Claristep®
Filtration System

The Easy Choice – Syringeless and Fast

Simplifying Progress

SARTORIUS

Claristep® Filtration System – The Power of Simplicity

Preparing samples by clarification is an essential step prior to nearly all analytical techniques, such as high pressure liquid chromatography (HPLC). This filtration step to eliminate particles is crucial for maintaining the integrity of chromatography columns and for maximizing their operating life time. In addition, as the sensitivity of automated analytical instruments continues to improve, they increasingly require less volume to operate in order to maximize throughput. Therefore, fast clarification of small volumes that does not add leachables or extractables to the original sample is indispensable for achieving the best analytical results.

To meet these requirements, Sartorius has developed a new, easy-to-use and straightforward filtration setup. The manually operated Claristep® Filtration System consisting of a station and filter units offers a novel way for clarifying your samples prior to analysis.

- Up to 8 samples are processed simultaneously
- No syringe required
- No need for a vacuum source or a power supply
- For low sample volumes ranging from 60 µL to 600 µL
- Hold-up volume < 30 µL

Claristep® Station

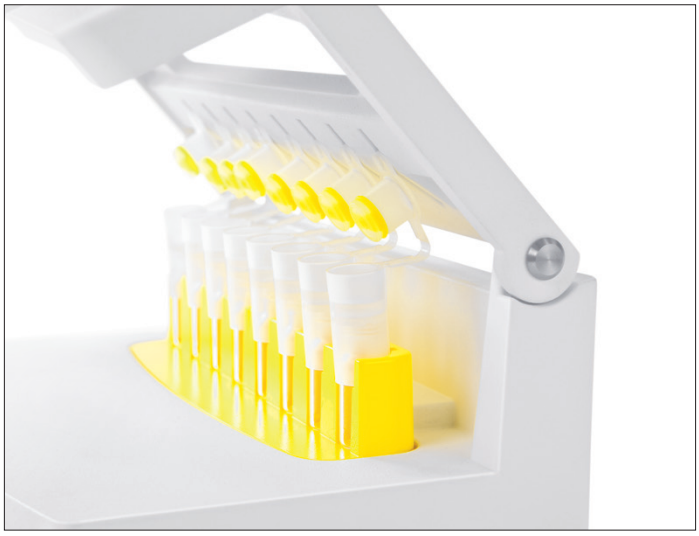
The Claristep® Station consists of a base, a lid and an exchangeable tray for easy and accurate positioning of sample vials and Claristep® Filter units. The patent-pending design features unique grooves in the station's lid and matching guide ridges on Claristep® Filter units to enable intuitively correct alignment and convenient handling of the system.

Claristep® Filter Units

Claristep® Filter units are made of the purest materials. Another major benefit is that the contact time of the samples with the filters and the caps is extremely short, ensuring optimal, contamination-free results. Filtered liquids are collected in any 12 × 32 mm outer diameter vials of your choice based on the analytical method to be performed.

Automatic Guiding System

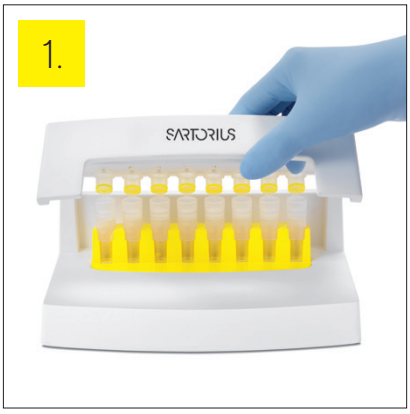
The grooves automatically guide the filter unit caps into the correct positions for simultaneous and accurate cap closure.



Sample Preparation for Analytics – Use the Most Ergonomic Clarification Solution

Filter 8 samples simultaneously – without needing any power supply or a vacuum | pressure source. Simply place the filters on your vials, gently close the station and press on the station lid to filter – that's it!

1.



Close the station lid. The grooves align the caps automatically, securely sealing every single Claristep® Filter unit for the most convenient processing.

2.

Apply slight uniform pressure with your hand to start sample clarification. You will feel a certain resistance while liquid is pressed through each membrane.

3.

Press down on the station lid so that the left and right corners touch the base plate. Hold the lid in place for 3 seconds to ensure all sample liquid is filtered through.

4.

Claristep® Filter units press liquid through each membrane by an air pocket that forms over each filter unit when the station lid is closed. This air pocket is released when you stop holding down the lid – you will feel it in your fingertips!

Before clarification, the samples are pipetted in the filter reservoire.

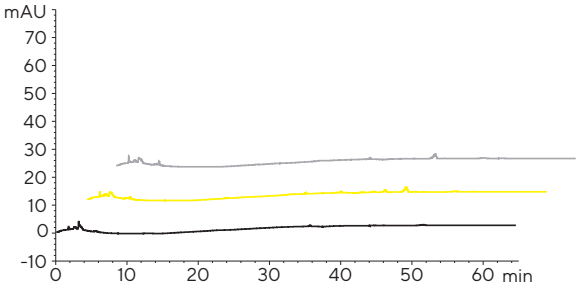
After clarification, the filtrates are collected in sample vials.

Reliable Removal of Particles – Filter Samples Without Adding Extractables and Leachables

Claristep® Filter units with RC membranes are optimized for solvents and aqueous solutions.
They provide maximum chemical compatibility and exceptionally low non-specific binding of analytes.

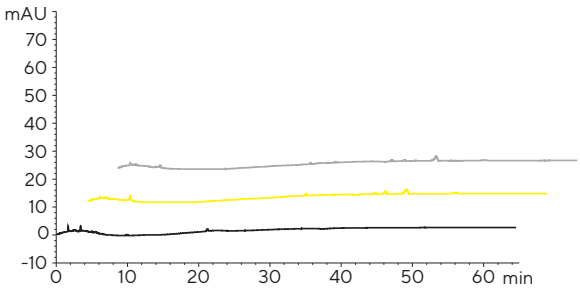
HPLC Certification

Methanol



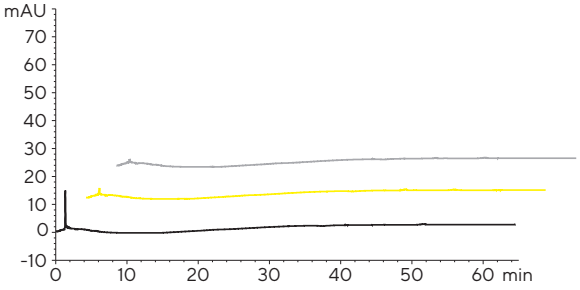
— Filtered with Claristep® RC 0.2 µm
— Filtered with Claristep® RC 0.45 µm
— Unfiltered Methanol

Acetonitrile



— Filtered with Claristep® RC 0.2 µm
— Filtered with Claristep® RC 0.45 µm
— Unfiltered Acetonitrile

Water



— Filtered with Claristep® RC 0.2 µm
— Filtered with Claristep® RC 0.45 µm
— Unfiltered Water

HPLC Procedure

Column (C18):
5 µm × 250 mm × 4.0 mm

Flow Rate: 1 mL/min,
Wavelength: 220 nm

Injection Volume: 20 µL,
Analysis Time: 65 min,
Temperature: 40°C,
Mobile Phases:
A) Acetonitrile
B) Water

Gradient:
Hold 60% A for 10 min,
60% to 100% A in 20 min,
100% A for 30 min

Sample Preparation Techniques – Choose the Best Solution for Your Needs

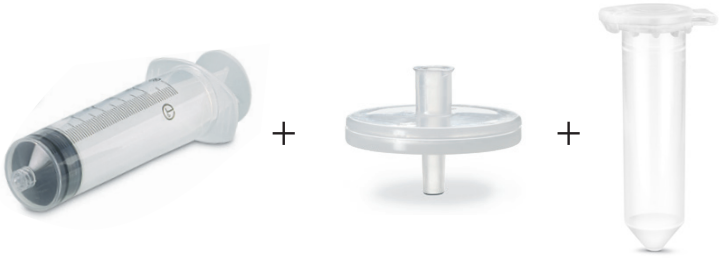
Do you process dozens of samples each day? A syringeless solution will help you reduce time, effort and waste – and minimize hand stress. If you need to analyze only a few samples a day, you will benefit from our proven combination of a syringe and syringe filter. The choice is all yours!

Claristep® Filtration System

8 × fold

or

Syringe Filters for processing one sample at a time



Analytical Sample Volumes Run Small – Get the Particle-free Volume You Really Need

If you need to fill only 12 × 32 mm vials, a syringeless solution will help you save time and reduce sample loss!

Syringeless Solution

0.06 – 0.6 mL

or

Different Diameters for different sample volumes

1 – 200 mL | 1 – 100 mL | 0.5 – 15 mL | 0.05 – 1 mL

Claristep® Components and Ordering Information

Claristep® Filters

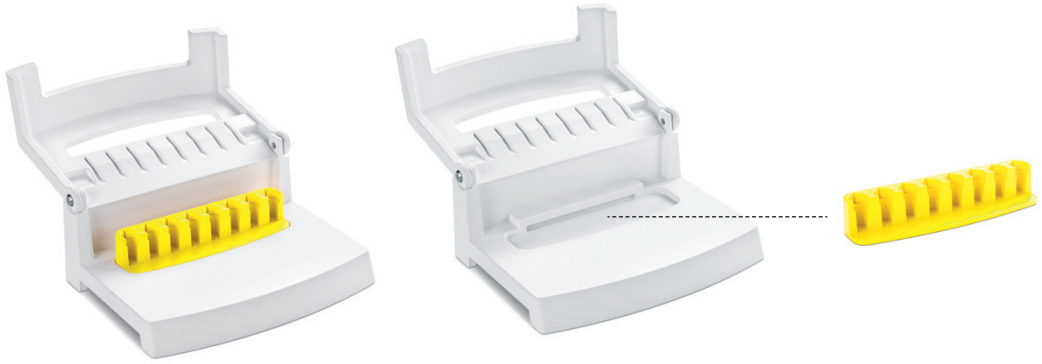
Claristep® Filters are availabe in a choice of two pore sizes.

Ø mm | EFD[1]	Membrane	Housing	Pore Size	Sterile	Qty | Pk	Order No.
9.7 mm	RC	PP	0.2 µm	No	96	17C07FT---96
9.7 mm	RC	PP	0.2 µm	No	480	17C07FT--480
9.7 mm	RC	PP	0.45 µm	No	96	17C06FT---96
9.7 mm	RC	PP	0.45 µm	No	480	17C06FT--480

[1] Effective Filtration Diameter
RC = Regenerated Cellulose

Claristep® System

The Tray can be removed and exchanged.



Name	Qty | Pk	Order No.
Claristep® Station complete	1	17C--M8
Claristep® Single Tray	1	17C--S1

Additional Components Needed

The free choice of 12 × 32 mm sample vials and lids is enabeling you to chose the right vial for your particular sample and application, e.g. for light sensitive substances you can use brown glass. For small sample volumes you can use vessels with inlays. You can use glass or plastic, screw caps and | or slid lids – whatever you prefer.

12 × 32 mm sample vials

Minisart® Syringe Filters

Removal of Particles and Microorganisms from Liquids and Gases

Syringe filters are used for many routine preparation steps in laboratories all over the world. They are convenient, ready-to-use disposables for sterile filtration of liquids and removal of particles from solutions and gases. Depending on the reagents filtered, syringe filters have to fulfill certain requirements to best serve customer's application.

Minisart® with PP housing is optimized for filtration prior to analytics and withstands even harsh solvents and chemicals. Minisart® NML with housing made of methacrylate butadiene styrene (MBS) are the perfect choice for sterile filtration and clarification of additives, buffers, reagents and gases.

Sartolab® Filters

Vacuum Filtration
Sartolab® Vacuum Filtration Devices with 0.1 µm and 0.22 µm PES membranes are convenient filtration units for 150 ml to 1 L sample volume.

Sartolab® RF as a complete system includes receiver flasks. Sartolab® BT is a bottle top filter without receiver flasks enabling customers to use their own receiver bottles and to expand the filtration capacity depending on the particle load of the filtered liquid by filling more than one receiver flask. Sartolab® 150V is a disposable vacuum filter with a pleated 0.22 µm PES membrane which is suitable for filtration of up to 15 L liquid.

Pressure Filtration Devices
Sartolab® P20 Pressure Filtration Devices with 0.2 µm or 0.22 µm PES membrane with and without GF pre-filter are convenient filtration units for 500 ml to 5 L sample volumes. Especially Sartolab® P20 can be used to collect the filtrate in any required container or for in-line filtration.

The polycarbonate housing and membrane components are suitable for many aqueous solutions. The GF pre-filter types are mainly suitable for environmental samples with high particle load prior to analytics.

Find out more
For more information, please visit www.sartorius.com

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