (3) Adjust the pH of the cartridge to match the sample matrix using the same solution that is used for the pH adjustment of the sample matrix. (4) If required for the sample matrix, equilibrate the cartridge with a chelating agent or ion pair reagent.
Normal phase (SI and FL etc)	Fill the cartridge with hexane or a similar organic solvent in equal volume to the cartridge capacity.
Ion exchange (SAX, SCX etc.)	(1) Fill with methanol in equal volume to the cartridge capacity. (2) Wash with water in equal volume to the cartridge capacity. (3) As required, fill with buffer at pH6 - 7 in equal volume to the cartridge capacity.

②Sample Loading

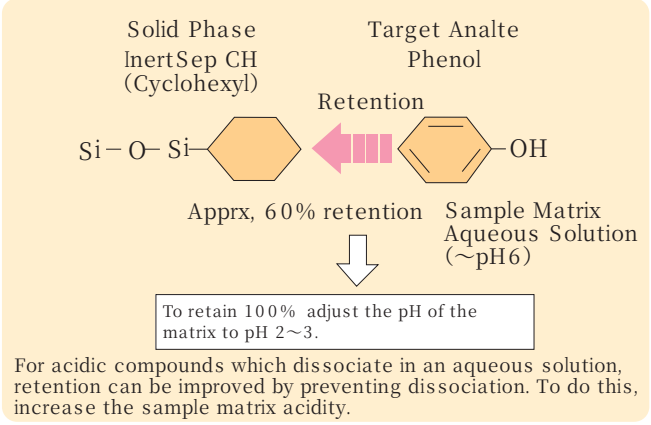
The retention of the target analyte will depend on its polarity, the sample matrix and the type of solid phase being used. Test the retention conditions experimentally with reference to the following guidelines

Solid Phase Type	Sample Loading Conditions
Reversed Phase (C18, C8 etc)	(1) For samples such as blood plasma and serum etc, dilute the sample 1:1 or 1:2 in water or in pH buffer. (2) If a hydrophilic solvent such as methanol or acetonitrile is included in the sample, adjust the concentration to be below 10%. (3) The concentration of the diluting pH buffer should be 0.1M or less. (4) For effective target analyte retention, adjust the pH accordingly. Neutral analyte: Dilute in water or pH buffer to pH6 - 7. Acidic analyte: Adjust to pH2-4 using hydrochloric acid, acetic acid or pH buffer. Basic substance: Adjust to pH7 - 9 using a pH buffer. For strongly basic samples above pH9 use ammonium carbonate, sodium carbonate solution or sodium hydroxide solution etc.
Normal phase (SI and FL etc)	Use a low polarity solvent such as hexane.
Ion exchange (SAX, SCX etc.)	(1) Dilute in water or pH buffer and adjust to pH6 - 7. (2) Use SCX and PRS only in an acidic environment. (3) Use a pH buffer for dilution with a concentration of 0.1M or less.

Solvent Polarity and Application with Solid Phase Extraction



The solvents that are generally used for solid phase extraction are described as above. The diagram shows the increasing solvent polarity and the suitability to the elution of the target analyte from the range of different solid phases.



For acidic compounds which dissociate in an aqueous solution, retention can be improved by preventing dissociation. To do this, increase the sample matrix acidity.

When using solid phase extraction, in order to extract a certain target analyte efficiently it is necessary to adjust the conditions to maintain the pH of the sample matrix. This is particularly important when the target analyte has a high polarity and the dependence on pH becomes greater.

③Removal of Sample Matrix（Washing）

When using solid phase extraction to prepare samples for GC, GC/MS, HPLC and LC/MS(/MS), the presence of sample matrix will lead to poor precision and poor reproducibility in the assay. It is necessary to remove or minimise the presence of sample matrix. After loading the sample on to the cartridge, the clean-up operation and solid phase washing procedure is extremely important. Select a solvent for solid phase washing that is well suited to removing the sample matrix whilst retaining the target analyte.

Solid Phase Type	Washing Conditions
Reversed Phase (C18, C8 etc)	(1) Wash with the water. Ensure the volume used does not elute the target analyte. (2) If the target analyte is eluted with water, replace with a buffer that has a pH value similar to the matrix or wash with the same acid or alkali in which the samples were prepared. (3) To increase the scavenging effect, wash with 5 - 40% methanol or 5 - 30% acetonitrile. Verify experimentally, that this concentration and washing duration does not elute the target analyte.
Normal phase (SI and FL etc)	(1) Wash with hexane or another low polarity solvent. (2) To increase the scavenging effect, add acetone or isopropanol to the selected washing solvent.
Ion exchange (SAX, SCX etc.)	(1) Wash with water. (2) Next wash with 40 - 100% methanol. Verify experimentally, that this concentration and washing duration does not elute the target analyte.

④Selecting an Elution Solvent（Elution and Collection）

When eluting the target analyte from the solid phase it is important to consider the type of solvent used and the volume required. Selecting the most appropriate elution solvent will enable the target analyte to be eluted in the smallest volume for the highest recovery and to ensure assay sensitivity, precision and reproducibility. When choosing the elution solvent, careful consideration should be given to the sample matrix, the type of solid phase being used and the chemistry of the target analyte.

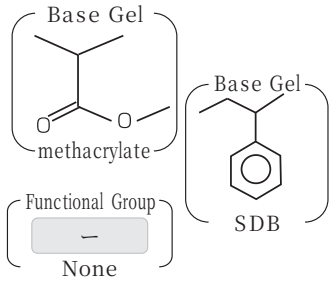
Solid Phase Type	Elution Solvent
Reversed Phase (C18, C8 etc)	(1) Typically, either methanol or acetonitrile is used at 2 to 5 x the bed volume. (2) If the target analyte is acidic and strongly retained when eluting with methanol or acetonitrile, either ammonia or triethylamine can be added as necessary to aid elution. (3) If the target analyte is basic and strongly retained when eluting with methanol or acetonitrile, either hydrochloric acid or acetic acid can be added as necessary to aid elution. (4) Ethyl acetate and dichloro-methane etc are used to elute the target analyte.
Normal phase (SI and FL etc)	(1) Elute with a polar solvents such as acetone and methanol. (2) Hexane and dichloro-methane etc can be added in small amounts to the polar solvents acetone or methanol etc to aid elution.
Ion exchange (SAX, SCX etc.)	(1) Elution occurs by controlling the dissociation of the solid phase from the target analyte. The conditions are set where the dissociation constant （pKa） of the solid phase and target analyte, do not dissociate. The following elution solvents are generally used. ○Acidic Analyte：①Use Methanol adjusted with 0.001M hydrochloric acid （Use InertSep NH2 and PSA for strongly ionic compounds） ②Methanol with 2-4% ammonia in water ③Acetonitrile: triethylamine: water （80: 0.1: 20） （For weak ionic compounds use InertSep SAX） ○Basic Analyte：①Use Methanol adjusted with 0.001M hydrochloric acid （For strong ionic compounds use InertSep CBA） ②Methanol with 2 - 4% ammonia in water ③Acetonitrile: triethylamine: water （80: 0.1: 20） （For weak ionic compounds use InertSep SCX or PRS） (2) Increase the salt concentration to elute the target analyte. Select an inorganic salt that does not interfere with the measurement assay. The following elution solvents are generally used: ①0.2M or greater, NaCl or KCl solution ②0.2M or greater KH_2PO_4 solution.

※Bed Volume…Generally, the bed volume is 120 µL for every 100mg of solid phase.
As the quantity of solid phase material increases, the bed volume increases proportionately.

Non Polar Polymer

InertSep™ RP-1 (Methacrylate - SDB Copolymer)

InertSep RP-1 is a combination polymer manufactured from styrene-divinylbenzene(SDB)and methacrylate. It is a recommended material for the concentration of chemical compounds with a polarity range from high to low. It can also be used for sample cleanup.



Application

- 1,4-Dioxane
- Anionic surface active agent.
- Non-ionic surface active agent
- Agrochemicals
- Bisphenol A
- 4-nonylphenol

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep RP-1	30 mg/1 mL	100 pieces	5010-27001
	60 mg/3 mL	100 pieces	5010-27002
	250 mg/6 mL	30 pieces	5010-27000
	500 mg/6 mL	30 pieces	5010-27004
	500 mg/12 mL	20 pieces	5010-27005

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep RP-1	1 g/20 mL	20 pieces	5010-27006
	2 g/20 mL	20 pieces	5010-27007

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC RP-1	30 mg	50 pieces	5010-27601
	60 mg	50 pieces	5010-27602
	200 mg	50 pieces	5010-27603
	500 mg	50 pieces	5010-27604

Luer Device

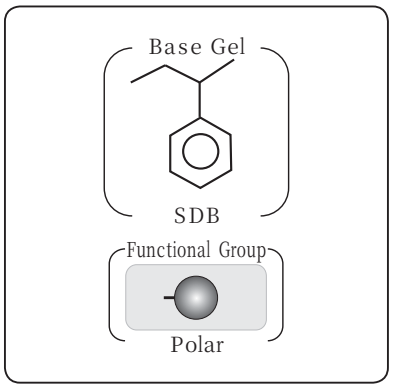
Item Name	Column Size	Quantity	Cat.No.
InertSep mini RP-1	230 mg	50 pieces	5010-27200
	230 mg	500 pieces	5010-27220
InertSep SlimJ RP-1	230 mg	50 pieces	5010-65730

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP RP-1	30 mg	1 piece	5010-66200
	60 mg	1 piece	5010-66201

InertSep™ RP-2 (Styrene-Divinylbenzene Copolymer With Polar Group)

InertSep RP-2 is a combination polymer which adds a polar functional group, with hydrogen bond interaction to the hydrophobic interaction of the SDB polymer. It is suitable for simultaneous screening and concentration using polar interaction for polar compounds whose retention is weak with the RP-1 solid phase.



Application

- Pharmaceuticals in blood and urine
- Polar compounds in aqueous samples

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep RP-2	30 mg/1 mL	100 pieces	5010-27021
	60 mg/3 mL	100 pieces	5010-27022
	200 mg/6 mL	30 pieces	5010-27023
	500 mg/6 mL	30 pieces	5010-27024
	500 mg/12 mL	20 pieces	5010-27025

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep RP-2	1 g/20 mL	20 pieces	5010-27026
	2 g/20 mL	20 pieces	5010-27027

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC RP-2	30 mg	50 pieces	5010-27611
	60 mg	50 pieces	5010-27612
	200 mg	50 pieces	5010-27613
	500 mg	50 pieces	5010-27614

Luer Device

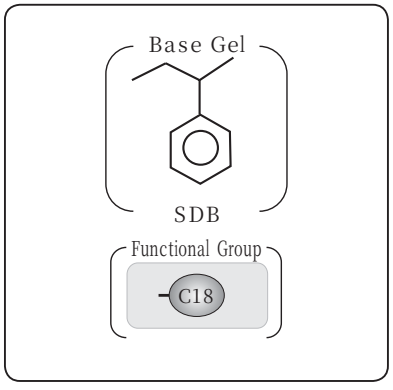
Item Name	Column Size	Quantity	Cat.No.
InertSep Slim RP-2	230 mg	50 pieces	5010-27700

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP RP-2	30 mg	1 piece	5010-66210
	60 mg	1 piece	5010-66211

InertSep™ RP-C18 (Styrene-Divinylbenzene Copolymer With ODS)

The styrene-divinylbenzene copolymer is modified to include an alkyl chain. The strongly hydrophobic solid phase can be used to selectively remove polar compounds.



Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep RP-C18	30 mg/1 mL	100 pieces	5010-27130
	60 mg/3 mL	100 pieces	5010-27131
	200 mg/6 mL	30 pieces	5010-27133
	500 mg/6 mL	30 pieces	5010-27134

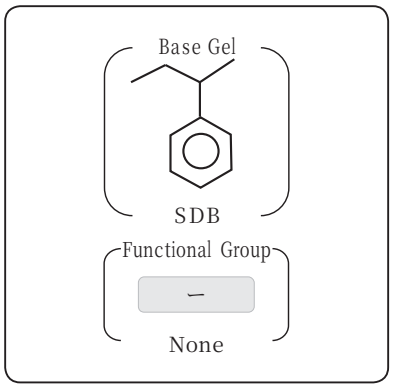
Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ RP-C18	230 mg	50 pieces	5010-65760

Non Polar Polymer

InertSep™ PLS-2

InertSep PLS-2 is a reversed phase polymer solid polymer made of SDB (styrene divinylbenzene) and can be comprehensively used. Compared to reversed phase solid phases made of silica gel, not only retaining a wide range of target compounds, but also InertSep PLS-2 can be used for basic and metal coordination compounds due to the complete removal of silanol residue out of the polymer surface.



Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PLS-2	265 mg/6 mL	50 pieces	5010-27430
	270 mg/6 mL	50 pieces	5010-25020
	500 mg/6 mL	30 pieces	5010-25025
	1000 mg/6 mL	20 pieces	5010-25030

Standard Cartridge (High Volume Cartridge)

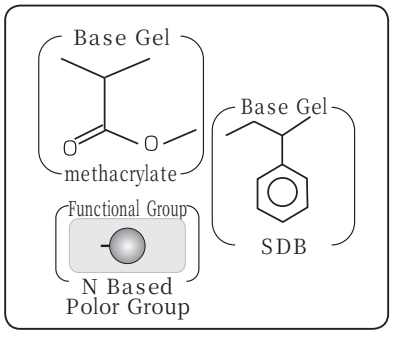
Item Name	Column Size	Quantity	Cat.No.
InertSep PLS-2	265 mg/20 mL	20 pieces	5010-27431
	270 mg/20 mL	20 pieces	5010-25035

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ PLS-2	230 mg	50 pieces	5010-65720
	265 mg	50 pieces	5010-65721

InertSep™ PLS-3

InertSep PLS-3 is a polymer solid phase composed of nitrogenous divinylbenzene and metacrylate. With nitrogenous function group, InertSep PLS-3 retains highly polar compounds. Having the strongest retention capability among polymer base solid phase, InertSep PLS-3 retains compounds that are difficult to be retained by InertSep RP-1 and/or InertSep PLS-2. Note that this strong retention capability might prevent elution of target compounds from the cartridge.



Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PLS-3	200 mg/6 mL	30 pieces	5010-25050

Standard Cartridge (glass)

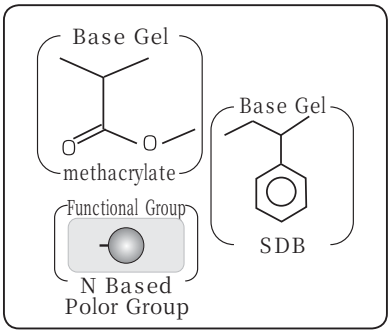
Item Name	Column Size	Quantity	Cat.No.
InertSep PLS-3	200 mg/6 mL	20 pieces	5010-26020

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ PLS-3	230 mg	50 pieces	5010-25200
	230 mg	500 pieces	5010-25205

InertSep™ Pharma (N-content Styrene-Divinylbenzene/ Methacrylate Copolymer)

InertSep Pharma is a combination polymer, made with N content styrene-divinylbenzene/ methacrylate. It is a reversed phase polymer material with superior water affinity which has been developed for simultaneous screening of pharmaceutical compounds in biological samples.



Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep Pharma	30 mg/1 mL	100 pieces	5010-27100
	60 mg/3 mL	100 pieces	5010-27101
	200 mg/6 mL	30 pieces	5010-27103
	500 mg/6 mL	30 pieces	5010-27104
	500 mg/12 mL	20 pieces	5010-27105

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC Pharma	30 mg	50 pieces	5010-27621
	60 mg	50 pieces	5010-27622
	200 mg	50 pieces	5010-27623
	500 mg	50 pieces	5010-27624

96-Well Plate

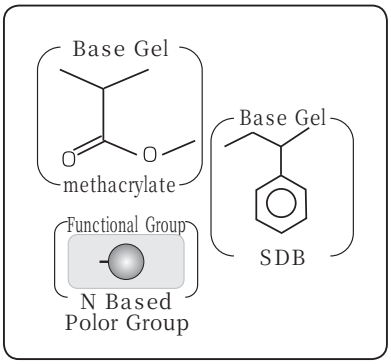
Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP Pharma	30 mg	1 piece	5010-66230
	60 mg	1 piece	5010-66231

Application

- Pharmaceutical compounds in blood and urine
- Chloramphenicol
- Cephalosporin antibiotic
- Concentration of environmental pharmaceutical contamination

InertSep™ Pharma FF (N-content Styrene-Divinylbenzene/ Methacrylate Copolymer)

InertSep Pharma FF is a high flow specification of InertSep Pharma. It is well suited to the concentration of bulk samples and high viscosity biological samples.



Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep Pharma FF	60 mg/3 mL	100 pieces	5010-27111
	200 mg/6 mL	30 pieces	5010-27113
	500 mg/6 mL	30 pieces	5010-27114

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ Pharma FF	230 mg	50 pieces	5010-65740

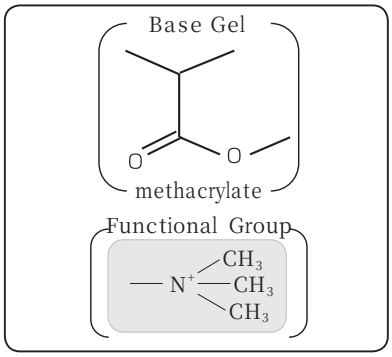
Application

- Organic compounds in environment water samples
- Simultaneous screening

Ion Exchange Polymer

InertSep™ MA-1 (Methacrylate Copolymer With Strong Anion Exchange)

InertSep MA-1 is a methacrylate polymer based solid phase which includes a strong anion exchange functional group. Hydrophobic interaction is low, so it works as a pure ion-exchange resin; the result is that InertSep MA-1 can be used for applications with strongly hydrophilic anionic compounds.



Application

- Anionic compounds
- Inorganic anions

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep MA-1	30 mg/1 mL	100 pieces	5010-27304
	60 mg/3 mL	100 pieces	5010-27305
	100 mg/3 mL	50 pieces	5010-27300
	250 mg/6 mL	30 pieces	5010-27301
	500 mg/6 mL	30 pieces	5010-27302

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep MA-1	1 g/20 mL	20 pieces	5010-27306
	2 g/20 mL	20 pieces	5010-27307

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC MA-1	30 mg	50 pieces	5010-27631
	60 mg	50 pieces	5010-27632
	200 mg	50 pieces	5010-27633
	500 mg	50 pieces	5010-27634

Luer Device

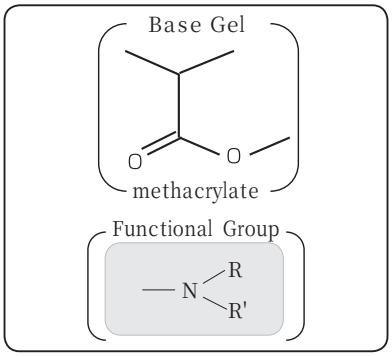
Item Name	Column Size	Quantity	Cat.No.
InertSep mini MA-1	280 mg	50 pieces	5010-27205

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP MA-1	30 mg	1 piece	5010-66700
	60 mg	1 piece	5010-66701

InertSep™ MA-2 (Methacrylate Copolymer With Weak Anion Exchange)

InertSep MA-2 is a methacrylate polymer based solid phase, which includes a weak anion exchange functional group. Because the solid phase is based on methacrylate, there is very little secondary interaction so the extraction is made purely with ion exchange. Use InertSep MA-2 to extract ionic compounds only on the basis of ion exchange.



Application

- Strongly anionic compounds etc.

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep MA-2	30 mg/1 mL	100 pieces	5010-27324
	60 mg/3 mL	100 pieces	5010-27325
	100 mg/3 mL	50 pieces	5010-27320
	250 mg/6 mL	30 pieces	5010-27321
	500 mg/6 mL	30 pieces	5010-27322

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep MA-2	1 g/20 mL	20 pieces	5010-27326
	2 g/20 mL	20 pieces	5010-27327

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC MA-2	30 mg	50 pieces	5010-27641
	60 mg	50 pieces	5010-27642
	200 mg	50 pieces	5010-27643
	500 mg	50 pieces	5010-27644

Luer Device

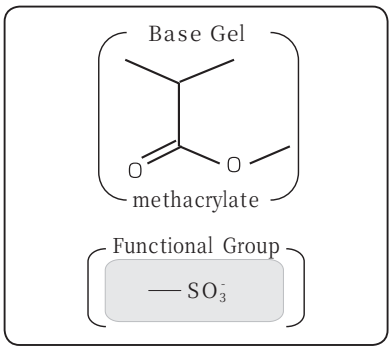
Item Name	Column Size	Quantity	Cat.No.
InertSep mini MA-2	280 mg	50 pieces	5010-27235

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP MA-2	30 mg	1 piece	5010-66710
	60 mg	1 piece	5010-66711

InertSep™ MC-1 (Methacrylate Copolymer With Strong Cation Exchange)

InertSep MC-1 is a methacrylate copolymer based solid phase, which includes a strong cation exchange functional group. Hydrophobic interaction is low so it works as a pure ion-exchange resin; the result is that InertSep MC-1 can be used for applications with strongly hydrophilic cationic compounds.



Application

- Wide range of cationic compounds

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep MC-1	30 mg/1 mL	100 pieces	5010-27354
	60 mg/3 mL	100 pieces	5010-27355
	100 mg/3 mL	50 pieces	5010-27350
	250 mg/6 mL	30 pieces	5010-27351
	500 mg/6 mL	30 pieces	5010-27352

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep MC-1	1 g/20 mL	20 pieces	5010-27356
	2 g/20 mL	20 pieces	5010-27357

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC MC-1	30 mg	50 pieces	5010-27651
	60 mg	50 pieces	5010-27652
	200 mg	50 pieces	5010-27653
	500 mg	50 pieces	5010-27654

Luer Device

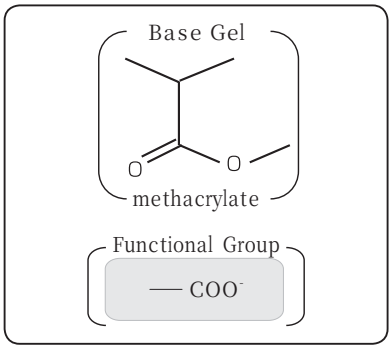
Item Name	Column Size	Quantity	Cat.No.
InertSep mini MC-1	280 mg	50 pieces	5010-27210

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP MC-1	30 mg	1 piece	5010-66500
	60 mg	1 piece	5010-66501

InertSep™ MC-2 (Methacrylate Copolymer With Weak Cation Exchange)

InertSep MC-2 is a methacrylate copolymer based solid phase, which includes a weak cation exchange functional group. Because the solid phase is based on methacrylate, there is very little secondary interaction so the extraction is made purely with ion exchange. Use InertSep MC-2 to extract cationic compounds only on the basis of ion exchange.



Application

- Strong cationic compounds

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep MC-2	30 mg/1 mL	100 pieces	5010-27374
	60 mg/3 mL	100 pieces	5010-27375
	100 mg/3 mL	50 pieces	5010-27370
	250 mg/6 mL	30 pieces	5010-27371
	500 mg/6 mL	30 pieces	5010-27372

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep MC-2	1 g/20 mL	20 pieces	5010-27376
	2 g/20 mL	20 pieces	5010-27377

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC MC-2	30 mg	50 pieces	5010-27661
	60 mg	50 pieces	5010-27662
	200 mg	50 pieces	5010-27663
	500 mg	50 pieces	5010-27664

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep mini MC-2	280 mg	50 pieces	5010-27240

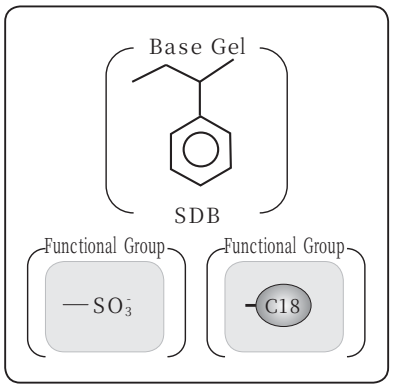
96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP MC-2	30 mg	1 piece	5010-66510
	60 mg	1 piece	5010-66511

Ion Exchange Polymer

InertSep™ MPC (Mixed Mode Reversed Phase Cation Exchange)

InertSep MPC is a solid phase made from a hard styrene-divinylbenzene base with both cationic and ODS functional groups. The combination of hydrophobic interaction and ion exchange offers the selective removal of a wide range of cationic compounds.



Standard Cartridge

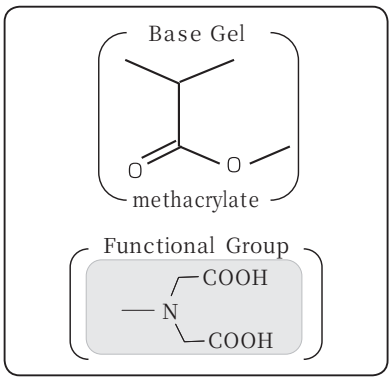
Item Name	Column Size	Quantity	Cat.No.
InertSep MPC	30 mg/1 mL	100 pieces	5010-27120
	60 mg/3 mL	100 pieces	5010-27121
	150 mg/6 mL	30 pieces	5010-27122
	200 mg/6 mL	30 pieces	5010-27123
	500 mg/6 mL	30 pieces	5010-27124

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ MPC	230 mg	50 pieces	5010-65750

InertSep™ ME-1 (Methacrylate Copolymer With Iminodiacetic Acid)

InertSep ME-1 is a methacrylate copolymer based solid phase, which includes an iminodiacetic acid weak cation exchange functional group. It is strongly hydrophilic and does not retain monovalent Na ion or K ion, but it does retain metal cations that are bivalent or greater. This offers selective concentration of greater than bivalent metal ions.



Application

- Heavy metals in seawater
- Heavy metals in river and ground water
- For protein purification (Ni): Affinity column
- Removal of heavy metals

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep ME-1	30 mg/1 mL	100 pieces	5010-27404
	60 mg/3 mL	100 pieces	5010-27405
	100 mg/3 mL	50 pieces	5010-27400
	250 mg/6 mL	30 pieces	5010-27401
	500 mg/6 mL	30 pieces	5010-27402

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep ME-1	1 g/20 mL	20 pieces	5010-27406
	2 g/20 mL	20 pieces	5010-27407

Large Cartridge LSC

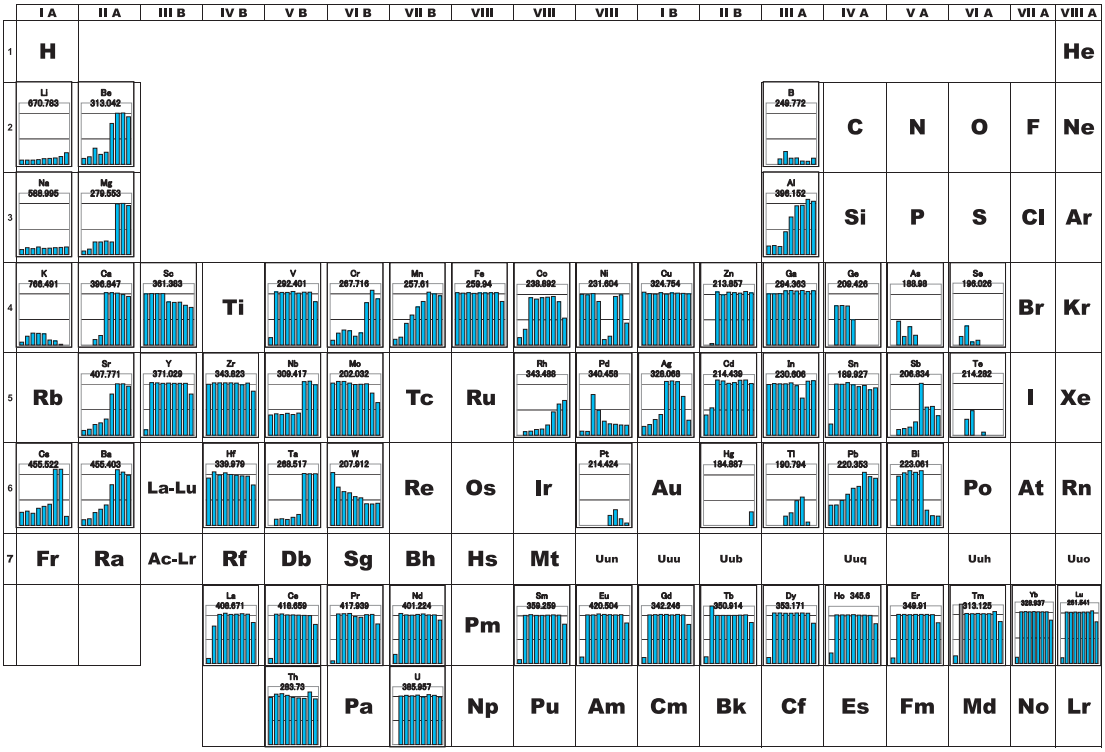
Item Name	Column Size	Quantity	Cat.No.
InertSep LSC ME-1	30 mg	50 pieces	5010-27671
	60 mg	50 pieces	5010-27672
	200 mg	50 pieces	5010-27673
	500 mg	50 pieces	5010-27674

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep mini ME-1	280 mg	50 pieces	5010-27215

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP ME-1	30 mg	1 piece	5010-66800
	60 mg	1 piece	5010-66801



InertSep ME-1 Retention based on pH

Non Polar Silica

InertSep™ C18 (Octadecyl Substituted Silica Gel)

InertSep C18 is a silica based solid phase with a C18(octadecyl) functional group that utilizes non-polar interaction. With high-level ended-capping, cationic interaction with the silanol groups on the base is virtually eliminated; reducing sample analyte non specific adsorption. The reverse phase interaction is suitable for the cleanup of organic solvent extracted agrochemicals from crop homogenates. InertSep C18 is the solid phase of choice for sample preparation using non-polar interaction.

$Si\text{-}(CH_2)_{17}CH_3$

Application

- Carbadox
- Streptomycin
- Neomycins
- Lipid removal
- Diquat
- Carbaryl
- Agrochemicals

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C18	50 mg/1 mL	100 pieces	5010-61000
	100 mg/1 mL	100 pieces	5010-61001
	200 mg/3 mL	50 pieces	5010-61002
	500 mg/3 mL	50 pieces	5010-61003
	500 mg/6 mL	30 pieces	5010-61004
	1 g/6 mL	30 pieces	5010-61005
	1 g/12 mL	20 pieces	5010-61015
	2 g/12 mL	20 pieces	5010-61006

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C18	500 mg/20 mL	20 pieces	5010-61013
	1 g/20 mL	20 pieces	5010-61014
	5 g/20 mL	20 pieces	5010-61007
	10 g/60 mL	16 pieces	5010-61008
	20 g/60 mL	16 pieces	5010-61009
	25 g/150 mL	8 pieces	5010-61010
	50 g/150 mL	8 pieces	5010-61011
	70 g/150 mL	8 pieces	5010-61012

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC C18	100 mg	50 pieces	5010-63001
	200 mg	50 pieces	5010-63002
	500 mg	50 pieces	5010-63003

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ C18	500 mg	50 pieces	5010-65000
	1000 mg	50 pieces	5010-65001
InertSep Slim C18	400 mg	50 pieces	5010-65005
	900 mg	50 pieces	5010-65006

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP C18	50 mg	1 piece	5010-66000
	100 mg	1 piece	5010-66001

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C18	60 µm	100 g	5010-69000

InertSep™ C18 FF (Octadecyl Substituted Silica Gel)

InertSep C18 FF is a high flow version of InertSep C18 used for the concentration of bulk samples such as environmental water.

$Si\text{-}(CH_2)_{17}CH_3$

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C18 FF	50 mg/1 mL	100 pieces	5010-62000
	100 mg/1 mL	100 pieces	5010-62001
	200 mg/3 mL	50 pieces	5010-62002
	500 mg/3 mL	50 pieces	5010-62003
	500 mg/6 mL	30 pieces	5010-62004
	1 g/6 mL	30 pieces	5010-62005
	2 g/12 mL	20 pieces	5010-62006

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C18 FF	5 g/20 mL	20 pieces	5010-62007
	10 g/60 mL	16 pieces	5010-62008

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP C18 FF	50 mg	1 piece	5010-66010
	100 mg	1 piece	5010-66011

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C18 FF	120 µm	100 g	5010-69024

InertSep™ C18-B (Octadecyl Substituted Silica Gel)

InertSep C18-B is a silica based solid phase with a C18(octadecyl) functional group that utilizes non-polar interaction. As a general purpose C18 based solid phase, it is likely that there will be secondary(non specific interaction). InertSep C18-B is best suited for general purpose reverse phase extraction.

$Si\text{-}(CH_2)_{17}CH_3$

Application

- Aflatoxin
- Amphetamine
- Non-polar compounds

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C18-B	50 mg/1 mL	100 pieces	5010-61020
	100 mg/1 mL	100 pieces	5010-61021
	200 mg/3 mL	50 pieces	5010-61022
	500 mg/3 mL	50 pieces	5010-61023
	500 mg/6 mL	30 pieces	5010-61024
	1 g/6 mL	30 pieces	5010-61025
	2 g/12 mL	20 pieces	5010-61026

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C18-B	5 g/20 mL	20 pieces	5010-61027
	10 g/60 mL	16 pieces	5010-61028

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ C18-B	500 mg	50 pieces	5010-65020
	1000 mg	50 pieces	5010-65021
InertSep Slim C18-B	360 mg	50 pieces	5010-65025
	840 mg	50 pieces	5010-65026

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP C18-B	50 mg	1 piece	5010-66020
	100 mg	1 piece	5010-66021

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C18-B	45 µm	100 g	5010-69001

InertSep™ C18-B FF (Octadecyl Substituted Silica Gel)

InertSep C18-B FF is a high flow version of InertSep C18-B FF ideal for the concentration of viscous samples.

$Si\text{-}(CH_2)_{17}CH_3$

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C18-B FF	50 mg/1 mL	100 pieces	5010-62020
	100 mg/1 mL	100 pieces	5010-62021
	200 mg/3 mL	50 pieces	5010-62022
	500 mg/3 mL	50 pieces	5010-62023
	500 mg/6 mL	30 pieces	5010-62024
	1 g/6 mL	30 pieces	5010-62025
	2 g/12 mL	20 pieces	5010-62026

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C18-B FF	5 g/20 mL	20 pieces	5010-62027
	10 g/60 mL	16 pieces	5010-62028

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C18-B FF	120 µm	100 g	5010-69025

Non Polar Silica

InertSep™ C18-C (Octadecyl Substituted Silica Gel)

InertSep C18-C is a silica based solid phase with a C18(octadecyl) functional group that utilizes non-polar interaction. In addition to the non-polar interaction, it is likely that there will be a controlled cation exchange with the active silanol groups. InertSep C18-C is suitable for the selection extraction of basic chemical compounds.

$Si\text{-}(CH_2)_{17}CH_3$

Application

- Odorous molds
- Basic organic compounds etc.

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C18-C	50 mg/1 mL	100 pieces	5010-61040
	100 mg/1 mL	100 pieces	5010-61041
	200 mg/3 mL	50 pieces	5010-61042
	500 mg/3 mL	50 pieces	5010-61043
	500 mg/6 mL	30 pieces	5010-61044
	1 g/6 mL	30 pieces	5010-61045
	2 g/12 mL	20 pieces	5010-61046

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C18-C	5 g/20 mL	20 pieces	5010-61047
	10 g/60 mL	16 pieces	5010-61048
	20 g/60 mL	16 pieces	5010-61049
	25 g/150 mL	8 pieces	5010-61050
	50 g/150 mL	8 pieces	5010-61051
	70 g/150 mL	8 pieces	5010-61052

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC C18-C	100 mg	50 pieces	5010-63041
	200 mg	50 pieces	5010-63042
	500 mg	50 pieces	5010-63043

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ C18-C	500 mg	50 pieces	5010-65040
	1000 mg	50 pieces	5010-65041
InertSep Slim C18-C	360 mg	50 pieces	5010-65045
	840 mg	50 pieces	5010-65046

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP C18-C	50 mg	1 piece	5010-66030
	100 mg	1 piece	5010-66031

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C18-C	60 µm	100 g	5010-69002

InertSep™ C18-C FF (Octadecyl Substituted Silica Gel)

InertSep C18-C FF is a high flow version of InertSep C18-B FF ideal for the selective concentration of highly viscous and bulk samples.

$Si\text{-}(CH_2)_{17}CH_3$

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C18-C FF	50 mg/1 mL	100 pieces	5010-62040
	100 mg/1 mL	100 pieces	5010-62041
	200 mg/3 mL	50 pieces	5010-62042
	500 mg/3 mL	50 pieces	5010-62043
	500 mg/6 mL	30 pieces	5010-62044
	1 g/6 mL	30 pieces	5010-62045
	2 g/12 mL	20 pieces	5010-62046

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C18-C FF	5 g/20 mL	20 pieces	5010-62047
	10 g/60 mL	16 pieces	5010-62048

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP C18-C FF	50 mg	1 piece	5010-66040
	100 mg	1 piece	5010-66041

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C18-C FF	120 µm	100 g	5010-69026

InertSep™ C8 (Octyl Substituted Silica Gel)

InertSep C8 is a silica gel based solid phase with a C8(octyl)functional group that offers a weaker non-polar interaction than C18. InertSep C8 is used for samples where the hydrophobic interaction is too strong to be used with a C18 functional group. With high-level ended-capping, cationic interaction with the silanol groups is virtually eliminated; reducing sample analyte non specific adsorption.

$Si\text{-}(CH_2)_7CH_3$

Application

- Agrochemical
- PCBs etc.

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C8	50 mg/1 mL	100 pieces	5010-61080
	100 mg/1 mL	100 pieces	5010-61081
	200 mg/3 mL	50 pieces	5010-61082
	500 mg/3 mL	50 pieces	5010-61083
	500 mg/6 mL	30 pieces	5010-61084
	1 g/6 mL	30 pieces	5010-61085
	2 g/12 mL	20 pieces	5010-61086

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C8	5 g/20 mL	20 pieces	5010-61087
	10 g/60 mL	16 pieces	5010-61088
	20 g/60 mL	16 pieces	5010-61089
	25 g/150 mL	8 pieces	5010-61090
	50 g/150 mL	8 pieces	5010-61091
	70 g/150 mL	8 pieces	5010-61092

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC C8	100 mg	50 pieces	5010-63081
	200 mg	50 pieces	5010-63082
	500 mg	50 pieces	5010-63083

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ C8	500 mg	50 pieces	5010-65080
	1000 mg	50 pieces	5010-65081

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP C8	50 mg	1 piece	5010-66050
	100 mg	1 piece	5010-66051

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C8	60 µm	100 g	5010-69003

InertSep™ C8 FF (Octyl Substituted Silica Gel)

InertSep C8 FF is a high flow version of InertSep C8 and can be used for the concentration of bulk samples and large volume samples such as environmental water.

$Si\text{-}(CH_2)_7CH_3$

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C8 FF	50 mg/1 mL	100 pieces	5010-62080
	100 mg/1 mL	100 pieces	5010-62081
	200 mg/3 mL	50 pieces	5010-62082
	500 mg/3 mL	50 pieces	5010-62083
	500 mg/6 mL	30 pieces	5010-62084
	1 g/6 mL	30 pieces	5010-62085
	2 g/12 mL	20 pieces	5010-62086

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C8 FF	5 g/20 mL	20 pieces	5010-62087
	10 g/60 mL	16 pieces	5010-62088

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C8 FF	120 µm	100 g	5010-69027

Non Polar Silica

InertSep™ C8-NE (Octyl Substituted Silica Gel)

InertSep C8-NE is a silica gel based solid phase with a C8(octyl)functional group that utilizes a weaker non-polar interaction than C18. InertSep C8-NE is used for samples where the hydrophobic interaction is too strong to be used with a C18 functional group, but due to the active free silanol groups not being end-capped, cationic exchange is combined with the hydrophobic interaction. It is suitable for the selective extraction of basic compounds.

$$Si\text{-}(CH_2)_7CH_3$$

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C8-NE	50 mg/1 mL	100 pieces	5010-61100
	100 mg/1 mL	100 pieces	5010-61101
	200 mg/3 mL	50 pieces	5010-61102
	500 mg/3 mL	50 pieces	5010-61103
	500 mg/6 mL	30 pieces	5010-61104
	1 g/6 mL	30 pieces	5010-61105
	2 g/12 mL	20 pieces	5010-61106

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C8-NE	5 g/20 mL	20 pieces	5010-61107
	10 g/60 mL	16 pieces	5010-61108

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC C8-NE	100 mg	50 pieces	5010-63101
	200 mg	50 pieces	5010-63102
	500 mg	50 pieces	5010-63103

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ C8-NE	500 mg	50 pieces	5010-65100
	1000 mg	50 pieces	5010-65101

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP C8-NE	50 mg	1 piece	5010-66060
	100 mg	1 piece	5010-66061

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C8-NE	60 µm	100 g	5010-69004

InertSep™ C2 (Ethyl Substituted Silica Gel)

InertSep C2 is a silica gel based solid phase with a C2(ethyl)functional group that utilizes a weaker non-polar interaction than C8. InertSep C2 is used for samples where the hydrophobic interaction is too strong to be used with a C8 functional group. With high-level ended-capping, cationic interaction with the free silanol groups is virtually eliminated; reducing sample analyte non specific adsorption. InertSep C2 is recommended for samples where the hydrophobic interaction with C8 or C18 is too strong.

$Si\text{-}C_2H_5$

Application

- Strongly hydrophobic samples

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C2	50 mg/1 mL	100 pieces	5010-61120
	100 mg/1 mL	100 pieces	5010-61121
	200 mg/3 mL	50 pieces	5010-61122
	500 mg/3 mL	50 pieces	5010-61123
	500 mg/6 mL	30 pieces	5010-61124
	1 g/6 mL	30 pieces	5010-61125
	2 g/12 mL	20 pieces	5010-61126

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C2	5 g/20 mL	20 pieces	5010-61127
	10 g/60 mL	16 pieces	5010-61128
	20 g/60 mL	16 pieces	5010-61129
	25 g/150 mL	8 pieces	5010-61130
	50 g/150 mL	8 pieces	5010-61131
	70 g/150 mL	8 pieces	5010-61132

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC C2	100 mg	50 pieces	5010-63121
	200 mg	50 pieces	5010-63122
	500 mg	50 pieces	5010-63123

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ C2	500 mg	50 pieces	5010-65120
	1000 mg	50 pieces	5010-65121

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP C2	50 mg	1 piece	5010-66070
	100 mg	1 piece	5010-66071

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C2	60 µm	100 g	5010-69005

InertSep™ C2 FF (Ethyl Substituted Silica Gel)

InertSep C2 FF is a high flow version of InertSep C2 and can be used for the concentration of bulk samples and large volume samples such as environmental water.

$Si\text{-}C_2H_5$

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C2 FF	50 mg/1 mL	100 pieces	5010-62120
	100 mg/1 mL	100 pieces	5010-62121
	200 mg/3 mL	50 pieces	5010-62122
	500 mg/3 mL	50 pieces	5010-62123
	500 mg/6 mL	30 pieces	5010-62124
	1 g/6 mL	30 pieces	5010-62125
	2 g/12 mL	20 pieces	5010-62126

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C2 FF	5 g/20 mL	20 pieces	5010-62127
	10 g/60 mL	16 pieces	5010-62128

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C2 FF	120 µm	100 g	5010-69028

Non Polar Silica

InertSep™ C2-NE (Ethyl Substituted Silica Gel)

InertSep C2-NE is a silica gel based solid phase with a C2(ethyl)functional group that utilizes a weak non-polar interaction, the active silanol base is not end-capped, so that cationic exchange plays a more important role in the separation. It is suitable for the selective extraction of a range of polar compounds.

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep C2-NE	50 mg/1 mL	100 pieces	5010-61140
	100 mg/1 mL	100 pieces	5010-61141
	200 mg/3 mL	50 pieces	5010-61142
	500 mg/3 mL	50 pieces	5010-61143
	500 mg/6 mL	30 pieces	5010-61144
	1 g/6 mL	30 pieces	5010-61145
	2 g/12 mL	20 pieces	5010-61146

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep C2-NE	5 g/20 mL	20 pieces	5010-61147
	10 g/60 mL	16 pieces	5010-61148

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC C2-NE	100 mg	50 pieces	5010-63141
	200 mg	50 pieces	5010-63142
	500 mg	50 pieces	5010-63143

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ C2-NE	500 mg	50 pieces	5010-65140
	1000 mg	50 pieces	5010-65141

96-Well Plate

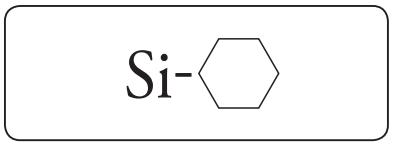
Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP C2-NE	50 mg	1 piece	5010-66080
	100 mg	1 piece	5010-66081

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep C2-NE	60 μm	100 g	5010-69006

InertSep™ CH (Cyclohexyl Substituted Silica Gel)

InertSep CH is a silica gel based solid phase with a cyclohexyl functional group, this gives a polar solid phase with the non polar characteristics of C2. InertSep CH offers a unique selectivity for the extraction of certain chemical compounds. It is suitable for separation with a higher selectivity that C18, C8, C2 and PH.



Application

- Phenol in water

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep CH	50 mg/1 mL	100 pieces	5010-61160
	100 mg/1 mL	100 pieces	5010-61161
	200 mg/3 mL	50 pieces	5010-61162
	500 mg/3 mL	50 pieces	5010-61163
	500 mg/6 mL	30 pieces	5010-61164
	1 g/6 mL	30 pieces	5010-61165
	2 g/12 mL	20 pieces	5010-61166

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep CH	5 g/20 mL	20 pieces	5010-61167
	10 g/60 mL	16 pieces	5010-61168

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC CH	100 mg	50 pieces	5010-63161
	200 mg	50 pieces	5010-63162
	500 mg	50 pieces	5010-63163

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ CH	500 mg	50 pieces	5010-65160
	1000 mg	50 pieces	5010-65161

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP CH	50 mg	1 piece	5010-66090
	100 mg	1 piece	5010-66091

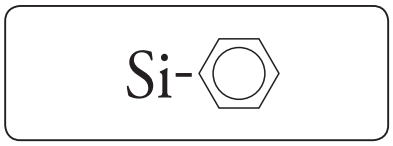
Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep CH	60 μm	100 g	5010-69007

Non Polar Silica

InertSep™ PH (Phenyl Substituted Silica Gel)

InertSep PH is a silica gel based solid phase with a phenyl functional group that has similar non-polar interaction to C8. The phenyl group has unique π-π bond interaction that increases the selectivity compared to C8. InertSep PH is more selective for aromatic compounds that contain benzene rings.



Application

- Phenol
- Aflatoxin
- Caffeine etc.

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PH	50 mg/1 mL	100 pieces	5010-61180
	100 mg/1 mL	100 pieces	5010-61181
	200 mg/3 mL	50 pieces	5010-61182
	500 mg/3 mL	50 pieces	5010-61183
	500 mg/6 mL	30 pieces	5010-61184
	1 g/6 mL	30 pieces	5010-61185
	2 g/12 mL	20 pieces	5010-61186

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep PH	5 g/20 mL	20 pieces	5010-61187
	10 g/60 mL	16 pieces	5010-61188
	20 g/60 mL	16 pieces	5010-61189
	25 g/150 mL	8 pieces	5010-61190
	50 g/150 mL	8 pieces	5010-61191
	70 g/150 mL	8 pieces	5010-61192

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC PH	100 mg	50 pieces	5010-63181
	200 mg	50 pieces	5010-63182
	500 mg	50 pieces	5010-63183

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ PH	500 mg	50 pieces	5010-65180
	1000 mg	50 pieces	5010-65181

96-Well Plate

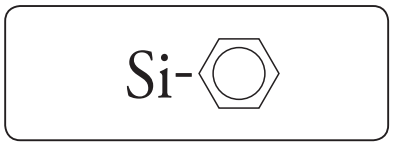
Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP PH	50 mg	1 piece	5010-66100
	100 mg	1 piece	5010-66101

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep PH	60 µm	100 g	5010-69008

InertSep™ PH FF (Phenyl Substituted Silica Gel)

InertSep PH FF is a high flow version of InertSep PH and can be used for the concentration of bulk samples and large volume samples such as environmental water.



Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PH FF	50 mg/1 mL	100 pieces	5010-62180
	100 mg/1 mL	100 pieces	5010-62181
	200 mg/3 mL	50 pieces	5010-62182
	500 mg/3 mL	50 pieces	5010-62183
	500 mg/6 mL	30 pieces	5010-62184
	1 g/6 mL	30 pieces	5010-62185
	2 g/12 mL	20 pieces	5010-62186

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep PH FF	5 g/20 mL	20 pieces	5010-62187
	10 g/60 mL	16 pieces	5010-62188

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep PH FF	120 µm	100 g	5010-69029

InertSep™ CN (Cyano-Propyl Substituted Silica Gel)

InertSep CN is a silica gel based solid phase with a cyano-propyl functional group. Combining both polar and non-polar interaction, the CN phase offers higher selectivity and better elution for hydrophobic compounds compared to either C8 or C18 In addition, it is effective for the extraction of polar compounds that SI or 2OH phase has difficulties to elute.

$Si\text{-}(CH_2)_3\text{-}CN$

Application

- Cyclosporin
- Polar compounds

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep CN	50 mg/1 mL	100 pieces	5010-61300
	100 mg/1 mL	100 pieces	5010-61301
	200 mg/3 mL	50 pieces	5010-61302
	500 mg/3 mL	50 pieces	5010-61303
	500 mg/6 mL	30 pieces	5010-61304
	1 g/6 mL	30 pieces	5010-61305
	2 g/12 mL	20 pieces	5010-61306

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep CN	5 g/20 mL	20 pieces	5010-61307
	10 g/60 mL	16 pieces	5010-61308

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC CN	100 mg	50 pieces	5010-63301
	200 mg	50 pieces	5010-63302
	500 mg	50 pieces	5010-63303

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ CN	500 mg	50 pieces	5010-65300
	1000 mg	50 pieces	5010-65301

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP CN	50 mg	1 piece	5010-66300
	100 mg	1 piece	5010-66301

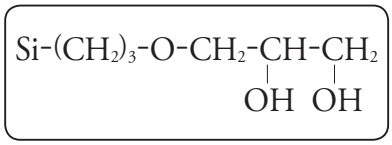
Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep CN	45 µm	100 g	5010-69009

Polar Silica

InertSep™ 2OH (Glyceryl-Propyl Substituted Silica Gel)

InertSep 2OH is a silica gel based solid phase with a diol(glyceryl-propyl)functional group. Combining both polar and non-polar interaction, it is suitable for the extraction of polar compounds in polar solvents. Making use of hydrogen bond interaction, InertSep 2OH Change retained polar compound to the polarity of the elution solvent. InertSep 2OH is used in high-level cleanup methods including fractionation.



Application

- Prostaglandin
- Antibiotics
- Polar compounds etc.

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep 20H	50 mg/1 mL	100 pieces	5010-61320
	100 mg/1 mL	100 pieces	5010-61321
	200 mg/3 mL	50 pieces	5010-61322
	500 mg/3 mL	50 pieces	5010-61323
	500 mg/6 mL	30 pieces	5010-61324
	1 g/6 mL	30 pieces	5010-61325
	2 g/12 mL	20 pieces	5010-61326

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep 20H	5 g/20 mL	20 pieces	5010-61327
	10 g/60 mL	16 pieces	5010-61328
	20 g/60 mL	16 pieces	5010-61329
	25 g/150 mL	8 pieces	5010-61330
	50 g/150 mL	8 pieces	5010-61331
	70 g/150 mL	8 pieces	5010-61332

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC 20H	100 mg	50 pieces	5010-63321
	200 mg	50 pieces	5010-63322
	500 mg	50 pieces	5010-63323

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ 20H	500 mg	50 pieces	5010-65320
	1000 mg	50 pieces	5010-65321
InertSep Slim 20H	360 mg	50 pieces	5010-65325

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP 20H	50 mg	1 piece	5010-66310
	100 mg	1 piece	5010-66311

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep 20H	60 µm	100 g	5010-69010

InertSep™ SI (Silica Gel)

InertSep SI is a silica base, which has strong polar interaction. It offers selective separation for similar chemical compounds using polar solvents. InertSep SI has the highest affinity for polar compounds. Care should be taken with humidity and polar solvents, when using this material.

Si-OH

Application

- Polar purification in normal phase mode
- Agrochemicals

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep SI	50 mg/1 mL	100 pieces	5010-61340
	100 mg/1 mL	100 pieces	5010-61341
	200 mg/3 mL	50 pieces	5010-61342
	500 mg/3 mL	50 pieces	5010-61343
	500 mg/6 mL	30 pieces	5010-61344
	1 g/6 mL	30 pieces	5010-61345
	2 g/12 mL	20 pieces	5010-61346

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep SI	5 g/20 mL	20 pieces	5010-61347
	10 g/60 mL	16 pieces	5010-61348
	20 g/60 mL	16 pieces	5010-61349
	25 g/150 mL	8 pieces	5010-61350
	50 g/150 mL	8 pieces	5010-61351
	70 g/150 mL	8 pieces	5010-61352

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC SI	100 mg	50 pieces	5010-63341
	200 mg	50 pieces	5010-63342
	500 mg	50 pieces	5010-63343

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ SI	500 mg	50 pieces	5010-65340
	1000 mg	50 pieces	5010-65341
InertSep Slim SI	690 mg	50 pieces	5010-65345

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP SI	50 mg	1 piece	5010-66320
	100 mg	1 piece	5010-66321

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep SI	60 µm	100 g	5010-69011

Polar Silica

InertSep™ SI FF (Silica Gel)

InertSep SI FF is a high flow version of InertSep SI and is suitable for cut off processing of samples with high viscosity.

Si-OH

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep SI FF	50 mg/1 mL	100 pieces	5010-62340
	100 mg/1 mL	100 pieces	5010-62341
	200 mg/3 mL	50 pieces	5010-62342
	500 mg/3 mL	50 pieces	5010-62343
	500 mg/6 mL	30 pieces	5010-62344
	1 g/6 mL	30 pieces	5010-62345
	2 g/12 mL	20 pieces	5010-62346

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep SI FF	5 g/20 mL	20 pieces	5010-62347
	10 g/60 mL	16 pieces	5010-62348
	20 g/60 mL	16 pieces	5010-62349
	25 g/150 mL	8 pieces	5010-62350
	50 g/150 mL	8 pieces	5010-62351
	70 g/150 mL	8 pieces	5010-62352

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC SI FF	100 mg	50 pieces	5010-64341
	200 mg	50 pieces	5010-64342
	500 mg	50 pieces	5010-64343

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep SI FF	120 µm	100 g	5010-69030

InertSep™ AL-A (Alumina - Acid)

InertSep AL-A is a solid phase manufactured from alumina(Al_2O_3). Available in three types, A type(acid) B type(basic), N type(neutral). InertSep AL-A is used for cut-off processing of organic compounds.

Al_2O_3

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep AL-A	50 mg/1 mL	100 pieces	5010-61360
	100 mg/1 mL	100 pieces	5010-61361
	200 mg/3 mL	50 pieces	5010-61362
	500 mg/3 mL	50 pieces	5010-61363
	500 mg/6 mL	30 pieces	5010-61364
	1 g/6 mL	30 pieces	5010-61365
	2 g/12 mL	20 pieces	5010-61366

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep AL-A	5 g/20 mL	20 pieces	5010-61367
	10 g/60 mL	16 pieces	5010-61368

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC AL-A	100 mg	50 pieces	5010-63361
	200 mg	50 pieces	5010-63362
	500 mg	50 pieces	5010-63363

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ AL-A	500 mg	50 pieces	5010-65360
	1000 mg	50 pieces	5010-65361
	1710 mg	50 pieces	5010-65362

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep AL-A	100 µm	100 g	5010-69012

Other Polar Phases

InertSep™ AL-B (Alumina - Basic)

InertSep AL-B is a solid phase manufactured from alumina(Al_2O_3) Available in three types, A type(acid), B type(basic), N type(neutral). InertSep AL-B is used for cut-off processing of organic compounds.

Al_2O_3

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep AL-B	50 mg/1 mL	100 pieces	5010-61380
	100 mg/1 mL	100 pieces	5010-61381
	200 mg/3 mL	50 pieces	5010-61382
	500 mg/3 mL	50 pieces	5010-61383
	500 mg/6 mL	30 pieces	5010-61384
	1 g/6 mL	30 pieces	5010-61385
	2 g/12 mL	20 pieces	5010-61386

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep AL-B	5 g/20 mL	20 pieces	5010-61387
	10 g/60 mL	16 pieces	5010-61388

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC AL-B	100 mg	50 pieces	5010-63381
	200 mg	50 pieces	5010-63382
	500 mg	50 pieces	5010-63383

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ AL-B	500 mg	50 pieces	5010-65380
	1000 mg	50 pieces	5010-65381
	1710 mg	50 pieces	5010-65382

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep AL-B	100 µm	100 g	5010-69013

InertSep™ AL-N (Alumina - Neutral)

InertSep AL-N is a solid phase manufactured from alumina(Al_2O_3) Available in three types, A type(acid), B type(basic), N type(neutral). InertSep AL-N is used for cut-off processing of organic compounds.

Al_2O_3

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep AL-N	50 mg/1 mL	100 pieces	5010-61400
	100 mg/1 mL	100 pieces	5010-61401
	200 mg/3 mL	50 pieces	5010-61402
	500 mg/3 mL	50 pieces	5010-61403
	500 mg/6 mL	30 pieces	5010-61404
	1 g/6 mL	30 pieces	5010-61405
	2 g/12 mL	20 pieces	5010-61406

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep AL-N	5 g/20 mL	20 pieces	5010-61407
	10 g/60 mL	16 pieces	5010-61408

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC AL-N	100 mg	50 pieces	5010-63401
	200 mg	50 pieces	5010-63402
	500 mg	50 pieces	5010-63403

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ AL-N	500 mg	50 pieces	5010-65400
	1000 mg	50 pieces	5010-65401
	1710 mg	50 pieces	5010-65402
	1850 mg	50 pieces	5010-65403

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep AL-N	100 µm	100 g	5010-69014

Other Polar Phases

InertSep™ FL (Synthetic Magnesium Silicate)

InertSep FL is manufactured from Florisil a highly selective magnesium silicate($MgO \cdot SiO_2$)based adsorbent. It is used for clean up of organic compounds in complex matrix.

$MgO \cdot SiO_2$

Application

- Polar material purification
- Weak pigment removal etc.

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep FL	50 mg/1 mL	100 pieces	5010-61420
	100 mg/1 mL	100 pieces	5010-61421
	200 mg/3 mL	50 pieces	5010-61422
	500 mg/3 mL	50 pieces	5010-61423
	500 mg/6 mL	30 pieces	5010-61424
	1 g/6 mL	30 pieces	5010-61425
	2 g/12 mL	20 pieces	5010-61426

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep FL	5 g/20 mL	20 pieces	5010-61427
	10 g/60 mL	16 pieces	5010-61428

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC FL	100 mg	50 pieces	5010-63421
	200 mg	50 pieces	5010-63422
	500 mg	50 pieces	5010-63423

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ FL	500 mg	50 pieces	5010-65420
	900 mg	50 pieces	5010-65422
	1000 mg	50 pieces	5010-65421

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep FL	50～200 μm	100 g	5010-69015

InertSep™ FL-PR (Synthetic Magnesium Silicate)

The InertSep FL-PR version is used specifically for cleanup of crop agrochemicals.

$MgO \cdot SiO_2$

Application

- Organic compound purification
- Crop agrochemical residue cleanup

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep FL-PR	50 mg/1 mL	100 pieces	5010-61440
	100 mg/1 mL	100 pieces	5010-61441
	200 mg/3 mL	50 pieces	5010-61442
	500 mg/3 mL	50 pieces	5010-61443
	500 mg/6 mL	30 pieces	5010-61444
	1 g/6 mL	30 pieces	5010-61445
	2 g/12 mL	20 pieces	5010-61446

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep FL-PR	910 mg/20 mL	20 pieces	5010-61453
	5 g/20 mL	20 pieces	5010-61447
	10 g/60 mL	16 pieces	5010-61448

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC FL-PR	100 mg	50 pieces	5010-63441
	200 mg	50 pieces	5010-63442
	500 mg	50 pieces	5010-63443

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ FL-PR	500 mg	50 pieces	5010-65440
	900 mg	50 pieces	5010-65442
	1000 mg	50 pieces	5010-65441

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep FL-PR	100～300 μm	100 g	5010-69016

InertSep™ CBA (Carboxyethyl Substituted Silica Gel)

InertSep CBA is a silica gel based solid phase with a carboxyl ethyl functional group. The primary interaction is cation exchange, with a weaker combined secondary non-polar and polar interaction. InertSep CBA is particularly useful for the extraction of pharmaceutical compounds etc. that have a strong cation, such as those with an amine group.

$Si\text{-}(CH_2)_2\text{-}COO^-$

Application

- Strongly cationic compounds

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep CBA	50 mg/1 mL	100 pieces	5010-61500
	100 mg/1 mL	100 pieces	5010-61501
	200 mg/3 mL	50 pieces	5010-61502
	250 mg/3 mL	50 pieces	5010-61509
	500 mg/3 mL	50 pieces	5010-61503
	250 mg/6 mL	30 pieces	5010-61510
	500 mg/6 mL	30 pieces	5010-61504
	1 g/6 mL	30 pieces	5010-61505
	2 g/12 mL	20 pieces	5010-61506

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep CBA	5 g/20 mL	20 pieces	5010-61507
	10 g/60 mL	16 pieces	5010-61508

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC CBA	100 mg	50 pieces	5010-63501
	200 mg	50 pieces	5010-63502
	500 mg	50 pieces	5010-63503

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ CBA	500 mg	50 pieces	5010-65500
	1000 mg	50 pieces	5010-65501

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP CBA	50 mg	1 piece	5010-66400
	100 mg	1 piece	5010-66401

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep CBA	45 µm	100 g	5010-69017

Ion Exchange Silica

InertSep™ PRS (Propylsulfonyl Substitued Silica Gel)

InertSep PRS is a silica gel based solid phase that has a propyl-sulfonyl functional group. The primary interaction is cation exchange, with a weaker combined secondary non-polar and polar interaction. In addition, in low polarity solvents it offers polar interaction and also hydrogen bond interaction.

$Si\text{-}(CH_2)_3\text{-}SO_3^-$

Application

- Weakly basic compounds in aqueous solution

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PRS	50 mg/1 mL	100 pieces	5010-61520
	100 mg/1 mL	100 pieces	5010-61521
	200 mg/3 mL	50 pieces	5010-61522
	500 mg/3 mL	50 pieces	5010-61523
	500 mg/6 mL	30 pieces	5010-61524
	1 g/6 mL	30 pieces	5010-61525
	2 g/12 mL	20 pieces	5010-61526

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep PRS	5 g/20 mL	20 pieces	5010-61527
	10 g/60 mL	16 pieces	5010-61528

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC PRS	100 mg	50 pieces	5010-63521
	200 mg	50 pieces	5010-63522
	500 mg	50 pieces	5010-63523

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ PRS	500 mg	50 pieces	5010-65520
	1000 mg	50 pieces	5010-65521

96-Well Plate

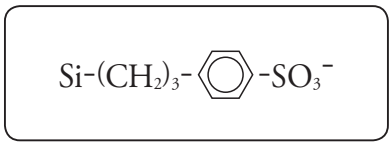
Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP PRS	50 mg	1 piece	5010-66410
	100 mg	1 piece	5010-66411

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep PRS	45 µm	100 g	5010-69018

InertSep™ SCX (Benzene Sulfonyl Propyl Substituted Silica Gel)

InertSep SCX is a silica gel based solid phase with a benzene sulfonyl propyl functional group. Primary function is a combination of both non-polar and strong cation exchange interactions. In addition, it possesses a less significant polar interaction. Because the non-polar interaction is stronger than for PRS material, InertSep SCX is suitable for samples which require the additional selectivity offered by a combination of two surface characteristics - cation exchange and non-polar interaction.



Application

- Levamisole
- Malachite green
- Weakly basic compounds in aqueous solution

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep SCX	50 mg/1 mL	100 pieces	5010-61540
	100 mg/1 mL	100 pieces	5010-61541
	200 mg/3 mL	50 pieces	5010-61542
	500 mg/3 mL	50 pieces	5010-61543
	500 mg/6 mL	30 pieces	5010-61544
	1 g/6 mL	30 pieces	5010-61545
	2 g/12 mL	20 pieces	5010-61546

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep SCX	5 g/20 mL	20 pieces	5010-61547
	10 g/60 mL	16 pieces	5010-61548
	20 g/60 mL	16 pieces	5010-61549
	25 g/150 mL	8 pieces	5010-61550
	50 g/150 mL	8 pieces	5010-61551
	70 g/150 mL	8 pieces	5010-61552

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC SCX	100 mg	50 pieces	5010-63541
	200 mg	50 pieces	5010-63542
	500 mg	50 pieces	5010-63543

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ SCX	500 mg	50 pieces	5010-65540
	1000 mg	50 pieces	5010-65541

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP SCX	50 mg	1 piece	5010-66420
	100 mg	1 piece	5010-66421

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep SCX	45 µm	100 g	5010-69019

Ion Exchange Silica

InertSep™ NH2 (Amino Propyl Substituted Silica Gel)

InertSep NH2 is a solid phase with an amino-propyl functional group. Anion exchange and polar interaction are combined as a primary interaction. As a secondary interaction, it has a weak non-polar interaction combined with anion exchange. Similarly, to normal phase separation using Si - 2OH interaction, InertSep NH2 can be used for the separation of structural isomers.

$Si\text{-}(CH_2)_3\text{-}NH_2$

Application

- Pigment removal
- Fatty acid removal
- PCB (clean-up)
- Strongly acidic compounds in aqueous solution
- Purification of organic compounds in normal phase mode

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep NH2	50 mg/1 mL	100 pieces	5010-61600
	100 mg/1 mL	100 pieces	5010-61601
	200 mg/3 mL	50 pieces	5010-61602
	500 mg/3 mL	50 pieces	5010-61603
	500 mg/6 mL	30 pieces	5010-61604
	1 g/6 mL	30 pieces	5010-61605
	2 g/12 mL	20 pieces	5010-61606

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep NH2	5 g/20 mL	20 pieces	5010-61607
	10 g/60 mL	16 pieces	5010-61608
	20 g/60 mL	16 pieces	5010-61609
	25 g/150 mL	8 pieces	5010-61610
	50 g/150 mL	8 pieces	5010-61611
	70 g/150 mL	8 pieces	5010-61612

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC NH2	100 mg	50 pieces	5010-63601
	200 mg	50 pieces	5010-63602
	500 mg	50 pieces	5010-63603

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ NH2	500 mg	50 pieces	5010-65600
	1000 mg	50 pieces	5010-65601
InertSep Slim NH2	360 mg	50 pieces	5010-65605

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP NH2	50 mg	1 piece	5010-66600
	100 mg	1 piece	5010-66601

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep NH2	60 µm	100 g	5010-69020

InertSep™ NH2 FF (Amino Propyl Substituted Silica Gel)

InertSep NH2 FF is a high flow version of InertSep NH2. It is suitable for use with samples whose viscosity is high.

$Si\text{-}(CH_2)_3\text{-}NH_2$

Application

- Pigment removal
- Fatty acid removal
- PCB (clean up)
- Strongly acidic compounds in aqueous solution
- Purification of organic compounds in normal phase mode

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep NH2 FF	50 mg/1 mL	100 pieces	5010-62600
	100 mg/1 mL	100 pieces	5010-62601
	200 mg/3 mL	50 pieces	5010-62602
	500 mg/3 mL	50 pieces	5010-62603
	500 mg/6 mL	30 pieces	5010-62604
	1 g/6 mL	30 pieces	5010-62605
	2 g/12 mL	20 pieces	5010-62606

Standard Cartridge (High Volume Cartridge)

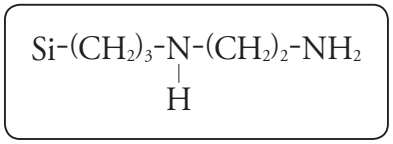
Item Name	Column Size	Quantity	Cat.No.
InertSep NH2 FF	5 g/20 mL	20 pieces	5010-62607
	10 g/60 mL	16 pieces	5010-62608

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep NH2 FF	120 µm	100 g	5010-69031

InertSep™ PSA (Ethylene Diamine - N- Propyl Substituted Silica Gel)

InertSep PSA is a silica gel based solid phase with an ethylene-diamine - N- propyl functional group.
The primary interaction is a combination of both anion exchange and polarity.



Application

- Pigment removal
- Fatty acid removal
- Strongly acidic compounds in aqueous solution

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PSA	50 mg/1 mL	100 pieces	5010-61620
	100 mg/1 mL	100 pieces	5010-61621
	200 mg/3 mL	50 pieces	5010-61622
	500 mg/3 mL	50 pieces	5010-61623
	500 mg/6 mL	30 pieces	5010-61624
	1 g/6 mL	30 pieces	5010-61625
	2 g/12 mL	20 pieces	5010-61626

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep PSA	5 g/20 mL	20 pieces	5010-61627
	10 g/60 mL	16 pieces	5010-61628

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC PSA	100 mg	50 pieces	5010-63621
	200 mg	50 pieces	5010-63622
	500 mg	50 pieces	5010-63623

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ PSA	500 mg	50 pieces	5010-65620
	1000 mg	50 pieces	5010-65621

96-Well Plate

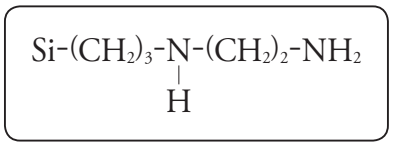
Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP PSA	50 mg	1 piece	5010-66610
	100 mg	1 piece	5010-66611

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep PSA	60 µm	100 g	5010-69021

InertSep™ PSA FF (Ethylene Diamine - N- Propyl Substituted Silica Gel)

InertSep PSA FF is a high flow version of InertSep PSA. It is suitable for the pretreatment of high viscosity crop extracts for the cleanup of agrochemicals.



Application

- Pigment removal
- Fatty acid removal
- Strongly acidic compounds in aqueous solution

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PSA FF	50 mg/1 mL	100 pieces	5010-62620
	100 mg/1 mL	100 pieces	5010-62621
	200 mg/3 mL	50 pieces	5010-62622
	500 mg/3 mL	50 pieces	5010-62623
	500 mg/6 mL	30 pieces	5010-62624
	1 g/6 mL	30 pieces	5010-62625
	2 g/12 mL	20 pieces	5010-62626

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep PSA FF	5 g/20 mL	20 pieces	5010-62627
	10 g/60 mL	16 pieces	5010-62628

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep PSA FF	120 µm	100 g	5010-69032

Ion Exchange Silica

InertSep™ SAX (Tri-methyl Amino Propyl Substituted Silica Gel)

InertSep SAX is a silca gel based solid phase with a tri-methyl amino propyl functional group. Primary interaction is very strong anion exchange Secondary interaction is a combination of a weak polar and non-polar interaction. It is generally used for the extraction of weak anions such as carboxylic acid.

$Si\text{-}(CH_2)_3\text{-}N^+\text{-}(CH_3)_3$

Application

- Pigment removal
- Fatty acid removal
- Weakly acidic compounds in aqueous solution

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep SAX	50 mg/1 mL	100 pieces	5010-61640
	100 mg/1 mL	100 pieces	5010-61641
	200 mg/3 mL	50 pieces	5010-61642
	500 mg/3 mL	50 pieces	5010-61643
	500 mg/6 mL	30 pieces	5010-61644
	1 g/6 mL	30 pieces	5010-61645
	2 g/12 mL	20 pieces	5010-61646

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep SAX	5 g/20 mL	20 pieces	5010-61647
	10 g/60 mL	16 pieces	5010-61648
	20 g/60 mL	16 pieces	5010-61649
	25 g/150 mL	8 pieces	5010-61650
	50 g/150 mL	8 pieces	5010-61651
	70 g/150 mL	8 pieces	5010-61652

Large Cartridge LSC

Item Name	Column Size	Quantity	Cat.No.
InertSep LSC SAX	100 mg	50 pieces	5010-63641
	200 mg	50 pieces	5010-63642
	500 mg	50 pieces	5010-63643

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ SAX	500 mg	50 pieces	5010-65640
	1000 mg	50 pieces	5010-65641

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP SAX	50 mg	1 piece	5010-66620
	100 mg	1 piece	5010-66621

Bulk Material For Solid Phase Extraction

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep SAX	45 μm	100 g	5010-69022

InertSep™ SAX/PSA (Tri-Methyl Amino Propyl Substituted Silica Gel/ Ethylene Diamine - N- Propyl Substituted Silica Gel)

InertSep SAX/PSA is two layer solid phase extraction cartridge with both SAX and PSA. It is used specifically where the polar interaction is ideal for agrochemical compounds that are often difficult to remove from crop samples.

Application

- Weak chlorophyll removal
- Pigment removal
- Fatty acid removal

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep SAX/PSA	250 mg/250 mg/3 mL	50 pieces	5010-68100
	500 mg/500 mg/6 mL	30 pieces	5010-68101

Standard Cartridge (High Volume Cartridge)

Item Name	Mean Particle Diameter	Weight	Cat.No.
InertSep SAX/PSA	500 mg/500 mg/20 mL	20 pieces	5010-68104
	1 g/1 g/20 mL	20 pieces	5010-68105

InertSep™ Dry Cartridge

InertSep Dry Cartridge is a solid phase, based on a sulfuric anhydride material.

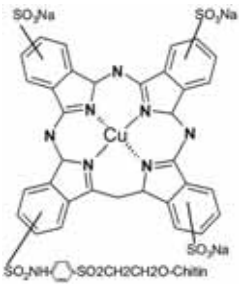
Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ Dry	1.4 g	50 pieces	5010-65700
	2.8 g	50 pieces	5010-65701

Application

- Moisture removal in solid phase collection solvent

InertSep™ SlimJ Aroma-Blue (Affinity Solid Phase)



InertSep SlimJ Aroma-Blue is a solid phase extraction cartridge used for the extraction of polycyclic aromatic hydrocarbons(PAHs)in samples such as environmental water quality. The solid phase cartridge is manufactured using two materials; the first is the blue pigment - copper phthalocyanine, which uniquely adsorbs polycyclic compounds. The second is the active material blue chitin mixed with chitin as a carrier. InertSep SlimJ Aroma-Blue can be used for the quantitative adsorption and elution of mutagenic polycyclic compounds in aqueous solution.

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep SlimJ Aroma-Blue	250 mg	20 pieces	5010-27801

InertSep™ PA

InertSep PA is a specific solid phase that has a polyamide base. The primary interaction is a combination of anion exchange and polar interaction. It also offers a secondary weak non-polar interaction.

Application

- Extraction of flavonol in bark
- Extraction of polycyclic aromatic hydrocarbons

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PA	50 mg/1 mL	100 pieces	5010-61660
	100 mg/1 mL	100 pieces	5010-61661
	200 mg/3 mL	50 pieces	5010-61662
	500 mg/6 mL	30 pieces	5010-61664
	1 g/12 mL	20 pieces	5010-61665

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep PA	2 g/20 mL	20 pieces	5010-61666
	5 g/60 mL	16 pieces	5010-61667
	10 g/60 mL	16 pieces	5010-61668

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP PA	50 mg	1 piece	5010-66630
	100 mg	1 piece	5010-66631

InertSep™ PCB

InertSep PCB is a mix mode solid phase with both SCX and SI functional groups. It has been designed for the extraction of Complex matrix samples containing PCBs. InertSep PCB is generally used for the extraction of lipid soluble samples in matrices such as oil and milk.

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PCB	1 g/3 mL	50 pieces	5010-68121
	1 g/6 mL	30 pieces	5010-68120

Application

- PCB in oil

Specific Phases

InertSep™ GC (Graphite Carbon)

InertSep GC is a solid phase that consists of graphite carbon in a planar structure. It is generally used for the removal of pigment materials from crop homogenates. In addition, it can be used in conjunction with various silica based solid phases such as ion exchange and normal phase for sample clean-up.

GC Application

- Chlorophyll removal
- Pigment removal

GC/NH_2, GC/PSA Application

- Chlorophyll removal
- Pigment removal
- Fatty acid removal

GC/PSA/SI Application

- Chlorophyll removal
- Pigment removal
- Fatty acid removal
- Polar compound purification

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep GC	150 mg/3 mL	50 pieces	5010-68000
	250 mg/3 mL	50 pieces	5010-68005
	300 mg/6 mL	30 pieces	5010-68001
	500 mg/6 mL	30 pieces	5010-68002
	1 g/12 mL	20 pieces	5010-68003

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep GC	500 mg/20 mL	20 pieces	5010-68004

Luer Device

Item Name	Column Size	Quantity	Cat.No.
InertSep Slim GC	400 mg	50 pieces	5010-65710

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep GC/NH_2	500 mg/500 mg/6 mL	30 pieces	5010-68022
InertSep GC/PSA	300 mg/500 mg/6 mL	30 pieces	5010-68011
	500 mg/500 mg/6 mL	30 pieces	5010-68012

Standard Cartridge (High Volume Cartridge)

Item Name	Column Size	Quantity	Cat.No.
InertSep GC/NH_2	500 mg/500 mg/20 mL	20 pieces	5010-68024
	1g/1g/20 mL	20 pieces	5010-68025
InertSep GC/PSA	500 mg/500 mg/20 mL	20 pieces	5010-68014
	1g/1g/20 mL	20 pieces	5010-68015
InertSep GC/PSA/SI	500 mg/500 mg/500 mg/20 mL	20 pieces	5010-68034
InertSep GC/SAX/PSA	500 mg/500 mg/500 mg/20 mL	20 pieces	5010-68044

InertSep™ Phase Separator(Phase Separation Membrane)

InertSep PS-SH is used to separate two liquid layers in an extraction procedure. It is suitable for separating the lower stratum solvent, typically dichloromethane.

PS-SH Application

- Separation of a heavier that water organic layer, from water

InertSep PS-SL is used to separate two liquid layers in an extraction procedure. It is suitable for separating the upper stratum solvent, typically n-hexane.

PS-SL Application

- Separation of a lighter than water organic layer, from water

Note

If the sample forms an emulsion, it will not be possible to make a separation.

Standard Cartridge

Item Name	Column Size	Quantity	Cat.No.
InertSep PS-SH	1 mL	100 pieces	5010-67000
	3 mL	100 pieces	5010-67001
	6 mL	100 pieces	5010-67002
	12 mL	100 pieces	5010-67003
InertSep PS-SL	1 mL	100 pieces	5010-67010
	3 mL	100 pieces	5010-67011
	6 mL	100 pieces	5010-67012
	12 mL	100 pieces	5010-67013

Standard Cartridge (High Volume Cartridge)

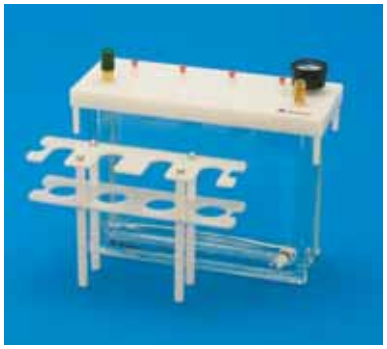
Item Name	Column Size	Quantity	Cat.No.
InertSep PS-SH	20 mL	100 pieces	5010-67004
	60 mL	50 pieces	5010-67005
InertSep PS-SL	20 mL	100 pieces	5010-67014
	60 mL	50 pieces	5010-67015

96-Well Plate

Item Name	Column Size	Quantity	Cat.No.
InertSep 96WP PS-SH	-	1 piece	5010-67008
InertSep 96WP PS-SL	-	1 piece	5010-67018

GL-SPE Vacuum Manifold

GL-SPE Vacuum Manifold Kit



GL-SPE Vacuum Manifold Kit（for 4 florence flasks）

GL-SPE Vacuum Manifold Kit

Description	Contents	Unit	Cat.No.
GL-SPE Vacuum Manifold Kit	Glass Chamber 1pcs Cover 1pcs Gasket 1pcs Vacuum Gage 1pcs Bleed Valve 1pcs Safety Valve 1pcs Plug 12pcs Cartridge Adaptor 12pcs Teflon Female Luer 12pcs Stainless Delivery Tip 12pcs Teflon Delivery Tip 12pcs 12/16mm Rack 1pcs 12mm Waste Liquid Funnel 12pcs 16mm Waste Liquid Funnel 12pcs	1Set	5010-50000
GL-SPE Vacuum Manifold Kit (for 4 florence flasks)	Glass Chamber 1pcs Cover 1pcs Gasket 1pcs Vacuum Gage 1pcs Bleed Valve 1pcs Safety Valve 1pcs Plug 4pcs Teflon Female Luer 4pcs Stainless Delivery Tip 4pcs GL-SPE Vacuum Manifold TS29/38 Rack for 4 Florence Flasks 1pcs 12mm Waste Liquid Funnel 4pcs 16mm Waste Liquid Funnel 4pcs	1Set	5010-50006

GL-SPE Vacuum Manifold System
（for environmental analysis）

GL-SPE Vacuum Manifold system

Description	Contents	Unit	Cat.No.
GL-SPE Vacuum Manifold System (for conventional analysis)	GL-SPE Vacuum Manifold Kit 1set Diaphragm Vacuum Pump 1pcs Vacuum Filtration Glass 1pcs Decompression Hose 2M 1pcs Hose Connector Kit Luer Stop Valve (PTFE) 12pcs Stopper Spit Tube 12mm 12pcs Stopper Spit Tube 16mm 12pcs	1Set	5010-50001
GL-SPE Vacuum Manifold System (for environmental analysis)	GL-SPE Vacuum Manifold Kit 1set Diaphragm Vacuum Pump 1pcs Vacuum Filtration Glass 1pcs Decompression Hose 2M 1pcs Hose Connector Kit Luer Stop Valve (PTFE) 12pcs LS Tube 6pcs Stopper Spit Tube 12mm 12pcs Stopper Spit Tube 16mm 12pcs	1Set	5010-50002

SPE Vaccum Kit

SPE Vaccum Kit

Contents	Cat.No.
Diaphragm Vacuum Pump 1pcs Vacuum Filtration Glass 1pcs Decompression Hose 2M 1pcs Hose Connector Kit 2pcs	5010-50040

SPE Starter Kit A

SPE Starter Kit A

Contents	Cat.No.
Diaphragm Vacuum Pump 1pcs Vacuum Filtration Glass 1pcs Decompression Hose 2M 1pcs Hose Connector Kit 2pcs GL-SPE Concentration Tube Brown 0.5, 1.0mL & 7mL 10pcs Luer Stop Valve 12pcs InertSep Cartridge Adaptor 12pcs	5010-50050

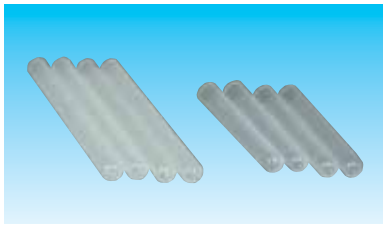
SPE Starter Kit B

SPE Starter Kit B

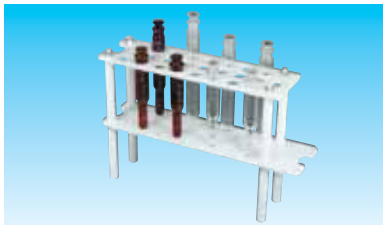
Contents	Cat.No.
Diaphragm Vacuum Pump 1pcs Vacuum Filtration Glass 1pcs Decompression Hose 2M 1pcs Hose Connector Kit 2pcs GL-SPE Concentration Tube Clear 0.5, 1.0mL & 7mL 10pcs GL-SPE Concentration Tube Brown 0.5, 1.0mL & 7mL 10pcs LS Tube 6pcs Luer Stop Valve 12pcs InertSep Cartridge Adaptor 12pcs	5010-50051

Accessories for GL-SPE Vacuum Manifold

Cover Assembly



12mm/16mm Waste Liquid Funnel



12mm/16mm Rack

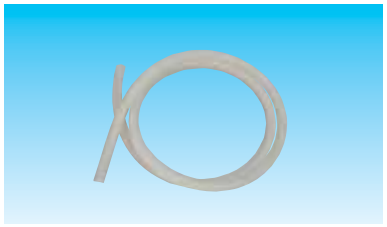
Accessories GL-SPE Vacuum Manifold

Item Name	Quantity	Cat.No.
Glass Chamber with Tube Connector	1 pcs	5010-50011
Cover Assembly	1 pcs	5010-50012
Gasket	2 pcs	5010-50013
Vacuum Gage	1 pcs	5010-50014
Bleed Valve	1 pcs	5010-50015
Plug	12 pcs	5010-50016
Stainless Delivery Tip	12 pcs	5010-50019
PTFE Delivery Tip	12 pcs	5010-50020
12mm Waste Liquid Funnel	12 pcs	5010-50022
16mm Waste Liquid Funnel	12 pcs	5010-50024
Luer Fitting	12 pcs	5010-50032
Tube Connector Assembly	1 pcs	5010-50033
12mm/16mm Rack	1 pcs	5010-50034
Cartridge Adaptor for 1, 3 and 6mL	12 pcs	5010-60000
Luer Stop Valve (PTFE)	12 pcs	5010-60010

Accessories for Back Flush

Item Name	Quantity	Cat.No.
Cartridge Holder for InertSep mini, Jr.	5 pcs	5010-52003
Connector Tube	1 pcs	5010-52021
Connector Tube	5 pcs	5010-52022
Male Luer Union	10 pcs	5010-52012
Female Luer Union	10 pcs	5010-52013
Male Luer Cap	50 pcs	5010-52015
Female Luer Cap	50 pcs	5010-52016
LS Tube without Adaptor	1 pcs	5010-50214
Syringe Luer Tip 5mL	6 pcs	3008-41150
Back-flush Adaptor	5 pcs	5010-52011

Vacuum Filtration Glass with Silicon Plug and Hose Connector Kit



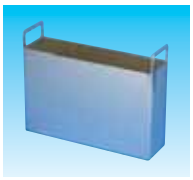
Vacuum Hose 2M

Accessories for SPE Vacuum Kit

Item Name	Quantity	Cat.No.
Diaphragm Vacuum Pump with Switch	1 pcs	5010-50026
Vacuum Filtration Glass 3L with Silicon Plug and Hose Connector Kit	1 pcs	5010-50028
Vacuum Filtration Glass 1L with Silicon Plug and Hose Connector Kit	1 pcs	5010-50027
Vacuum Hose 2M	1 pcs	5010-50030
Hose Connector Kit for Vacuum Filtration Glass IN-OUT	2 pcs	5010-50029
GL-SPE Concentration Tube Clear 0.5, 1.0mL & 7mL	10 pcs	5010-51013
GL-SPE Concentration Tube Brown 0.5, 1.0mL & 7mL	10 pcs	5010-51014
LS Tube 6	6 pcs	5010-50212
Luer Stop Valve	12 pcs	5010-60010
InertSep Cartridge Adaptor for 1, 3 and 6mL	12 pcs	5010-60000

5010-50038

5010-50039



5010-50122

5010-50131

5010-50130

5010-51021

5010-51020

5010-51041

5010-50031

5010-50032

5010-50033

Solvent Glass Cap

Tube Clip

Accessories for GL-SPE Vacuum Manifold

Item Name	Cat.No.
30mL Concentration Rack & Funnel Set	5010-50038
Rack for TS29/38 Florence Flask	5010-50039
Waste Liquid Pat Container(SUS)	5010-50122

Item Name	Cat.No.
GL-SPE Vacuum Manifold TS29/38 for 4 Florence Flasks (50mL or 100mL)	5010-50131
Cover Assembly for GL-SPE Manifold for 4 Florence Flasks	5010-50130

Note) GL-SPE Vacuum Manifold TS29/38 (CAT# 5010-50131) needs to be used together with the Cover Assembly (CAT# 5010-5130).

Concentration Tubes, Test Tubes and Florence Flasks

※Scales for larger than 2.0mL are for rough indication.

Item Name	Quantity	Vol(mL)	Plug	Cat.No.
Stopper Spit Tube 12mm	20 pcs	6	Universal Fit	5010-51001
Stopper Spit Tube 16mm	20 pcs	14		5010-51002
GL-SPE Concentration Tube Clear 1.0mL & 7mL	10 pcs	7		5010-51010
GL-SPE Concentration Tube Clear 0.5, 1.0mL & 7mL	10 pcs			5010-51011
GL-SPE Concentration Tube Brown 0.5, 1.0mL & 7mL	10 pcs			5010-51012
GL-SPE Concentration Tube Clear 0.5, 1.0mL & 7mL	10 pcs		Clear Taper	5010-51013
GL-SPE Concentration Tube Brown 0.5, 1.0mL & 7mL	10 pcs			5010-51014
GL-SPE Concentration Tube Clear 0.5, 1.0mL & 10mL	10 pcs	10	Universal Fit	5010-51015
GL-SPE Concentration Tube Brown 0.5, 1.0mL & 10mL	10 pcs	10		5010-51016
GL-SPE Concentration Tube Clear 1, 2, 5 mL & 6mL	10 pcs	6		5010-51017
GL-SPE Concentration Tube Clear 1.0, 2.0mL & 20mL	6 pcs	20		5010-51020
GL-SPE Concentration Tube Clear 1.0, 2.0mL & 30mL	6 pcs	30	Universal Fit	5010-51021
GL-SPE Concentration Tube Clear 5.0mL & 16mL	10 pcs	16	Clear Taper	5010-51040
GL-SPE Concentration Tube Clear 25mL	6 pcs	25	—	5010-51041

Item Name	Quantity	Cat.No.
Florence Flask Clear TS29/38 50mL	2 pcs	5010-51031
Florence Flask Clear TS29/38 100mL	2 pcs	5010-51032
Florence Flask Clear TS29/38 200mL	2 pcs	5010-51033

Solvent Container Cap

With 4 holes, 3mm diameter, the solvent glass cap is convenient to fix tubes and purge solvent with He.

Item Name	Quantity	Cat.No.
Solvent Container Cap for 500mL Container	1 pcs	6010-81140
Solvent Container Cap for 3000mL Container	1 pcs	6010-81150

Tube Clip

The tube clip is convenient to fix tubes with glasses and/or containers.

Item Name	Quantity	Cat.No.
Tube Clip	5 pcs	6010-81160

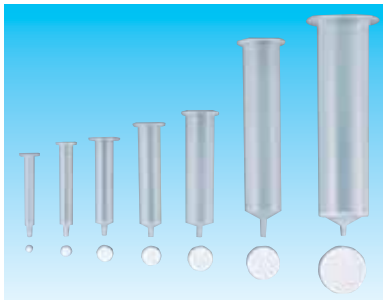
Note: Not able to fix tubes with glasses/containers of more than 4mm thickness.

Other SPE Accessories

Reservior with Adaptor

Connecting Adaptor

Luer Stop Valve



Empty Reservoir

Reservior with Adaptor

Description	Quantity	Cat.No.
Reservior with Adaptor for 1, 3, 6mL Reservoir	12 pcs	5010-60015
Reservior with Adaptor for 12, 20mL Reservoir	12 pcs	5010-60016
Reservior with Adaptor for 60mL Reservoir	12 pcs	5010-60017

Connecting Adaptor

Description	Quantity	Cat.No.
Connecting Adaptor (PP) 1, 3 & 6mL Reservoir	12 pcs	5010-60000
Connecting Adaptor (PP) 12 & 20mL Reservoir	12 pcs	5010-60001
Connecting Adaptor (PP) 60mL Reservoir	12 pcs	5010-60002
Connecting Adaptor (PP) LSC Reservoir	12 pcs	5010-60004
Connecting Adaptor (PP) 150mL Reservoir	1 pcs	5010-50336

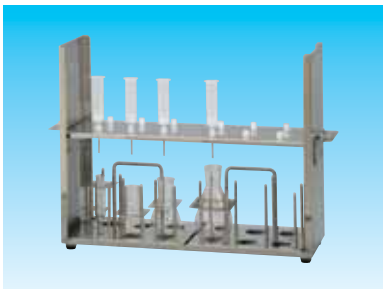
Luer Stop Valve (PTFE)

Item name	Quantity	Cat.No.
Luer Stop Valve(PTFE)	12 pcs	5010-60010

Empty Reservoir

Item Name	Size	Quantity	Cat.No.
Empty Reservoir (PP) without Frit	1 mL	50 pcs	5010-60100
	3 mL	50 pcs	5010-60101
	6 mL	30 pcs	5010-60102
	12 mL	20 pcs	5010-60103
	20 mL	20 pcs	5010-60104
	60 mL	10 pcs	5010-60105
	150 mL	10 pcs	5010-60106
Empty Reservoir (PP) with Frit	1 mL	50 pcs	5010-60120
	3 mL	50 pcs	5010-60121
	6 mL	30 pcs	5010-60122
	12 mL	20 pcs	5010-60123
	20 mL	20 pcs	5010-60124
	60 mL	10 pcs	5010-60125
	150 mL	10 pcs	5010-60126
Frit (PE)	for(for 1)1 mL	100 pcs	5010-60150
	for(for 1)3 mL	100 pcs	5010-60151
	for(for 1)6 mL	60 pcs	5010-60152
	for(for 1)12 mL	40 pcs	5010-60153
	for(for 1)20 mL	40 pcs	5010-60154
	for(for 1)60 mL	20 pcs	5010-60155
	for(for 1)150 mL	20 pcs	5010-60156

GL-SPE Dry Unit Nitrogen Gas Purge



Free Fall Rack

GL-SPE Dry Unit

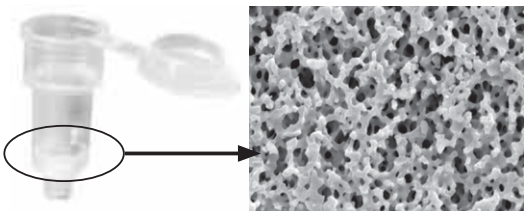
Item Name	Quantity	Cat.No.
GL-SPE Dry Unit Nitrogen Gas Purge	1 pcs	5010-50080
GL-SPE Dry Unit Nitrogen Tube Set	6 pcs	5010-50081
GL-SPE Dry Unit Nitrogen Mount	1 pcs	5010-50082

Free Fall Rack Unit

Item Name	Quantity	Cat.No.
Free Fall Rack Basic Unit	1 pcs	5010-50410
Free Fall Rack Delivery Tube	24 pcs	5010-50420
Free Fall Rack Delivery Tip	100 pcs	5010-50421

Low Molecular Weight Compounds Extraction & Purification

MonoSpin™ Series



MonoSpin　　Silica monolith Enlarged picture

Centrifuge Operation

Optimal for sample purification and enrichment

MonoSpin is an SPE column packed with monolithic silica and is excellent for the sample pretreatment of small sample volume with easy and quick operation by centrifuge.

Features

Easy to Operate
Easy operation by centrifuge

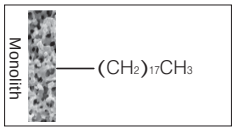
Fast
Speedy sample treatment with superb monolith silica through pore even for biological samples

Small Sample Volume
Excellent for the pretreatment for samples of 50-800 µL

Various Functional Groups
There are 10 kinds of functional groups for MonoSpin series.

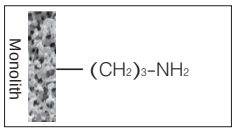
Product Lineup

MonoSpin™ C18



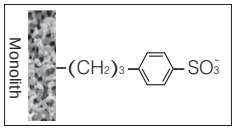
Octadecyl functional group. Optimal for drug extraction in biological samples, and desalting & enrichment of peptide samples.

MonoSpin™ NH2



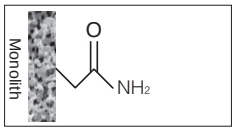
Bonded with aminopropyl. Optimal for the enrichment of sugar chain and/or hydrophilic compounds by HILIC mode.

MonoSpin™ SCX



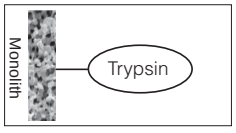
Bonded with propyl benzene sulfonic acid combining both strong cation exchange & hydrophobic interaction. Optimal for the extraction of basic drugs.

MonoSpin™ Amide



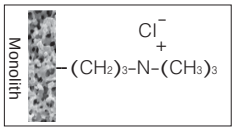
Bonded with amide groups. Optimal for the extraction of sugar chains and various acidic and basic hydrophilic compounds by HILIC mode.

MonoSpin™ Trypsin



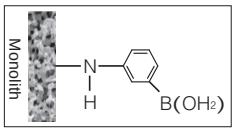
Trypsin is fixed to monolithic silica for fast and easy protein digestion.

MonoSpin™ SAX



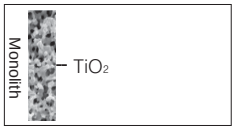
Bonded with Trimethyl aminopropyl combining both strong anion exchange & weak hydrophobic interaction. Optimal for the extraction of acidic drugs.

MonoSpin™ PBA



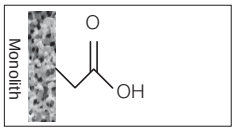
Specific column combined with phenyl boronic acid. Excellent for the selective extraction of cis diol compounds, such as catechol amines.

MonoSpin™ TiO



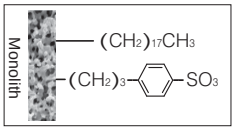
Monolith skeleton coated with titanium dioxide. Excellent for the enrichment of phosphopeptides

MonoSpin™ CBA



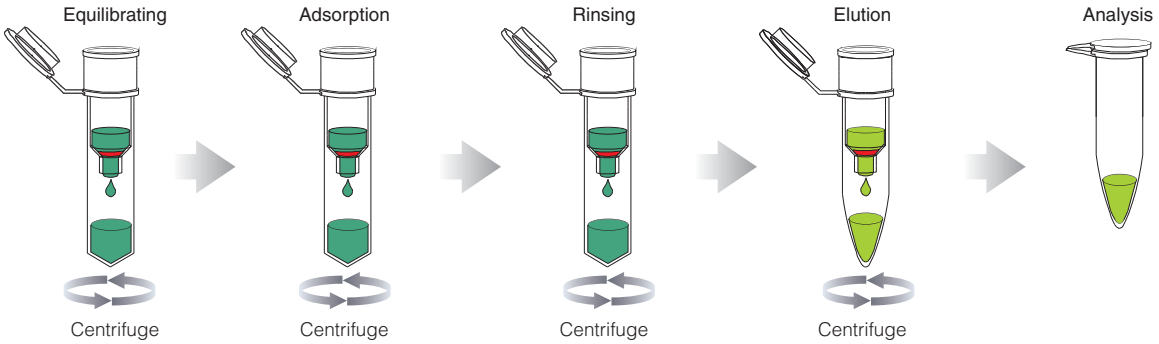
Bonded with carboxy acid combining both weak cation exchange. Optimal for the extraction of basic drugs.

MonoSpin™ C18-CX



Octadecy functional group and benzensulfonic acid are fixed to monolithic silica for hydrophobic and ion exchange functions. Better cleanup performance for basic drugs in blood serum and urinary samples than singular function columns such as C18 or SCX.

How to Operate



Specifications

Description	Specification
Packing material	Silica Monolith (Highly pure silica gel)
Through Pore Diameter	5 μm(Tio 20 μm)
Meso Pore Diameter	10 nm(Tio 15 nm)
Surface Area	350 m^2/g
Sample Volume	50 - 800 μL

MonoSpin™ Part Numbers

Description	Quantity	Cat.No.
MonoSpin C18	50 pcs	5010-21700
	100 pcs	5010-21701
MonoSpin Amide	50 pcs	5010-21727
	100 pcs	5010-21728
MonoSpin CBA	50 pcs	5010-21729
	100 pcs	5010-21730
MonoSpin NH2	50 pcs	5010-21710
	100 pcs	5010-21711
MonoSpin SCX	50 pcs	5010-21725
	100 pcs	5010-21726
MonoSpin SAX	50 pcs	5010-21720
	100 pcs	5010-21721
MonoSpin PBA	50 pcs	5010-21715
	100 pcs	5010-21716
MonoSpin TiO	50 pcs	5010-21705
	100 pcs	5010-21706
MonoSpin Trypsin*	50 pcs	7820-11300
	100 pcs	7820-11301
MonoSpin C18-CX	50 pcs	5010-21731
	100 pcs	5010-21732

"Based on monolithic technology, Merck KGaA, Darmstadt, Germany"
*Keep cool once delivered

96-Well Protein Precipitation Plate

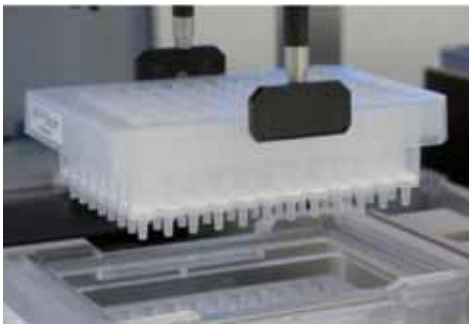
FastRemover™

FastRemover is a 96-well type filter plate ideal for preparing precipitated protein samples and rapid processing of multiple plasma samples.

<BENEFITS>

- Easy filtration of biological samples.
- Trace analytes can be processed with minimal sample loss owing to the low volume design of the elution tip and filter.
- Perfect for processing with automated vacuum instruments.
- High sensitivity analysis is unaffected by contamination from plasticizers or other impurities found in other 96-well plates.
- Removal of microparticle contaminants enables injection to LC/MS/MS directly from the collection plate.

FastRemover



Automatic Pipetting Robot, NIMBUS

Vacuum Manifold with shims

FastRemover

Description	Quantity	Cat.No.
FastRemover for Protein (0.45 μm) 96-well	1 pcs	7820-11001
	5 pcs	7820-11005
FastRemover for Protein (0.20 μm) 96-well	1 pcs	7820-11011
	5 pcs	7820-11015

Related products

Description	Quantity	Cat.No.
Vacuum Manifold with shims	1 Set	5010-33101
Deep Well 96 Square Plate 2 mL	50 pcs	7820-54200
Sealing Mat for Microplate WSM-3SX (PTFE/SILCON)	5 pcs	1030-43831
Sealing Tape for Microplate (Polyolefin)	100 pcs	1065-70002

<BENEFITS>

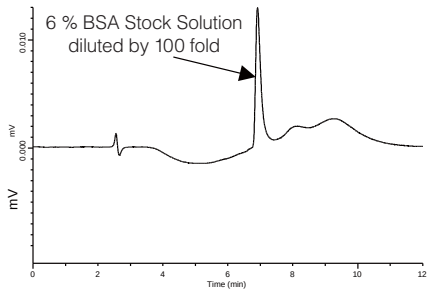
To demonstrate the performance of FastRemover, a BSA solution was prepared as follows:

1. 200 uL of plasma is thoroughly mixed in a test tube containing 800uL of Acetonitrile.
2. The FastRemover and collection plate are attached to a vacuum manifold.
3. The BSA sample mixture is loaded into the 96-well plate and vacuum applied above 0.02 MPa (0.2 Bar) for 2 minutes.

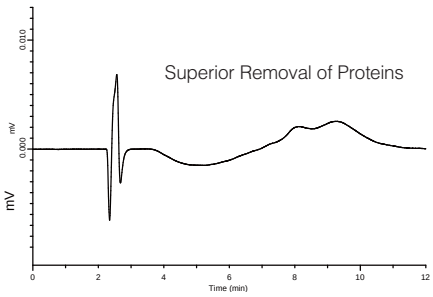
* Methanol can be used as well as a replacement of Acetonitrile.

Performance of Removal of Proteins

Standard Sample



After filtrated with FastRemover



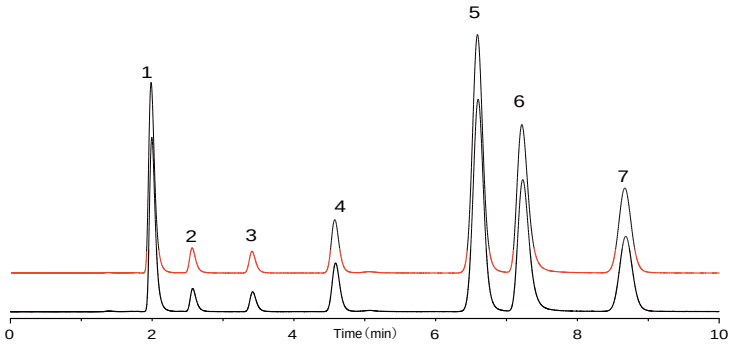
Analytical Conditions

Column	:Inertsil WP300 C8 (5 um, 150 x 2.1 mm I.D.)
Eluent:	:A) 0.1% TFA in CH_3CN
	B) 0.1 % TFA in H_2O
	A/B=10/90 – 5 min - 50/50
Flow Rate	:0.2 mL/min
Col.Temp.	:40 ℃
Detection	:280 nm
Injection Vol.	:2 µL

<Adsorption Test>

A standard mixture containing 7 compounds were analyzed to evaluate potential non-specific adsorption to the plate. As shown in the following chromatograms, FastRemover provides minimal loss of target samples.

Black: Before treatment with FastRemover
Red: After treatment with FastRemover



Adsorption to the Plate Excellent Non-Specific

Analytical Conditions

Column	:Inertsil ODS-3 (3 um, 150 x 2.1 mm I.D.)
Eluent:	:48% CH3CN (0.7 % KH2PO4 + 0.17% SDS, pH 4.5)
Flow Rate	:0.2 mL/min
Col.Temp.	:40 ℃
Detection	:230 nm
Injection Vol.	:1 µL

Samples
1. Acetaminophen
2. Pyridine
3. Phenol
4. Hexobarbital
5. Propranolol
6. Berberine
7. Doxepin

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・We reserve the right to change specification to make improvements without notice.

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