

CHROMACOL HPLC Syringe Filters

CELLULOSE ACETATE • REGENERATED CELLULOSE • PVDF • PTFE • POLYPROPYLENE • PES • NYLON



Chromacol Products are distributed by:

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PTFE Specifications

Specifications:

Membrane: HPLC Certified PTFE, w/polypropylene support

Housing: Medical Grade, Virgin Polypropylene

Prefilter: Binder Free Glass Microfiber

Connections: Enhanced Female Luer-Lok Inlet
Male Luer Slip Outlet

Max. Operating Temp. 100°C

Max. Operating Pressure: 4mm – 75psi
17mm – 115 psi
30mm – 90 psi

Retention Volumes: 4mm – <15 µL
17mm – <29 µL
30mm – <137 µL

Autoclave: Sterilize by dry heat at 121°C for 15 min

Polypropylene Specifications

Specifications:

Membrane: Hydrophilic Polypropylene

Housing: Medical Grade, Virgin Polypropylene

Connections: Enhanced Female Luer-Lok Inlet
Male Slip Outlet

Max. Operating Temp. 110°C

Max. Operating Pressure: 17mm – 115 psi
30mm – 90 psi

Retention Volumes: 17mm – <29 µL
30mm – <137 µL

PES Specifications

Specifications:

Membrane: ICP Certified PES (PolyEtherSulfone)

Housing: Medical Grade, Virgin Polypropylene

Connections: Enhanced Female Luer-Lok Inlet
Male Slip Outlet

Max. Operating Temp. 100°C

Max. Operating Pressure: 4mm – 75psi
17mm – 115 psi
30mm – 90 psi

Retention Volumes: 4mm – <15 µL
17mm – <29 µL
30mm – <137 µL

Autoclave: Sterilize by dry heat at 121°C for 15 min

Cellulose Acetate Specifications

Specifications:

Membrane: HPLC Certified Cellulose Acetate

Housing: Medical Grade, Virgin Polypropylene

Protein Binding: <24µg/cm²

Connections: Enhanced Female Luer-Lok Inlet
Male Luer Slip Outlet

Max. Operating Temp. 110°C

Max. Operating Pressure: 4mm – 75psi
17mm – 115 psi
30mm – 90 psi

Retention Volumes: 4mm – <15 µL
17mm – <29 µL
30mm – <137 µL

Autoclave: Sterilize by dry heat at 121°C for 15 min

Flow Rate Study

Chromacol's Syringe Filter's increased diameter makes quick work of your filtration procedures. Our improved diameter permits faster flow rates and minimizes back pressures. Now you can filter faster and easier than ever before... even faster than popular, competitive syringe filters.

Flow Rate Study

Brand	Filter Dia.	Flow Rate
Chromacol 30mm	30mm	186 ml/min
Old style Chromacol	25mm	147ml/min
Competitor G	25mm	170ml/min
no filter in line		235ml/min

Test was performed using a constant pressure and flow rate pump. Flow pressure was 25 psi of distilled H₂O. All filters were Nylon 0.45µm with prefilters. Collection volumes were done post filter against time expired. Each filter was run four times.

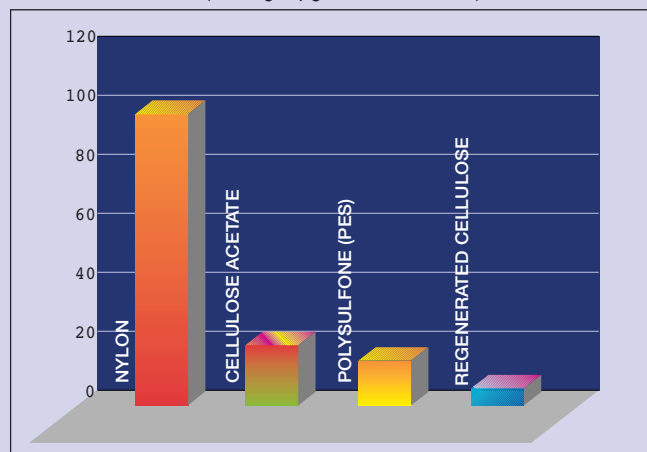
Enhanced quality control and clean room assembly

Chromacol filters are now assembled under clean room conditions. These new manufacturing controls lessen any airborne product contaminants, humidity and temperature changes that could adversely affect filter performance. With our automated procedures, human handling is kept to extreme minimums. These new procedures mean a cleaner, better and more compliant filter for even the most exacting filtration demands.

Protein Binding of Biological Samples

Chromacol's Regenerated Cellulose syringe filters possess superior characteristics for the filtration of biological samples or high binding analytes. Our Regenerated Cellulose filters have low membrane zeta potentials to provide ultra-low biological based binding coefficients, to maximize sample yield after filtration. No binders, surfactants or wetting agents are used, eliminating a source of contamination. Hydrophilic Regenerated Cellulose also exhibits excellent chemical resistance and high flow rates when compared to Polysulfone and Cellulose Acetate filters normally used in biological assay filtration.

BINDING CHARACTERISTICS of VARIOUS MEMBRANES
(Binding in µg/cm² of G-Globulin)



I M P R O V E D P E R F O R M A N C E ...

CHROMACOL

HPLC Syringe Filters

Chromacol Syringe Filters have been improved for even greater performance and sample throughput. National Scientifics' Continuous Improvement Program has resulted in our new re-designed Chromacol Filters, that now provide industry leading levels in sample loading and filter efficiency.



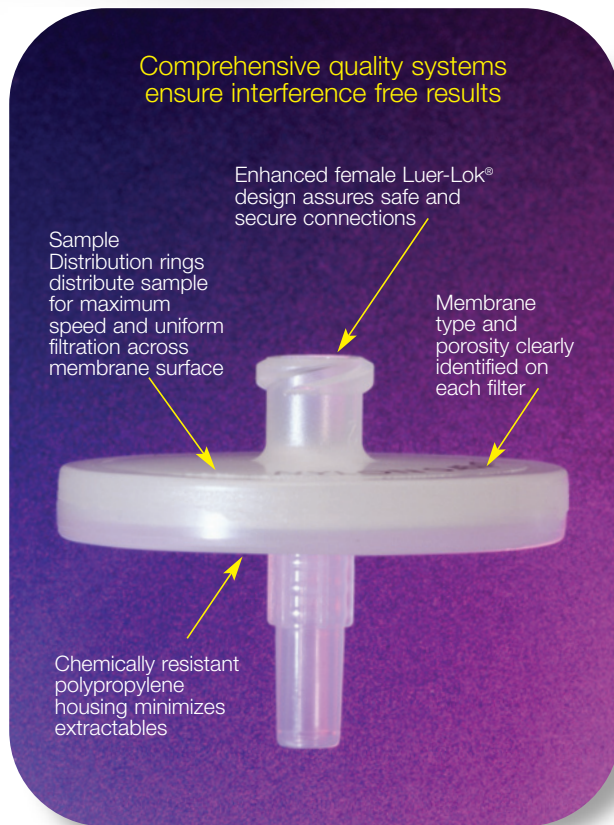
Chromacol's new 30mm and 17mm filter formats provide superior throughput and sample loading over standard, competitive 25mm and 13mm filters. Now you can process up to 50% more sample before reaching maximum sample loading for our new 30mm filters.

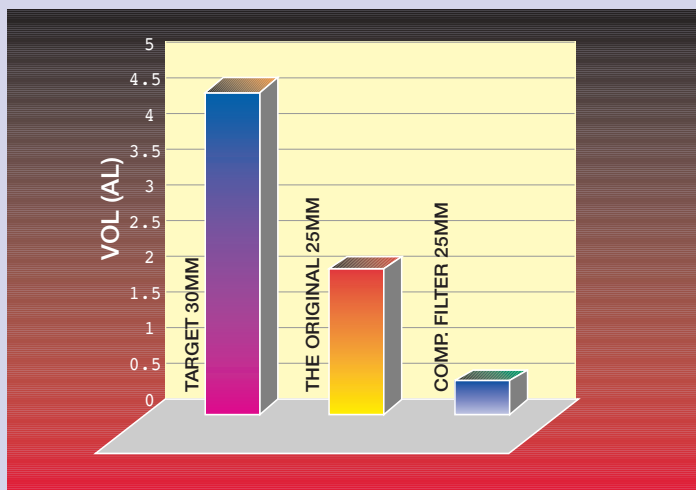
The new sample distribution rings promote uniform application of the sample across the membrane area. This feature maximizes the available filtration area, speed and reduces backpressure when filtering highly particulate samples. Our new, automated, manufacturing process ensures uniformity and reliability more than ever before. Our new methods eliminate variable results through controlled manufacturing consistency from batch to batch, filter to filter.

Performance Filtration Assurance

Improved Chromacol Filters assure product performance and reproducibility through a vigorous quality testing program that challenges each type of filter to provide interference-free results. Every production lot is quality monitored:

- **All critical filter performance specifications confirmed;** bubble point, burst pressure, membrane retention, flow rate.
- **HPLC performance and reproducibility;** actual NIST-traceable standard run confirmed for baseline, peak area/shape, retention time.
- **Actual filter efficiencies for sample;** standard sample spectrophotometrically tested for efficiency and performance.
- **Retention samples maintained for six months;** your actual filter lot used to answer application or performance inquiries.





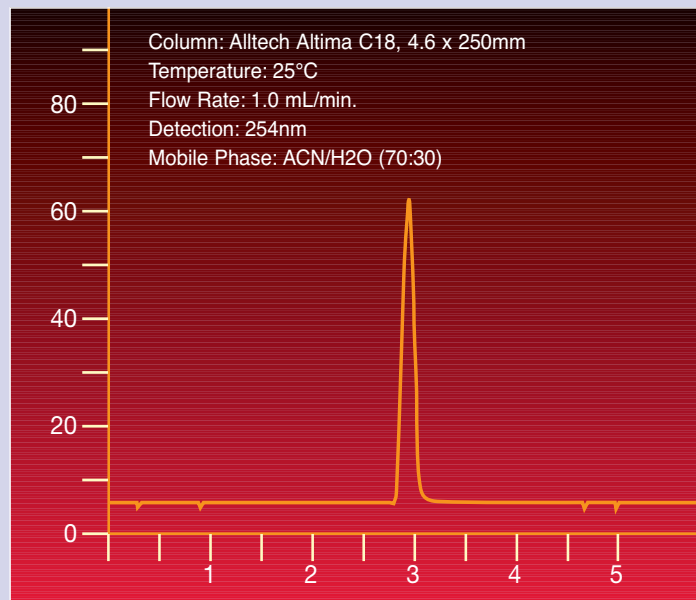
Throughput Volume Comparison 30mm Chromacol Syringe Filters

Our new filter permits more sample to be processed before filter overload. This is a considerable improvement in throughput volume compared to our first generation Target filters or competitive products.

Filter Type Volume

Improved Chromacol Nylon, 0.45µm, 30mm, with prefilter	4.71 ± 0.9mL
Older version Chromacol Nylon, 0.45µm, 25mm, prefilter	2.50 ± 0.2mL
Competitive 25mm Nylon, 0.45µm filter	0.49 ± 0.1mL

Validated HPLC Performance-Caffeine (4µg/mL)



Chromacol's quality assurance program utilizes a NIST traceable standard to ensure chromatographic performance. Our enhanced testing goes far beyond industry testing for quiet baselines. Each lot of Chromacol filters is tested for peak area, retention time, and peak shape of our traceable standard. Now you can be assured of industry leading and confirmed chromatographic performance and reproducibility lot to lot and filter to filter.

Nylon Specifications

Specifications:

Membrane: HPLC Certified Nylon
 Housing: Medical Grade, Virgin Polypropylene
 Prefilter: Binder Free Glass Microfiber

Connections: Enhanced Female Luer-Lok Inlet
 Male Slip Outlet

Max. Operating Temp.	100°C
Max. Operating Pressure:	4mm – 75psi 17mm – 115 psi 30mm – 90 psi
Retention Volumes:	4mm – <15 µL 17mm – <29 µL 30mm – <137 µL

Autoclave: Sterilize by dry heat at 121°C for 15 min

Regenerated Cellulose Specifications

Specifications:

Membrane: HPLC Certified Regenerated Cellulose
 Housing: Medical Grade, Virgin Polypropylene
 Protein Binding: <5µg/cm²

Connections: Enhanced Female Luer-Lok Inlet
 Male Slip Outlet

Max. Operating Temp.	110°C
Max. Operating Pressure:	4mm – 75psi 17mm – 115 psi 30mm – 90 psi
Retention Volumes:	4mm – <15 µL 17mm – <29 µL 30mm – <137 µL

Autoclave: Sterilize by dry heat at 121°C for 15 min

PVDF Specifications

Specifications:

Membrane: HPLC Certified PVDF
 Housing: Medical Grade, Virgin Polypropylene
 Prefilter: Binder-Free Glass Microfiber Prefilter

Connections: Enhanced Female Luer-Lok Inlet
 Male Luer Slip Outlet

Max. Operating Temp.	110°C
Max. Operating Pressure:	4mm – 75psi 17mm – 115 psi 30mm – 90 psi
Retention Volumes:	4mm – <15 µL 17mm – <29 µL 30mm – <137 µL

Autoclave: Sterilize by dry heat at 121°C for 15 min

Glass Microfiber (GMF) Specifications

Specifications:

Membrane: Binder-free glass microfiber
 Housing: Medical Grade, Virgin Polypropylene

Connections: Enhanced Female Luer-Lok Inlet
 Male Luer Slip Outlet

Max. Operating Temp.	110°C
Max. Operating Pressure:	30mm – 90 psi
Retention Volumes:	30mm – <137 µL