



# affinisep

The Art of making sample  
preparation easier



PROTEOMICS  
BIOMARKERS DISCOVERY  
BIOLOGICAL APPLICATIONS





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# AttractSPE® Disks

**Spinnable, Automatable  
High throughput HTS  
Micro-SPE for Microelution**



**Proteins, Peptides, DNA, Small molecules  
Purification  
Desalting  
Fractionation  
Bioanalysis**



Order on  
[www.affinisep.com](http://www.affinisep.com)

AttractSPE®Disks are **thin, dense, soft and uniform membranes** for extraction/separation, purification and concentration of analyte molecules.

**Thanks to their unique advantage**, AttractSPE®Disks are useful for purification of Very Small Sample Volumes in Proteomics, Genomics, Metabolomics, Bioanalysis, Biomarker discoveries and Biological applications. They are applied for Spinnable, Automatable, High throughput microelution and nano elution.

AttractSPE®Disks offer outstanding sample preparation efficiency and reproducibility of results. Since the diffusion distance between particles is minimized, adsorption is more efficient, and extraction can be accomplished using **very low sorbent mass**.

These properties are giving to AttractSPE®Disks a significant improvement of mass transfer kinetics compared to traditional packed SPE particles. As a monolith disk, AttractSPE®Disks are self stand and require no frits for immobilizing the column bed (unlike traditional SPE products) allowing 100% recovery of the original sample volume.

## AttractSPE®Disk Advantages

- No need to frits or filters
- Reduced dead volume
- Small elution volumes
- High sample recovery
- Reduced time for eluate evaporation
- Higher throughput
- Channeling effects eliminated
- Excellent reproducibility
- Concentration of the sample



# AttractSPE® Disks technology for microelution

AttractSPE® Disks can be used to miniaturize SPE for small operating volume of fluid samples. **4 formats** are **available** for microelution. Thanks to the use of AttractSPE® Disks **for all formats, the change of format or the scale up of the process is easy.**

Capacity of molecules of interest increases

## □ AttractSPE® Tips – Stagetips and AttractSPE® Disks 96 well-Plate for microelution

μSPE columns designed by immobilizing a uniform disk inside a pipette tips (Stagetips per unit or as 96 well plate)



## □ AttractSPE® Disks 96 well-Plate

96 SPE well plate designed by immobilizing a uniform disk



## □ AttractSPE® Spin Columns

SPE column designed by immobilizing a uniform disk inside a centrifuge SPE tube



## □ AttractSPE® Disks Cartridges

SPE cartridges designed by immobilizing a uniform disk



Concentration of molecules of interest increases

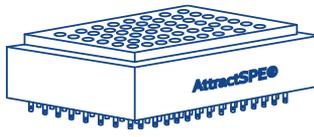
**AttractSPE® Tips, Spin, Disks 96 plate** and **Disks cartridges** are tools for proteomic and genomic applications (fractionation and desalting of peptides/proteins/RNA/DNA) and for bioanalysis (small molecules cleanup). In order to give the most exhaustive applications, they are proposed with a large variety of sorbents (HLB, RPS, SDB, SCX, SAX, Silica, C4 300A, C8, C18...).



**AttractSPE®**  
**Tips**



**AttractSPE®**  
**Spin**



**AttractSPE® Disks 96**  
**plate for microelution**



**AttractSPE®**  
**Disks Cartridges**

### Advantages of AttractSPE® Disks tools

- **Remove interfering contaminants** — significantly reduce signal suppression and improve signal-to-noise ratios and sequence coverage
- **Simplify optimization** — processing yields high-quality spectra and is effective for a variety of reverse-phase-compatible contaminants
- **Robust** — work with a wide variety of load volumes and concentrations; no need to reduce sample volume before application
- **Convenient** — easy to handle and require no special equipment to process multiple samples simultaneously (unlike tip-driven systems that require one sample to be processed at a time)
- **Sensitive** — special C18 resins allow excellent recovery percentages, even at low (sub-picomole) sample loads

## Capacity

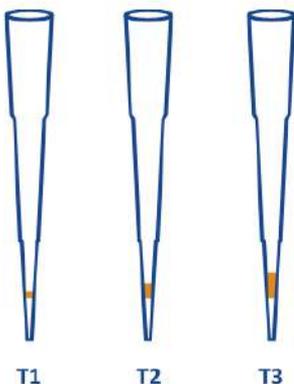
Each product is available with different capacities, which are referred as T1, T2 or T3 in the product designations. This designation refers to the layer thickness of SPE disks. For a more reproducible product, each tool contains only **ONE** layer.

**Following references (p10 to p15) will have **XX** indications, which have to be replaced by the capacity you require (T1, T2 or T3).**

- **T1** is **A layer** having a capacity equivalent to the **thickness of ONE layer of SPE disks** (around 0.6mm)
- **T2** is **A layer** having a capacity equivalent to the **thickness of TWO layers of SPE disks** (around 1.2mm)
- **T3** is **A layer** having a capacity equivalent to the **thickness of THREE layers of disks** (around 1.8mm)

**T1 and T2 are recommended for protein/peptide/DNA purification**

**T3 is recommended for small molecules extraction such as drugs in urine**



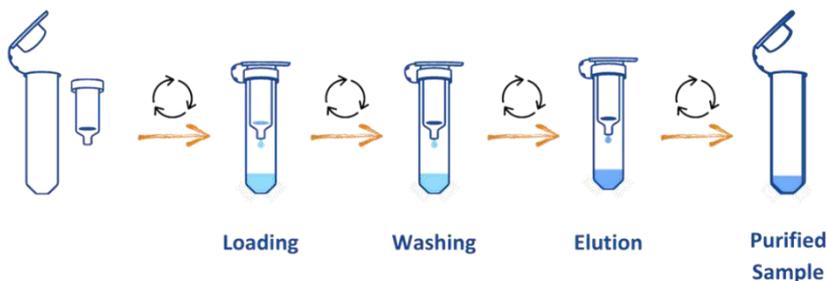
### Capacity for 200µL tips

- T1: capacity up to 15µg
- T2: capacity up to 30µg
- T3: capacity up to 50µg

Please note that we have recently developed **TO 10µL AttractSPE® Disks Tips**, with a **lower amount of sorbent**, for **single cell like analysis**. Contact us for more information.

## Use of proteomic tools

**AttractSPE® Disks Tips, Spin columns and 96 well plates** are easily spinnable tools.



**AttractSPE® Disks Tips, 96 well plates and cartridges** can be used with positive pressure and/or vacuum manifolds and are compatible with SPE automates.



**AttractSPE® Disks 96 well plates** can be partially used, without consequences for the unused wells.



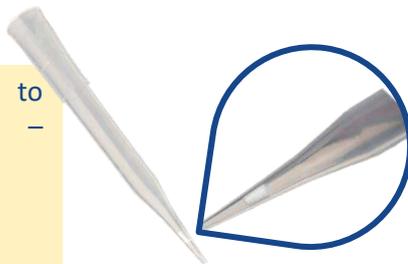
Elution of samples from **AttractSPE® Disks Tips** can only be performed by centrifugation (with adapted devices) or with the use of a positive pressure manifold. **AttractSPE® Disks Tips** are **not compatible with pipetting**. **AttractSPE® Disks Tips** can also be used with automates, with a refilling by the top of the tips.

- **A broad variety of sorbents** for each required application
- **Various formats:** disks, spins, 96 SPE plates, cartridges
- **One sorbent** – several capacities
- **Several sorbents - stacking** for complex applications
- **Disks used as filter** for applications requiring beads

	Sorbents for SPE Disks	Applications
Silica-based sorbents	<ul style="list-style-type: none"> <li>- <b>C18 end-capped (C18 EC)</b> for the most hydrophobic compounds/peptides</li> <li>- <b>C18 Not end-capped (C18 NEC)</b> with the best combination - large spectrum of interaction - capacity</li> <li>- <b>C18</b> for the wider interaction spectrum (hydrophobic - hydrophilic) with compounds / peptides</li> </ul>	<p>Desalting of peptides</p> <p>Fractionation of peptides at acidic and neutral pH</p> <p>Drug extraction in biological samples</p>
	<b>C8</b>	Desalting of large peptides and proteins Usage as filter to retain beads in a tip
	<b>Silica</b>	Purification of DNA/RNA
	<b>C4</b>	Desalting of large peptides and proteins
Polymeric sorbents	<b>SDB</b> <i>a.k.a</i> PS-DVB	Fractionation of peptides at basic pH
	<b>HLB:</b> SDB with hydrophilic moieties	Fractionation of peptides Extraction of small molecules (drugs) in biological fluids
	<b>SDB – RPS:</b> Sulfonic modified SDB sorbent	Desalting of peptides Fractionation of peptides
	<b>SAX:</b> Anion exchange SDB	Fractionation of peptides by salt or pH steps
	<b>SCX:</b> Cation exchange SDB	Fractionation of peptides by salt or pH steps

## Advantages

- Load your sample on AttractSPE® Disks Tips to **desalt or fractionate peptides/ proteins** – bioanalysis of small molecules
- **Several sorbents** based Stage-tips and **stacking**
- Available as **10, 20, 100, 200µL, 1mL**

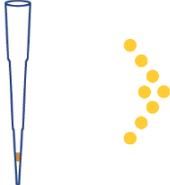


Designation	Description	Reference – 200µl - 96/pk **	Reference –1mL - 96/pk**
<b>AttractSPE® Tips C18</b>	C18 membrane, 96/pk	Tips-C18. C18.XX.200.96	Tips-C18. XX.1000.96
<b>AttractSPE® Tips C18 EC</b>	End-capped C18 membrane, 96/pk	Tips-C18EC. XX.200.96	Tips-C18EC.XX. 1000.96
<b>AttractSPE® Tips C18 NEC</b>	Not end-capped C18 membrane, 96/pk	Tips-C18NEC. XX.200.96	Tips-C18NEC. XX.1000.96
<b>AttractSPE® Tips C8</b>	C8 membrane, 96/pk	Tips-C8.XX.200.96	Tips-C8.XX. 1000.96
<b>AttractSPE® Tips SDB</b>	PS-DVB membrane, 96/pk	Tips-DVB. XX.200.96	Tips-DVB. XX. 1000.96
<b>AttractSPE® Tips SDB – RPS</b>	<b>Modified DVB</b> membrane, 96/pk	Tips-RPS-M. XX.200.96	Tips-RPS-M.XX. 1000.96
<b>AttractSPE® Tips HLB</b>	HLB membrane, 96/pk	Tips-HLB.XX.200.96	Tips-HLB.XX. 1000.96
<b>AttractSPE® Tips SAX</b>	SAX membrane, 96/pk	Tips-SAX .XX.200.96	Tips-SAX .XX.1000.96
<b>AttractSPE® Tips SCX</b>	SCX membrane, 96/pk	Tips-SCX.XX.200.96	Tips-SCX.XX. 1000.96
<b>AttractSPE® Tips C18-SCX</b>	Stacking C18 & SCX membranes, 96/pk	Tips-C18-SCX. XX.200.96	Tips-C18-SCX.XX. 1000.96
<b>AttractSPE® Tips C18-SCX-C18</b>	Stacking C18&SCX&C18 membranes, 96/pk	Tips-C18-SCX-C18. XX.200.96	Tips-C18-SCX-C18. XX.1000.96
<b>AttractSPE® Tips Silica</b>	Silica membranes, 96/pk	Tips-Si.XX.200.96	Tips-Si.XX. 1000.96

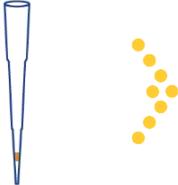
\*\*Replace XX by the capacity (T1, T2, T3) depending on your needs. e.g.: *Tips-C18.T1.200.96*

## AttractSPE® Disks Tips – StageTips

To help you select the **AttractSPE® Disks Tips** that are the most suitable for your biological applications based on your sample volume, the following table lists the maximum **loading volume** and the **elution volumes** of our different StageTips. Please note that these volumes, especially the elution volumes, are given as indicative values and depend on your applications and/or protocols.

Products		Loading volume	Elution volume
	AttractSPE® Disks Tips - 10µL	Up to 10µL	10µL
	AttractSPE® Disks Tips - 200µL	Up to 200µL	10 to 50µL
	AttractSPE® Disks Tips - 1000µL	Up to 1mL	Up to 200µL

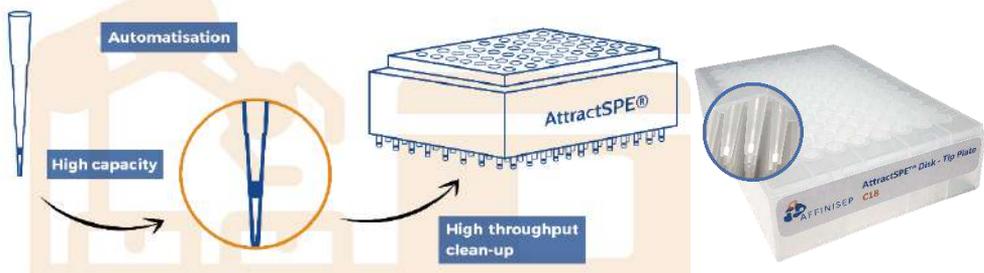
To help you select the **AttractSPE® Disks Tips** that are the most suitable for your biological applications based on your sample amount, the following table lists the **loading capacities** (maximal analytes quantities that can be retained) of our different products.

Products		Capacity* (µg)		
		T1	T2	T3
	AttractSPE® Disks Tips - 10µL	7	15	25
	AttractSPE® Disks Tips - 200µL	15	30	50
	AttractSPE® Disks Tips - 1000µL	35	70	105

\*Please note that these capacities are given as indicative values, since they are determined for C18 sorbents and are therefore expected to be higher for polymeric sorbents.

# AttractSPE® Disks 96 plate for microelution

AttractSPE® Disks 96 Plate for microelution is a 96 plate with wells similar to stagetips for a high throughput clean-up combined with microelution volumes.



Designation	Description	Reference – 1/pk **
AttractSPE® Disks 96 plate C18	C18 membrane, 1/pk	μ96W-C18.XX.1
AttractSPE® Disks 96 plate C18 EC	End-capped C18 membrane, 1/pk	μ96W-C18EC.XX.1
AttractSPE® Disks 96 plate C18 NEC	Not end-capped C18 membrane, 1/pk	μ96W-C18NEC.XX.1
AttractSPE® Disks 96 plate C8	C8 membrane, 1/pk	μ96W-C8.XX.1
AttractSPE® Disks 96 plate SDB	PS-DVB membrane, 1/pk	μ96W-DVB.XX.1
AttractSPE® Disks 96 plate SDB – RPS	<b>Sulfonated Modified DVB</b> membrane, 1/pk	μ96W-RPS-M.XX.1
AttractSPE® Disks 96 plate HLB	HLB membrane, 1/pk	μ96W-HLB.XX.1
AttractSPE® Disks 96 plate SAX	SAX membrane, 1/pk	μ96W-SAX.XX.1
AttractSPE® Disks 96 plate SCX	SCX membrane, 1/pk	μ96W-SCX.XX.1
AttractSPE® Disks 96 plate WCX	WCX membrane, 1/pk	μ96W-WCX.XX.1
AttractSPE® Disks 96 plate C18-SCX	Stacking C18 & SCX membranes, 1/pk	μ96W-C18-SCX.XX.1
AttractSPE® Disks 96 plate C18-SCX-C18	Stacking C18 & SCX & C18 membranes, 1/pk	μ96W-C18-SCX-C18.XX.1
AttractSPE® Disks 96 plate Silica	Silica membranes, 1/pk	μ96W-Si.XX.1

\*\*Replace XX by the capacity (T1, T2, T3) depending on your needs. e.g.: μ96W-C18.T1.1

# AttractSPE® Disks 96 plate – 1mL

**AttractSPE® Disks 96 Plate** is a plate with 96 SPE wells of 1mL containing immobilized SPE disks that enables a high throughput clean-up with the simultaneous preparation of 96 samples. Thanks to this small sorbent amount and a high efficiency, almost 100% of the original sample is recovered.

## Advantages

- All sorbents available on catalog or on demand
- Several sorbent weights available
- Easy handling with automates or liquid handling robots – spinnable
- AttractSPE® Manifold for 96 well plate format or AttractSPE® Positive pressure Manifold for 96 well plate



Designation	Description	Reference – 1/pk**
AttractSPE® Disks 96 plate <b>C18</b>	C18 membrane, 1/pk	96W-C18.XX.1
AttractSPE® Disks 96 plate <b>C18 EC</b>	End-capped C18 membrane, 1/pk	96W-C18EC.XX.1
AttractSPE® Disks 96 plate <b>C18 NEC</b>	Not end-capped C18 membrane, 1/pk	96W-C18NEC.XX.1
AttractSPE® Disks 96 plate <b>C8</b>	C8 membrane, 1/pk	96W-C8.XX.1
AttractSPE® Disks 96 plate <b>SDB</b>	PS-DVB membrane, 1/pk	96W-DVB.XX.1
AttractSPE® Disks 96 plate <b>SDB – RPS</b>	<b>Modified</b> DVB membrane, 1/pk	96W-RPS-M.XX.1
AttractSPE® Disks 96 plate <b>HLB</b>	HLB membrane, 1/pk	96W-HLB.XX.1
AttractSPE® Disks 96 plate <b>SAX</b>	SAX membrane, 1/pk	96W-SAX.XX.1
AttractSPE® Disks 96 plate <b>SCX</b>	SCX membrane, 1/pk	96W-SCX.XX.1
AttractSPE® Disks 96 plate <b>C18-SCX</b>	Stacking C18 & SCX membranes, 1/pk	96W-C18-SCX.XX.1
AttractSPE® Disks 96 plate <b>C18-SCX-C18</b>	Stacking C18 & SCX & C18 membranes, 1/pk	96W-C18-SCX-C18.XX.1
AttractSPE® Disks 96 plate <b>Silica</b>	Silica membranes, 1/pk	96W-Si.XX.1

\*\*Replace XX by the capacity (T1, T2, T3) depending on your needs. e.g.: 96W-C18.T1.1

# AttractSPE® Disks 96 plate 1mL and for microelution

To help you select the **AttractSPE® Disks 96 well plates** that are the most suitable for your biological applications based on your sample volume, the following table lists the maximum **loading volume** and the **elution volumes** of our different 96 well plates. Please note that these volumes, especially the elution volumes, are given as indicative values and depend on your applications and/or protocols.

Products		Loading volume	Elution volume
	AttractSPE® Disks 96 plate for microelution	Up to 400µL	50 to 200µL
	AttractSPE® Disks 96 plate 1mL	Up to 1mL	200 to 500µL

To help you select the **AttractSPE® Disks 96 well plates** that are the most suitable for your biological applications based on your sample amount, the following table lists the **loading capacities** (maximal analytes quantities that can be retained) of our different 96 well plates.

Products		Capacity* (µg)		
		T1	T2	T3
	AttractSPE® Disks 96 plate for microelution	35	70	105
	AttractSPE® Disks 96 plate 1mL	500	1000	1500

\*Please note that these capacities are given as indicative values, since they are determined for C18 sorbents and are therefore expected to be higher for polymeric sorbents.

# AttractSPE® Disks Spin Column

## Advantages

- 4 spin size formats: micro and minispin, 15mL and 50mL spin tubes
- Fast and easy extraction process by centrifugation
- High throughput purification
- Easy scale up of the process



Mini spin

Micro spin

Designation	Description	Reference micro spin – 96/pk**	Reference mini spin – 96/pk**
AttractSPE® Spin C18	C18 membrane, 96/pk	μSpin-C18.XX.96	Spin-C18.XX.96
AttractSPE® Spin C18 EC	End-capped C18 membrane, 96/pk	μSpin-C18EC.XX.96	Spin-C18EC.XX.96
AttractSPE® Spin C18 NEC	Not end-capped C18 membrane, 96/pk	μSpin-C18NEC.XX.96	Spin-C18NEC.XX.96
AttractSPE® Spin C8	C8 membrane, 96/pk	μSpin-C8.XX.96	Spin-C8.XX.96
AttractSPE® Spin SDB	PS-DVB membrane, 96/pk	μSpin-DVB.XX.96	Spin-DVB.XX.96
AttractSPE® Spin SDB – RPS	Modified DVB membrane, 96/pk	μSpin-RPS-M.XX.96	Spin-RPS-M.XX.96
AttractSPE® Spin HLB	HLB membrane, 96/pk	μSpin-HLB.XX.96	Spin-HLB.XX.96
AttractSPE® Spin SAX	SAX membrane, 96/pk	μSpin-SAX.XX.96	Spin-SAX.XX.96
AttractSPE® Spin SCX	SCX membrane, 96/pk	μSpin-SCX.XX.96	Spin-SCX.XX.96
AttractSPE® Spin C18-SCX	Stacking C18 & SCX membranes, 96/pk	μSpin-C18-SCX.XX.96	Spin-C18-SCX.XX.96
AttractSPE® Spin C18-SCX-C18	Stacking C18 & SCX & C18 membranes, 96/pk	μSpin-C18-SCX-C18.XX.96	Spin-C18-SCX-C18.XX.96
AttractSPE® Spin Silica	Silica membranes, 96/pk	μSpin-Si.XX.96	Spin-Si.XX.96
Reservoirs for AttractSPE® Spin	25mL- 96/pk	Spin-Res.96	Spin-Res.96

\*\*Replace XX by the capacity (T1, T2, T3) depending on your needs. e.g.: μSpin-C18.T1.96

# AttractSPE® Disks Spin Column

AttractSPE® Spin columns of 15mL and 50mL are the perfect tools to scale up fractionation and desalting of peptides thanks to a high area of SPE disks.



Designation	Description	Reference 15mL spin tube – 50/pk Loading <4mL**	Reference 50mL spin tube – 50/pk Loading <22mL**
<b>AttractSPE® Spin C18</b>	C18 membrane, 50/pk	Spin15-C18.XX.50	Spin50-C18.XX.50
<b>AttractSPE® Spin C18 EC</b>	End-capped C18 membrane, 50/pk	Spin15-C18EC.XX.50	Spin50-C18EC.XX.50
<b>AttractSPE® Spin C18 NEC</b>	Not end-capped C18 membrane, 50/pk	Spin15-C18NEC.XX.50	Spin50-C18NEC.XX.50
<b>AttractSPE® Spin C8</b>	C8 membrane, 50/pk	Spin15-C8.XX.50	Spin50-C8.XX.50
<b>AttractSPE® Spin SDB</b>	PS-DVB membrane, 50/pk	Spin15-DVB.XX.50	Spin50-DVB.XX.50
<b>AttractSPE® Spin SDB – RPS</b>	Modified DVB membrane, 50/pk	Spin15-RPS-M.XX.50	Spin50-RPS-M.XX.50
<b>AttractSPE® Spin HLB</b>	HLB membrane, 50/pk	Spin15-HLB.XX.50	Spin50-HLB.XX.50
<b>AttractSPE® Spin SAX</b>	SAX membrane, 50/pk	Spin15-SAX.XX.50	Spin50-SAX.XX.50
<b>AttractSPE® Spin SCX</b>	SCX membrane, 50/pk	Spin15-SCX.XX.50	Spin50-SCX.T1.50
<b>AttractSPE® Spin C18-SCX</b>	Stacking C18 & SCX membranes, 50/pk	Spin15-C18-SCX.XX.50	Spin50-C18-SCX.XX.50
<b>AttractSPE® Spin C18-SCX-C18</b>	Stacking C18 & SCX & C18 membranes, 50/pk	Spin15-C18-SCX-C18.XX.50	Spin50-C18-SCX-C18.XX.50
<b>AttractSPE® Spin Silica</b>	Silica membranes, 50/pk	Spin15-Si.XX.50	Spin50-Si.XX.50

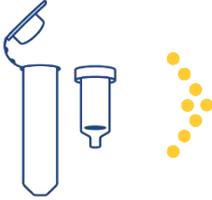
\*\*Replace XX by the capacity (T1, T2, T3) depending on your needs. e.g.: Spin15-C18.T3.50

## AttractSPE® Disks Spin Column

To help you select the **AttractSPE® Disks Spin columns** that are the most suitable for your biological applications based on your sample volume, the following table lists the maximum **loading volume** and the **elution volumes** of our different Spin columns. Please note that these volumes, especially the elution volumes, are given as indicative values and depend on your applications and/or protocols.

Products		Loading volume	Elution volume
	AttractSPE® Disks Spin (micro)	Up to 800µL	100 to 400µL
	AttractSPE® Disks Spin (mini)	Up to 800µL	100 to 400µL
	AttractSPE® Disks Spin - 15mL	Up to 4mL	Up to 2mL
	AttractSPE® Disks Spin - 50mL	Up to 22mL	Up to 10mL

To help you select the **AttractSPE® Disks Spin columns** that are the most suitable for your biological applications based on your sample amount, the following table lists the **loading capacities** (maximal analytes quantities that can be retained) of our different Spin columns.

Products	Capacity* (µg)			
	T1	T2	T3	
	AttractSPE® Disks Spin (micro)	200	400	600
	AttractSPE® Disks Spin (mini)	300	600	900
	AttractSPE® Disks Spin - 15mL	1500	3000	4500
	AttractSPE® Disks Spin - 50mL	3000	6000	9000

\*Please note that these capacities are given as indicative values, since they are determined for C18 sorbents and are therefore expected to be higher for polymeric sorbents.

# AttractSPE® Disks Cartridges

## Advantages

- 1, 3 and 6mL formats
- Larger loading volume with a minimal elution volume
- High extraction capacity
- A broad range of sorbents or sorbents combination



Designation	Reference – 1mL – 50/pk**	Reference – 3mL – 50/pk**	Reference – 6mL – 50/pk**
AttractSPE® Disks Cartridge <b>C18</b>	CAR1-C18.XX.50	CAR3-C18.XX.50	CAR6-C18.XX.50
AttractSPE® Disks Cartridge <b>C18 EC</b>	CAR1-C18EC. XX.50	CAR3-C18EC.XX.50	CAR6-C18EC.XX.50
AttractSPE® Disks Cartridge <b>C18 NEC</b>	CAR1-C18NEC. XX.50	CAR3-C18NEC. XX.50	CAR6-C18NEC. XX.50
AttractSPE® Disks Cartridge <b>C8</b>	CAR1-C8.XX.50	CAR3-C8.XX.50	CAR6-C8.XX.50
AttractSPE® Disks Cartridge <b>SDB</b>	CAR1-DVB.XX.50	CAR3-DVB.XX.50	CAR6-DVB.XX.50
AttractSPE® Disks Cartridge <b>SDB – RPS</b>	CAR1-RPS- M.XX.50	CAR3-RPS-M.XX.50	CAR6-RPS-M.XX.50
AttractSPE® Disks Cartridge <b>HLB</b>	CAR1-HLB .XX.50	CAR3-HLB .XX.50	CAR6-HLB .XX.50
AttractSPE® Disks Cartridge <b>SAX</b>	CAR1-SAX .XX.50	CAR3-SAX .XX.50	CAR6-SAX .XX.50
AttractSPE® Disks Cartridge <b>SCX</b>	CAR1-SCX.XX.50	CAR3-SCX.T1.50	CAR6-SCX.XX.50
AttractSPE® Disks Cartridge <b>C18-SCX</b>	CAR1-C18- SCX.XX.50	CAR3-C18-SC.XX.50	CAR6-C18- SCX.XX.50
AttractSPE® Disks Cartridge <b>C18-SCX-C18</b>	CAR1-C18-SCX- C18.XX.50	CAR3-C18-SCX- C18.XX.50	CAR6-C18-SCX-C18. XX.50
AttractSPE® Disks Cartridges <b>SDB-SAX</b>	CAR1-DVB- SAX.XX.50	CAR3-DVB- SA.XX.50	CAR6-DVB- SAX.XX.50
AttractSPE® Disks 96 Cartridges <b>Silica</b>	CAR1-Si.XX.50	CAR3-Si.XX.50	CAR6-Si.XX.50

\*\*Replace XX by the capacity (T1, T2, T3) depending on your needs. e.g.: CAR1-C18.T2.50

# Choose the perfect AttractSPE® Disks tool for your application

To help you select the **AttractSPE® Disks cartridges** that are the most suitable for your biological applications based on your sample volume, the following table lists the maximum **loading volume** and the **elution volumes** of our different cartridges. Please note that these volumes, especially the elution volumes, are given as indicative values and depend on your applications and/or protocols.

Products		Loading volume	Elution volume
	AttractSPE® Disks Cartridges - 1mL	Up to 250µL	100 to 200µL
	AttractSPE® Disks Cartridges - 3mL	Up to 1mL	200 to 400µL
	AttractSPE® Disks Cartridges - 6mL	Up to 2mL	Up to 1mL

To help you select the **AttractSPE® Disks cartridges** that are the most suitable for your biological applications based on your sample amount, the following table lists the **loading capacities** (maximal analytes quantities that can be retained) of our different cartridges.

Products		Capacity* (µg)		
		T1	T2	T3
	AttractSPE® Disks Cartridges - 1mL	250	500	750
	AttractSPE® Disks Cartridges - 3mL	700	1400	2100
	AttractSPE® Disks Cartridges - 6mL	1500	3000	4500

\*Please note that these capacities are given as indicative values, since they are determined for C18 sorbents and are therefore expected to be higher for polymeric sorbents.

## Advantages

- Automated process to desalt or fractionate proteins or peptides
- Liquid handling robotics
- Can be used for StageTips, 96 well plates...
- 25mm or 47mm diameter



## AttractSPE® Disks for molecular biology purpose

Designation	Description	Reference – 25mm – 40/pk	Reference – 47mm – 20/pk
<b>AttractSPE® Disks Bio</b> <b>C18</b>	C18 sorbent	SPE-Disks-Bio-C18- 100.25.40	SPE-Disks-Bio-C18- 100.47.20
<b>AttractSPE® Disks Bio</b> <b>C8</b>	C8 sorbent	SPE-Disks-Bio-C8- 100.25.40	SPE-Disks-Bio-C8- 100.47.20
<b>AttractSPE® Disks Bio</b> <b>C4</b>	C4 sorbent	SPE-Disks-Bio-C4- 300.25.40	SPE-Disks-Bio-C4- 300.47.20
<b>AttractSPE® Disks Bio</b> <b>HLB</b>	HLB sorbent	SPE-Disks-Bio-HLB- 25.40	SPE-Disks-Bio-HLB- 47.20
<b>AttractSPE® Disks Bio</b> <b>SDB</b>	PS-DVB sorbent	SPE-Disks-Bio-DVB- 25.40	SPE-Disks-Bio-DVB- 47.20
<b>AttractSPE® Disks Bio</b> <b>SDB-RPS</b>	Modified SDB-RPS sorbent	SPE-Disks-Bio-RPS- M-25.40	SPE-Disks-Bio-RPS- M-47.20
<b>AttractSPE® Disks Bio</b> <b>SAX</b>	SAX sorbent	SPE-Disks-Bio-SAX- 25.40	SPE-Disks-Bio-SAX- 47.20
<b>AttractSPE® Disks Bio</b> <b>SCX</b>	SCX sorbent	SPE-Disks-Bio-SCX- 25.40	SPE-Disks-Bio-SCX- 47.20

**Q. What is the difference between AttractSPE®Disks mini spin and AttractSPE®Disks micro spin columns?**

The difference between AttractSPE®Disks mini spin and AttractSPE®Disks micro spin is the diameter of the SPE disks immobilized in the column (7.5mm for mini spin and 5mm for micro spin). Thus, capacities are higher for mini spin columns than for micro spin columns.

**Q. What is the difference between AttractSPE®Disks 96 plates for microelution and 1mL AttractSPE®Disks 96 plates?**

AttractSPE®Disks 96 plates for microelution are plates for which the SPE wells have the shape of tips, and the volume of the wells is 400µL. 1mL 96 plates are classical plates, with SPE wells having a volume of 1mL and higher capacities than 96 well plates for microelution.

**Q. What are the advantages of the AttractSPE®Disks Spin columns compared to the AttractSPE®Disks Tips?**

AttractSPE®Disks Spin columns present a simplicity of use since they can directly be centrifuged, without requiring adaptors. Moreover, the centrifugation tubes supplied with the spin columns have lids, therefore the spins columns can be closed. The AttractSPE®Disks micro and mini spin columns are also compatible with any 2mL or 1.5mL centrifugation tube on the market. Finally, you can treat higher sample volumes with the AttractSPE®Disks micro and mini Spin columns (loading volume up to 800µL), than with AttractSPE®Disks Tips (loading volume up to 200µL for the most used StageTips).

**Q. Which sorbent can I use to purify peptides after enzymatic digestion?**

Peptides purification and desalting are mainly performed using C18 sorbent or SDB-RPS sorbent for the removal of detergents.

**Q. Which sorbent can I use to purify large peptides and/or proteins?**

Desalting of large peptides and proteins is mainly carried out with C4 (300Å) sorbents. C8 sorbent (100Å) can also be used to purify peptides or proteins with a molecular weight inferior to 10kDa.

**Q. Which product should I use for single cell like analysis?**

We supply 10µL AttractSPE®Disks Tips with a reduced amount of sorbent (TO capacity), ideal for single cell like analysis.

**Q. What sorbents are recommended for the extraction of small molecules from biological samples?**

HLB or C18 sorbents with T2 or T3 capacities are recommended to extract small molecules such as drugs from biological matrices (urine, plasma, blood...).

**Q. I use magnetic beads for SP3 protocols, what can I use to remove them before mass spectrometry analysis of my sample?**

Removal of magnetic beads or non-magnetic beads prior to MS analysis can be performed using C8 sorbent, which is used as a filter to retain beads while proteins/peptides, initially trapped on the beads, pass through the sorbent.

**Q. Can I elute my sample from AttractSPE®Disks 96 well plates under vacuum?**

Yes, elution from AttractSPE®Disks 96 well plates for microelution and 1mL 96 well plates can be achieved under vacuum, as well as by centrifugation or positive pressure.

**Q. Can AttractSPE®Disks Tips be used by pipetting?**

No, AttractSPE®Disks Tips can only be used with positive pressure or by centrifugation, using adapted devices. AttractSPE®Disks Tips can also be used with automates (refilling by the top of the tips).

**Q. Can I use the AttractSPE®Disks 96 well plates partially?**

Yes, you can use only some wells of the AttractSPE®Disks 96 well plates for microelution and the AttractSPE®Disks 1mL 96 well plates to perform your experiments, without consequences on the unused wells. You will just have to cover the unused wells before using the plate.

**Q. Are the AttractSPE®Disks Tips supplied with an adaptor for centrifugation or collection tubes?**

AttractSPE®Disks Tips are not supplied with adaptors or collection tubes. However, we offer a kit composed of 200µL StageTips, corresponding adaptors and collection tubes (reference KT-Adapt-Tips-SB.XX.200.96, replacing SB by the sorbent you want and XX by the required capacity).

## **Q. Is there any protocol of use for AttractSPE®Disks tools?**

Yes, instruction sheets describing protocols of use are supplied with all our products.

## **Q. Is it possible to buy custom-made products that are not on Affinisep catalog?**

Yes, Affinisep can provide custom products that are the most adapted to your applications. Contact our technical service at [contact@affinisep.com](mailto:contact@affinisep.com) to describe your needs and we will try our best to offer you a product that meets your criteria.

## **Q. What are the performances of your technology compared to other SPE products on the market?**

C18 AttractSPE®Disks Tips have been compared to two brands of StageTips available on the market and showed similar or better results for the purification of tryptic digests. The results are presented in an application note on our website ([AttractSPE®Disks Tips for an efficient protein cleanup – Comparison with competitor products](#)).

## **Q. What is the protein recovery ratio with the AttractSPE®Disks technology?**

Thanks to their multiple advantages, the AttractSPE®Disks membranes allow the recovery of up to 100% of the samples, with low elution volumes. A recent application note, available on our website ([Estimation of the working range on the AttractSPE®Disks Tips C18 – T1](#)), has demonstrated that, for proteins amounts as low as 10ng, the recoveries were close to 100% with RSD inferior to 3%, after desalting on 200µL AttractSPE®Disks Tips C18. Moreover, no loss of performance was observed for the purification of 10µg of peptides on the AttractSPE®Disks Tips C18 T1, meaning that this StageTips can be used for much higher quantities of peptides.

## **Q. I have questions regarding the use of your products, how can I contact the technical support?**

You can contact our technical support team by email at [tech.support@affinisep.com](mailto:tech.support@affinisep.com). You can also fill the request service on our website to describe your issue or your project.

# Choose the perfect AttractSPE® Disks tool for your application

The following table will help you select the AttractSPE® Disks tools and references that are the most adapted to your proteomic applications, depending on your sample volume (< 800µL) and protein/peptides amount. Please replace the **SB** in the given references by the sorbent you need for your application (e.g. Tips-C18.T1.200.96, see table p10 for available sorbents and their corresponding applications).

		Sample volume			
		Up to 10µL	Up to 200µL	Up to 400µL	Up to 800µL
Protein/peptide amount	< 7µg	Tips-SB.T0.10.96 Tips-SB.T1.10.96	Tips-SB.T1.200.96	µ96W-SB.T1.1 Tips-SB.T1.1000.96	Tips-SB.T1.1000.96
	< 15µg	Tips-SB.T2.10.96			
	< 25µg	Tips-SB.T3.10.96	Tips-SB.T2.200.96		
	< 35µg	µ96W-SB.T1.1	Tips-SB.T3.200.96 µ96W-SB.T1.1		
	< 50µg	µ96W-SB.T2.1	Tips-SB.T3.200.96	µ96W-SB.T2.1	Tips-SB.T2.1000.96
	< 70µg	µ96W-SB.T2.1	µ96W-SB.T2.1		
	< 100µg	µ96W-SB.T3.1	µ96W-SB.T3.1	µ96W-SB.T3.1	Tips-SB.T3.1000.96
	< 200µg	µSpin-SB.T1.96	CAR1-SB.T1.50 µSpin-SB.T1.96	µSpin-SB.T1.96	µSpin-SB.T1.96
	< 300µg	Spin-SB.T1.96	Spin-SB.T1.96	Spin-SB.T1.96	Spin-SB.T1.96
	< 400µg	µSpin-SB.T2.96	µSpin-SB.T2.96	µSpin-SB.T2.96	Spin-SB.T2.96 µSpin-SB.T2.96
	< 500µg	Spin-SB.T2.96 µSpin-SB.T3.96	CAR1-SB.T2.50	96W-SB.T1.1	96W-SB.T1.1
	< 600µg		Spin-SB.T2.96 µSpin-SB.T3.96	Spin-SB.T2.96 µSpin-SB.T3.96	Spin-SB.T2.96 µSpin-SB.T3.96
	< 750µg	Spin-SB.T3.96	CAR1-SB.T3.50	Spin-SB.T3.96 96W-SB.T2.1	Spin-SB.T3.96 96W-SB.T2.1
< 900µg	Spin-SB.T3.96				

Please note that these references are given for information purpose for proteomic applications. Don't hesitate to contact us for small molecules extraction,

# Choose the perfect AttractSPE® Disks tool for your application

The following table will help you select the AttractSPE® Disks tools and references that are the most adapted to your proteomic applications, depending on your sample volume (> 800µL) and protein/peptides amount. Please replace the **SB** in the given references by the sorbent you need for your application (e.g. Tips-C18.T1.200.96, see table p9 for available sorbents and their corresponding applications).

		Sample volume			
		Up to 1mL	Up to 2mL	Up to 4mL	Up to 22mL
Protein/peptide amount	< 35 µg	Tips-SB.1000.T1.96	CAR6-SB.T1.50 Spin15-SB.T1.50	Spin15-SB.T1.50	Spin50-SB.T1.50
	< 70µg	Tips-SB.1000.T2.96			
	< 100µg	Tips-SB.1000.T3.96			
	< 500µg	96W-SB.T1.1			
	< 700µg	CAR3-SB.T1.50			
	< 1.0mg	96W-SB.T2.1			
	< 1.5mg	96W-SB.T3.1 CAR3-SB.T2.50 CAR6-SB.T1.50 Spin15-SB.T1.50			
	< 2.0mg	CAR3-SB.T3.50	CAR6-SB.T2.50 Spin15-SB.T2.50 Spin50-SB.T1.50	Spin15-SB.T2.50	Spin50-SB.T2.50
	< 3.0mg	CAR6-SB.T2.50 Spin15-SB.T2.50 Spin50-SB.T1.50			
	< 4.5mg	CAR6-SB.T3.50 Spin15-SB.T3.50	CAR6-SB.T3.50 Spin15-SB.T3.50	Spin15-SB.T3.50	Spin50-SB.T2.50
	< 6.0mg	Spin50-SB.T2.50	Spin50-SB.T2.50	Spin50-SB.T2.50	
	< 9.0 mg	Spin50-SB.T3.50	Spin50-SB.T3.50	Spin50-SB.T3.50	Spin50-SB.T3.50

Please note that these references are given for information purpose for proteomic applications. Don't hesitate to contact us for small molecules extraction,

# Other products for biological applications

**AttractSPE®LipRem**

**SilactSPE™ Double fritted & Single fritted**

**AttractFiltr membrane filter**

**Powder-based SPE cartridges and plates**



# SPE for removal of proteins & lipids

## AttractSPE® LipRem

**For the removal of phospholipids of plasma sample**

**AttractSPE® LipRem** is a sorbent used for the removal of phosphorylcholine lipids from the plasma.

Cartridges format	#/box	AttractSPE® LipRem
1mL	100	LipRem-100.S.1.20
3mL	50	LipRem-50.S.3.50
6mL	50	LipRem-50.S.6.100
96 well Plate	1	LipRem-1.96W.20
Reversible, 0.7mL	25	LipRem-25.REV.1.F
	50	LipRem-50.REV.1.F

## SilactSPE™ Double fritted & SilactSPE™ Single fritted

**For the removal of proteins after precipitation**

**SilactSPE™ Double fritted** & **SilactSPE™ Single fritted** are cartridges with respectively one or two 20µm PE frits.

Cartridge volume	SilactSPE™ Double fritted 100 cartridges	SilactSPE™ Single fritted 100 cartridges
1mL	0-100.S.1.2F	0-100.S.1.1F
3mL	0-100.S.3.2F	0-100.S.3.1F
6mL	0-100.S.6.2F	0-100.S.6.1F
15mL	0-100.S.15.2F	0-100.S.15.1F
25mL	0-100.S.25.2F	0-100.S.25.1F
96 well plate – 1 unit	0-1.96W.2F	0-1.96W.1F

## AttractFiltr membrane filter cartridges, spin tubes and 96 well plates

**AttractFiltr** is a filtration tool based on the use of a membrane to filtrate and remove particles with vacuum manifold or SPE automates before LC analysis.

Available formats are 3 and 6mL cartridges, spin tubes and 96 microfilter plate.

**AttractFiltr PVDF** with a PVDF membrane (hydrophobic, wide chemical compatibility, T resistance) for the filtration of protein digests.

**AttractFiltr PES** with a PES membrane (hydrophilic, low protein binding) for water filtration.

**AttractFiltr Nylon** with a Nylon membrane (hydrophilic, high protein, RNA & DNA binding, high surface area) for a wide range of biological preparations.

**AttractFiltr CA** with a Cellulose Acetate membrane (hydrophilic, low protein binding) for protein filtration.

Designation	Membrane	Pore size* (µm)	3mL (100/box)	6mL (100/box)	Spin tubes (100/box)	96 filter plate – 1unit
<b>AttractFiltr PVDF</b>	PVDF	0.45	PVDF-100.S.3.45	PVDF-100.S.6.45	PVDF-100.SPIN.45	PVDF-1.96W.45
<b>AttractFiltr PES</b>	PES	0.45	PES-100.S.3.45	PES-100.S.6.45	PES-100.SPIN.45	PES-1.96W.45
<b>AttractFiltr Nylon</b>	Nylon	0.45	NY-100.S.3.45	NY-100.S.6.45	NY-100.SPIN.45	NY-1.96W.45
<b>AttractFiltr CA</b>	Cellulose acetate	0.45	CA-100.S.3.45	CA-100.S.6.45	CA-100.SPIN.45	CA-1.96W.45

\*Porosity of 0.2µm also available, please contact us for more references.

## AttractFiltr Protein Precipitation plate

Easy and fast removal of plasma and serum proteins by precipitation on a spinnable 96 well plate, compatible with SPE automates



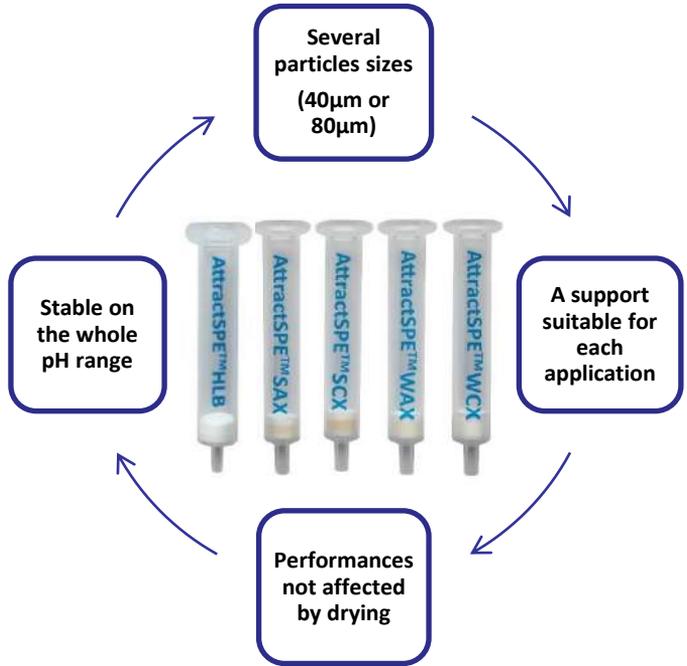
Designation	#/box	Reference
<b>AttractFiltr Protein precipitation</b>	1	PPT-1.96W
	5	PPT-5.96W

# Powder-based SPE cartridges and 96 well plates

## AttractSPE® Polymeric-based SPE

### Advantages

- **1, 3, 6, 10, 12 and 20mL cartridges** (10mg-2g of sorbent)
- **1 or 2mL 96 well plates** (10-60mg of sorbent)
- **A broad range of sorbents** (HLB, SAX, SCX, DVB, WAX, WCX)



Sorbent*	Format, sorbent amount*	#/box	40µm particles
AttractSPE® HLB	1mL cartridge, 10mg	100	HLB-100.S.1.10
	3mL cartridge, 60mg	50	HLB-50.S.3.60
	96 well plate, 10mg	1	HLB-1.96W.10
	96 well plate, 30mg	1	HLB-1.96W.30
	96 well plate, 60mg	1	HLB-1.96W.60
AttractSPE® SAX	1mL cartridge, 10mg	100	SAX-100.S.1.10
	3mL cartridge, 60mg	50	SAX-50.S.3.60
	96 well plate, 10mg	1	SAX-1.96W.10
	96 well plate, 30mg	1	SAX-1.96W.30
	96 well plate, 60mg	1	SAX-1.96W.60

\*Other formats, sorbents and sorbent amounts available, please contact us.

# Powder-based SPE cartridges and 96 well plates

## SilactSPE™ Inorganic-based SPE

SilactSPE™ products are silica-based and alumina-based sorbents available in different formats including SPE cartridges and 96 well plates.

### Advantages

- **1, 3, 6, 10, 12mL cartridges** (50mg-2g of sorbent)

- **96 well plates** (50-100mg of sorbent)

A **broad range of sorbents** (C18, C8, C4 Wide Pore, Silica, SiSCX, SiSAX, Florisil, Phenyl, Cyano, SiWAX, SiWCX)



Sorbent*	Format, sorbent amount*	#/box	Reference
<b>SilactSPE™ C4 WP</b>	6mL cartridge, 500mg	50	C4WP-50.S.6.500
<b>SilactSPE™ C18</b>	1mL cartridge, 50mg	100	C18-100.S.1.50
	1mL cartridge, 100mg	100	C18-100.S.1.100
	3mL cartridge, 200mg	50	C18-50.S.3.200
	96 well plate, 50mg	1	C18-1.96W.50
	96 well plate, 100mg	1	C18-1.96W.100
	<b>SilactSPE™ C8</b>	1mL cartridge, 50mg	100
1mL cartridge, 100mg		100	C8-100.S.1.100
3mL cartridge, 200mg		50	C8-50.S.3.200
96 well plate, 50mg		1	C8-1.96W.50
96 well plate, 100mg		1	C8-1.96W.100
<b>SilactSPE™ Amine (SiWAX)</b>		1mL cartridge, 50mg	100
	1mL cartridge, 100mg	100	NH2-100.S.1.100
	3mL cartridge, 200mg	50	NH2-50.S.3.200
	96 well plate, 50mg	1	NH2-1.96W.50
	96 well plate, 100mg	1	NH2-1.96W.100

\*Other formats, sorbents and sorbent amounts available, please contact us.



THE ART OF MAKING SAMPLE PREPARATION EASIER

## ABOUT

Affinisep is a **worldwide expert in sample preparation applications**. Dedicated to the development of analytical applications in various fields such as water monitoring, food quality control and bioanalysis, Affinisep offers a complete set of products and services for sample preparation.

### Brands

AFFINIMIP®  
AttractSPE®  
SilactSPE™ ...

### Applications

Sample Preparation  
Passive Sampling  
Filtration  
Microextraction of  
peptides/proteins

### Matrices

Food, Feed, Soil,  
Oil, Water,  
Biological fluids,  
Proteolytic digest

Analytical chemists can find any solution for sample preparation, selective extraction and sample clean-up needs in various sectors: food and feed safety and quality, life science and quality control, clinical diagnosis, environment and doping.

In addition, proteomics users can find a complete set of microextraction products for protein/peptides fractionation or desalting.

## ORDERING INFORMATION

For any order, please choose one of the following ways:

❖ On our website : [www.affinisep.com](http://www.affinisep.com)

Find all our references and benefit from a **FAST** and **SIMPLE** process!

❖ By email: [contact@affinisep.com](mailto:contact@affinisep.com)



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