

FAQS for Verex Filter Vials

To learn more about
Verex Filter Vials go to:

[www.phenomenex.com/
VerexFV](http://www.phenomenex.com/VerexFV)

What is a filter vial?

A filter vial combines syringe filter and vial technology into one simple product. Verex Filter Vials eliminate the need for separate syringes, syringe filters, vials, and cap/septum. By managing less products, these filter vials help streamline the sample preparation workflow and reduce lab waste. Potential sample loss and contamination are also reduced as multiple transfers are removed with this all-in-one filtration device.

Why is sample filtration important?

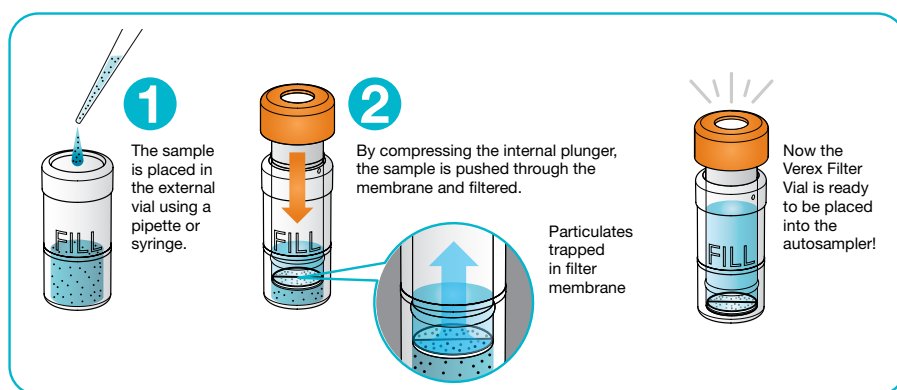
Verex Filter Vials protect your column and system from damaging particulates and contaminants that lead to shorter column lifetime, high backpressures, increased unscheduled system downtime, and unreliable results.

- Filtering your samples reduces the risk of contamination and clogging of your column and system components.
- Clean samples extend column lifetime and decrease the incidence of high-pressure fluctuations caused by particulate and contaminant buildup at the head of the column.
- Effective sample filtration also protects your system's rotor seals and valve stators from unnecessary wear and damage caused by undissolved sample particulates grinding away at the expensive injection port components.

How do Verex Filter Vials work?

Verex Filter Vials are composed of two pieces: the external vial and the internal plunger with an integrated filter membrane (RC, PTFE, NY, PES, or PVDF) and PTFE/Silicone preSlit snap cap. The unfiltered sample is first transferred into the external vial. Then the internal plunger with the cap is pressed into the external vial containing the sample. This forces the sample through the membrane and into the internal plunger's housing. This produces a quick and easy particulate-free sample ready for analysis.

In short, first dispense the sample into the external vial, press down the internal plunger to filter, and then place in the autosampler!



Are Verex Filter Vials suitable for HPLC analysis?

Yes, all Verex Filter Vials are able to be used with both HPLC and UHPLC analysis.

What is the max fill and dead-volume for the Verex Filter Vials?

The maximum fill in the external vial is 480 μ L. Exceeding the recommended maximum fill could result in the loss of your sample. The dead-volume is 30 μ L.

When compared to traditional sample filtration, will the use of Verex Filter Vials save me time?

Traditional sample preparation requires multiple steps and transfers before the sample is ready for injection. Verex Filter Vials cut your sample preparation down to two steps - simply dispense the sample and compress to filter. In addition, just imagine the extra time you save from not having to order multiple part numbers!

What is the force needed to compress a Verex Filter Vial?

The force needed to compress a Verex Filter Vial is estimated at 8 psi or 0.6 bar.

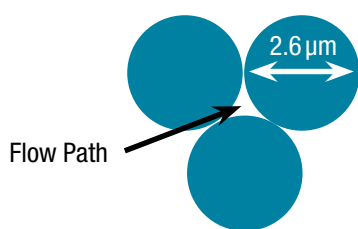
What is the max operating temperature?

The max operating temperature for Verex Filter Vials is 50 °C (120 °F).

Which filter pore size should I use for my samples?

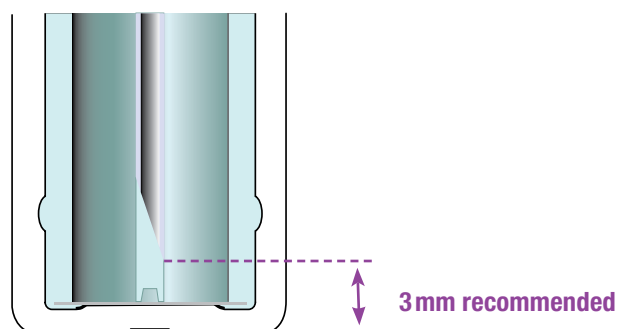
For HPLC/UHPLC columns packed with $\leq 3\mu\text{m}$ chromatographic media, a Verex Filter Vial with $0.2\mu\text{m}$ filter membrane is recommended. Filter membranes with a $0.2\mu\text{m}$ pore size provide an effective barrier against unwanted particulates entering the system's flow path, which reduces column plugging, leading to longer column lifetime and increased system uptime. For HPLC columns with $\geq 4\mu\text{m}$ chromatographic media, a Verex Filter Vial with $0.45\mu\text{m}$ filter membrane is recommended.

Particle Size (μm)	Flow Path (μm)	Effective Filter Pore Size (μm)
5	0.72	0.45
3	0.43	0.20
2.6	0.38	0.20
1.7	0.25	0.20



What needle depth should I set my autosampler for all Verex Filter Vials?

All Verex Filter Vials have the same dimensions as a standard 12 x 32 mm vial and we recommend the autosampler's needle depth to be set to a minimum of 3 mm from the bottom of the external filter vial.



Do I need to transfer my sample to a different vial before loading it into the autosampler?

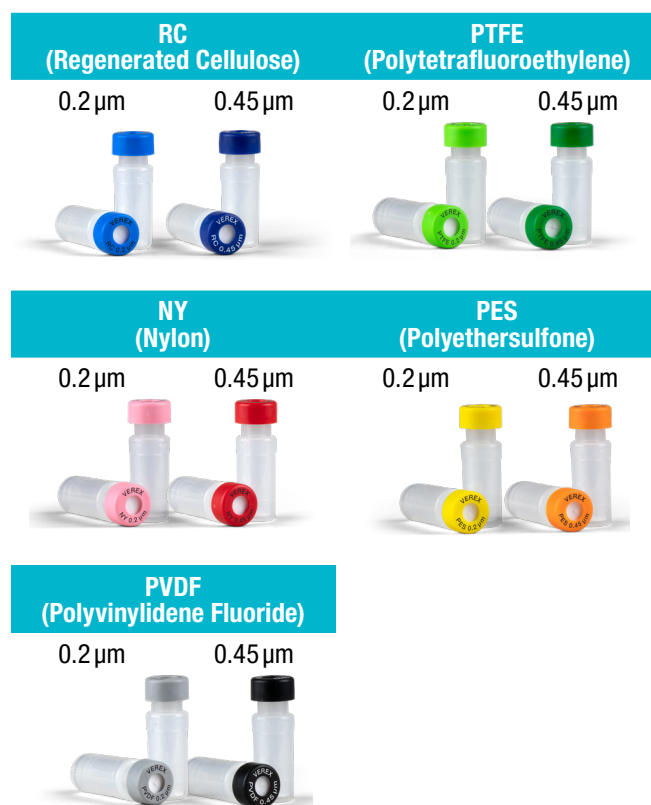
No, Verex Filter Vials have the same dimensions as a standard 12 x 32 mm, 11 mm snap-top vial and can be easily loaded into your autosampler.

Will Verex Filter Vials affect my chromatography?

If proper technique and filter membrane are used, there should be no changes in your chromatography.

Why are there different colored caps?

Each cap color represents a different filter membrane and pore size. This makes it easy for users to quickly identify which Verex Filter Vial to continue using for their samples.



What Verex Filter Vial membrane is best to use for my sample?

Please reference the filter membrane selection table below and the filter vial chemical compatibility chart on the next page to find the best membrane for your sample.

Solvents			
Non-Aqueous		Aqueous Mixtures	
Hydrophobic / Strong Acids		Hydrophilic	
PTFE		RC	NY
Aqueous			
Solvent Mixtures		Tissue Culture, Media, Buffers	Protein Analysis / Biological Samples
NY	PES	PES	PVDF



Chemical	Filter Media					Housing	
	Regenerated Cellulose	Polytetrafluoroethylene	Nylon	Polyethersulfone	Polyvinylidene Fluoride	Polypropylene	
	RC	PTFE	NY	PES	PVDF	PP	
ACIDS	Acetic Acid, 5%	R	R	R	R	R	R
	Acetic Acid, 10%	R	R	L	R	R	R
	Acetic Acid, Glacial	R	R	N	R	R	L
	Boric Acid	T	R	L	T	T	R
	Hydrochloric, 6N	N	R	N	R	L	T
	Hydrochloric, Conc.	N	R	N	R	R	T
	Hydrofluoric, 10%	L	R	N	T	R	R
	Hydrofluoric, 35%	N	T	N	T	R	T
	Nitric Acid, 6N	N	L	N	N	T	T
	Nitric Acid, Conc.	N	N	N	N	R	T
	Sulfuric Acid, 6N	L	L	N	T	R	T
Sulfuric Acid, Conc.	N	N	N	N	T	T	
ALCOHOLS	Amyl Alcohol	R	R	R	N	R	R
	Benzyl Alcohol	R	R	L	N	R	R
	Butyl Alcohol	T	R	R	R	R	R
	Butyl Cellosolve	T	R	R	T	T	T
	Ethyl Alcohol	T	R	R	R	R	T
	Ethylene Glycol	R	R	R	R	R	R
	Glycerin	R	R	R	R	R	R
	Isobutyl Alcohol	T	R	R	T	R	T
	Isopropanol	R	R	R	R	R	T
	Methanol	R	R	T	R	R	T
	Methyl Cellosolve	T	R	R	T	R	T
Propanol	R	R	R	T	R	R	
BASES	Ammonium Hydroxide, 6N	L	R	N	R	R	T
	Potassium Hydroxide, 6N	L	R	R	T	R	T
	Sodium Hydroxide, 6N	L	R	N	R	R	T
SOLVENTS	Acetone	R	R	R	N	N	R
	Acetonitrile	R	R	T	R	R	R
	Amyl Acetate	R	R	R	L	R	L
	Aniline	R	R	R	R	T	L
	Benzene	R	L	T	R	R	L
	Bromoform	T	R	R	T	T	T
	Butyl Acetate	R	R	R	L	T	L
	Carbon Tetrachloride	R	L	R	R	R	N
	Cellosolve	R	R	R	T	T	T
	Chloroform	R	L	NR	N	R	L
	Cyclohexane	R	R	R	T	T	R
	Cyclohexanone	R	R	T	N	N	R
	Diethyl Acetamide	R	N	R	T	T	T
	Dimethyl Formamide	L	R	R	N	N	R
	Dimethyl Sulfoxide (DMSO)	R	R	R	N	N	T
	Dioxane	R	R	R	L	R	R
	Ethyl Ether	R	R	R	R	R	N
	Ethylene Dichloride	T	R	R	T	T	T
	Formaldehyde	T	R	R	R	R	R
	Freon TF	T	R	R	R	R	T
	Gasoline	R	R	R	T	R	N
	Hexane	R	R	R	T	R	T
	Isopropyl Acetate	R	R	R	T	N	R
	Kerosene	R	R	R	T	R	T
	Methyl Acetate	R	R	R	T	R	R
	Methyl Ethyl Ketone (MEK)	R	R	R	N	NR	T
	Methyl Isobutyl Ketone	R	R	R	T	N	T
	Methylene Chloride	NR	R	T	N	R	N
Nitrobenzene	NR	R	T	N	R	R	
Pentane	NR	L	R	R	R	T	
Perchloroethylene	R	R	R	N	T	L	
Pyridine	R	R	T	N	N	L	
Tetrahydrofuran	R	L	T	N	N	L	
Toluene	R	L	R	N	R	L	
Trichloroethane	NR	R	T	L	T	T	
Trichlorethylene	R	L	T	R	R	N	
Triethylamine	R	R	R	T	T	T	
Xylene	R	L	T	L	R	R	
MISCELLANEOUS	Cottonseed Oil	T	R	R	T	T	R
	Hydrogen Peroxide (30%)	R	R	R	T	R	R
	Kodak KMER FTFR	T	R	R	T	T	T
	Peanut Oil	T	R	R	T	T	T
	Petroleum Oils	R	T	T	L	R	R
	Sesame Oil	T	R	R	T	T	T
	Shipley (AS-111,340,1350)	T	R	R	T	T	T
	Silicone Oils	R	R	R	R	R	R
	Turpentine	T	R	R	T	T	T
	Waycoat 59	T	R	R	T	T	T

Key	
R	Recommended
L	Limited Resistance (testing before use is recommended)
N	Not Recommended
T	Testing Recommended
NR	Not Resistant

Have more questions about Verex Filter Vials? Chat live with a technical expert now!

www.phenomenex.com/VerexFV

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