



sartorius stedim
biotech

Vivapure®
miniprep and maxiprep
Protein Purification Spin Columns



turning science **into solutions**





Features

- **Rapid purification with high yields**

The Vivapure® Protein A & G maxiprep spin columns purify > 20 mg protein from 20 ml of cleared lysate in under 50 min.

The Vivapure® Protein A & G miniprep spin columns purify > 1 mg protein from 0.65 ml of cleared lysate within 20 min

- **Cost effective**

Vivapure® Protein A & G maxiprep spin columns can be re-used up to 5 times while Vivapure® Protein A & G miniprep spin columns can be re-used up to 3 times

- **Run multiple spin columns in parallel**

Vivapure® miniprep and maxiprep fit in all bench top centrifuges, allowing purification of multiple samples at the same time. Use up to 16 Vivapure® maxiprep spin columns (320 ml) simultaneously

- **Premium agarose resin**

High quality agarose resin guarantees superior purity and yield in a single step

- **Negligible hold up volume**

Due to the centrifugal driving force, spin columns have negligible hold up volume in comparison to gravity columns and batch methods

Antibody and His-Tagged Protein Purification Kits



Rapid Purification with High Yields
Vivapure® miniprep and maxiprep Kits are spin column based kits for fast and effective purification of His-tagged proteins and antibodies.

Spin columns have the advantage of speed over gravity drip columns and batch protocols.

With the patented FlowGo regulator the sample residence time is extended to assure adequate sample binding to the resin. Due to this, Sartorius Stedim Biotech Vivapure® miniprep and maxiprep spin column kits combine the merits of spin columns and gravity drip columns resulting in rapid purification with up to 95%, protein recovery and purity.

All spin columns can conveniently be used in a centrifuge. For processing larger sample volumes, e. g. from diluted cell culture supernatants, the Vivapure® maxiprep spin columns can additionally be run (see picture top of page 4) with a peristaltic pump collar (VS-PPCSC).

The Vivapure® miniprep and maxiprep columns come in a variety of different configurations for your convenience. They can be purchased as completely ready-to-use kits with buffers and ultrafiltration devices but just as well as stand alone spin columns in small packs or large packs for frequent users.

Vivapure® miniprep and maxiprep Protein A & G Spin Columns



Protein A & G for Antibody Purification

Vivapure® miniprep A & G Kits	Centrifuge
Sample size	0.65 ml
Typical Binding Capacity	1 mg IgG/ column
Number of re-uses	3

Vivapure® maxiprep A & G Kits	Centrifuge ¹
Sample size	20 ml
Typical Binding Capacity	20 mg IgG/ column
Number of re-uses	5

¹ Use the peristaltic pump accessory (VS-PPCSC) for larger volumes

Applications

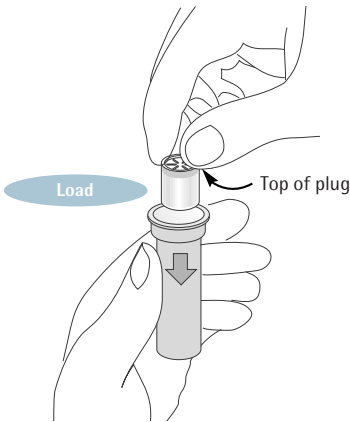
- Use Vivapure® Protein A or G miniprep or maxiprep spin columns to purify antibodies from serum, ascites and tissue culture supernatant derived from static cultures or bioreactors
- Purification of a wide range of monoclonal and polyclonal antibodies
- Rapid clean up of immuno-histo-chemical, immunofluorescence experiments of Western blots
- Removal of abundant IgG from human plasma to simplify samples
- Titration of antibody yield during cell culture



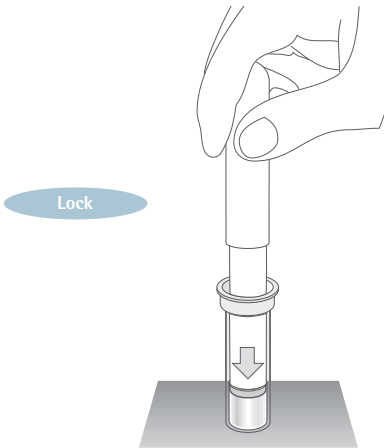
Set up Vivapure® spin columns

The plug and play concept for the Vivapure® miniprep spin columns

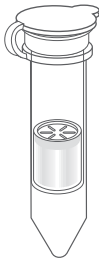
Loading the plug into the spin column



Place the plug into the spin column with the recessed end uppermost.



Push the plug **fully** into the tapered end of the spin column using the plug insertion tool.



Spin
Re-use

It is now ready for pre-equilibration with binding buffer followed by centrifugation.

Vivapure® miniprep and maxiprep MC Spin Columns



IMAC for His-tagged Protein Purification:

Vivapure® miniprepMC Kits	Centrifuge
Sample size	0.65 ml
Typical Binding Capacity	1 mg His-tagged protein
Number of re-uses	2

Vivapure® maxiprepMC Kits	Centrifuge ¹
Sample size	20 ml
Typical Binding Capacity	10 mg His-tagged protein
Number of re-uses	2

¹ Use the peristaltic pump accessory (VS-PPCSC) for larger volumes

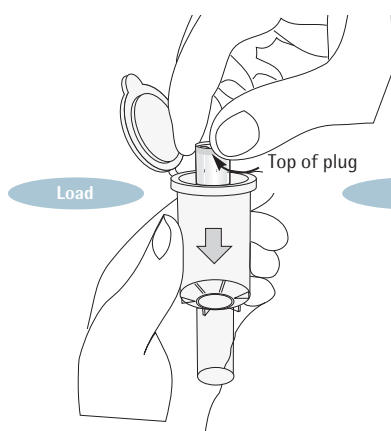
Applications

Ready-to-use, robust and reproducible kits for purifying His-tagged proteins from bacteria, insect, mammalian and yeast cells under native or denaturing conditions in Molecular Biology, Biochemistry or Structural Biology laboratories, i.e.:

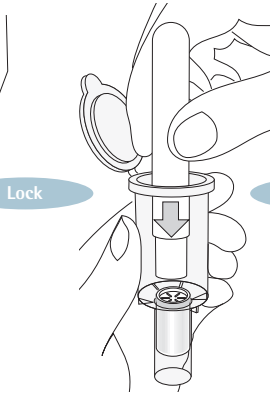
- Easy screening for soluble expression of His-tagged proteins
- Run Vivapure® maxiprep MC columns in centrifugal mode for volumes < 20 ml or with peristaltic pump for > 20 ml
- Purification of recombinant proteins for use as substrates for enzyme assays, structural studies or for raising antibodies
- Titration of His-tagged protein yield during cell culture
- Remove free His-tag after cleavage from purified recombinant protein
- Multiple expression profiling to generate critical cell culture performance data and for predicting optimal harvest times

The plug and play concept for the Vivapure® maxiprep spin columns

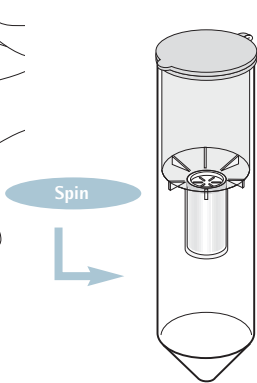
Loading the plug into the spin column



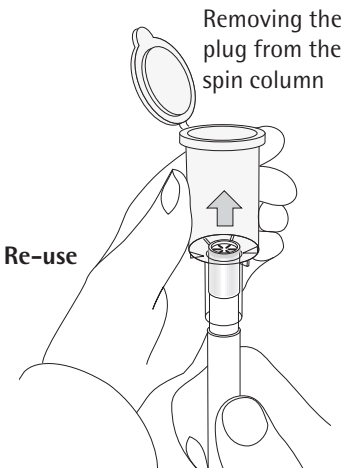
Place the plug into the spin column with the recessed end uppermost.



Push the plug **fully** into the tapered end of the spin column using the plug insertion tool.



It is now ready for pre-equilibration with binding buffer followed by centrifugation.



After use, the plug is removed using the plug insertion tool.

Working with samples > 20 ml



Accessory

For working with sample volumes larger than 20 ml, e.g. diluted cell culture supernatants, a sealing cap and peristaltic pump collar (VS-PPCSC) for Vivapure® maxiprep columns offer a fast and easy to use alternative to multiple centrifugation steps. The sample is pumped into the maxiprep spin column through a tube attached to the sealing cap with a connector. To ensure the usage of high sample loading flow rates, the peristaltic pump collar securely locks the sealing cap to the column barrel.

Required Equipment

Variable speed peristaltic pump capable of speeds less than 20 rpm. E. g. Masterflex pump (VFP001, 240V | VFP002 115V), Masterflex easy load pump head-size 16, (VFA012).

Ordering information

Product name	Pack size	Product no.
Vivapure® A Starter Pack*	2 miniprepA	VS-ARSTPKA2
Vivapure® miniprepA Kit*	16 miniprepA	VS-ARAMINIK
Vivapure® miniprepA Bulk Pack	48 miniprepA	VS-ARAMINIB
Vivapure® maxiprepA Kit*	4 maxiprepA	VS-ARAMAXIK
Vivapure® maxiprepA Bulk Pack	12 maxiprepA	VS-ARAMAXIB
Vivapure® A Buffer Pack		VS-ARABUFPK
Vivapure® G Starter Pack*	2 miniprepG	VS-ARSTPKG2
Vivapure® miniprepG Kit*	16 miniprepG	VS-ARGMINIK
Vivapure® miniprepG Bulk Pack	48 miniprepG	VS-ARGMINIB
Vivapure® maxiprepG Kit*	4 maxiprepG	VS-ARGMAXIK
Vivapure® maxiprepG Bulk Pack	12 maxiprepG	VS-ARGMAXIB
Vivapure® G Buffer Pack		VS-ARGBUFPK
Sealing Cap Et Peristaltic Pump Collor 1		VS-PPCSC
Vivapure® metal cheleate Starter Pack*	4 miniprepMC	VS-MCST04
Vivapure® miniprepMC Kit*	24 miniprepMC	VS-MCMINI24
Vivapure® miniprepMC Bulk Pack	72 miniprepMC	VS-MCMINIB
Vivapure® maxiprepMC Kit*	8 maxiprepMC	VS-MCMAXIK
Vivapure® maxiprepMC Bulk Pack	24 maxiprepMC	VS-MCMAXIB
Vivapure® metal chelate Buffer Pack		VS-MCBUFPK

* = incl. UF concentrators + buffers

Binding Affinities of Protein A and Protein G

Antibody	Protein A	Protein G	Antibody	Protein A	Protein G	Antibody	Protein A	Protein G
Human IgG1	****	****	Mouse IgG2b	***	***	Goat IgG	* /x	**
Human IgG2	****	****	Mouse IgG3	**	***	Pig IgG	***	***
Human IgG3	x	****	Rat IgG2a	x	****	Chicken IgG	x	*
Human IgG4	****	****	Rat IgG2b	x	**			
Human IgA	**	x	Rat IgG2c	*	**			
Human IgD	**	x	Rabbit IgG	****	***			
Human IgE	**	x	Hamster IgG	*	**			
Human IgM	**	x	Guinea Pig IgG****		**			
Mouse IgG1	*	**	Bovine IgG	**	****			
Mouse IgG2a	****	****	Sheep IgG	* /x	**			

**** = Strong Affinity
*** = Moderate Affinity
** = Weak Affinity
* = Slight Affinity
x = No Affinity

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