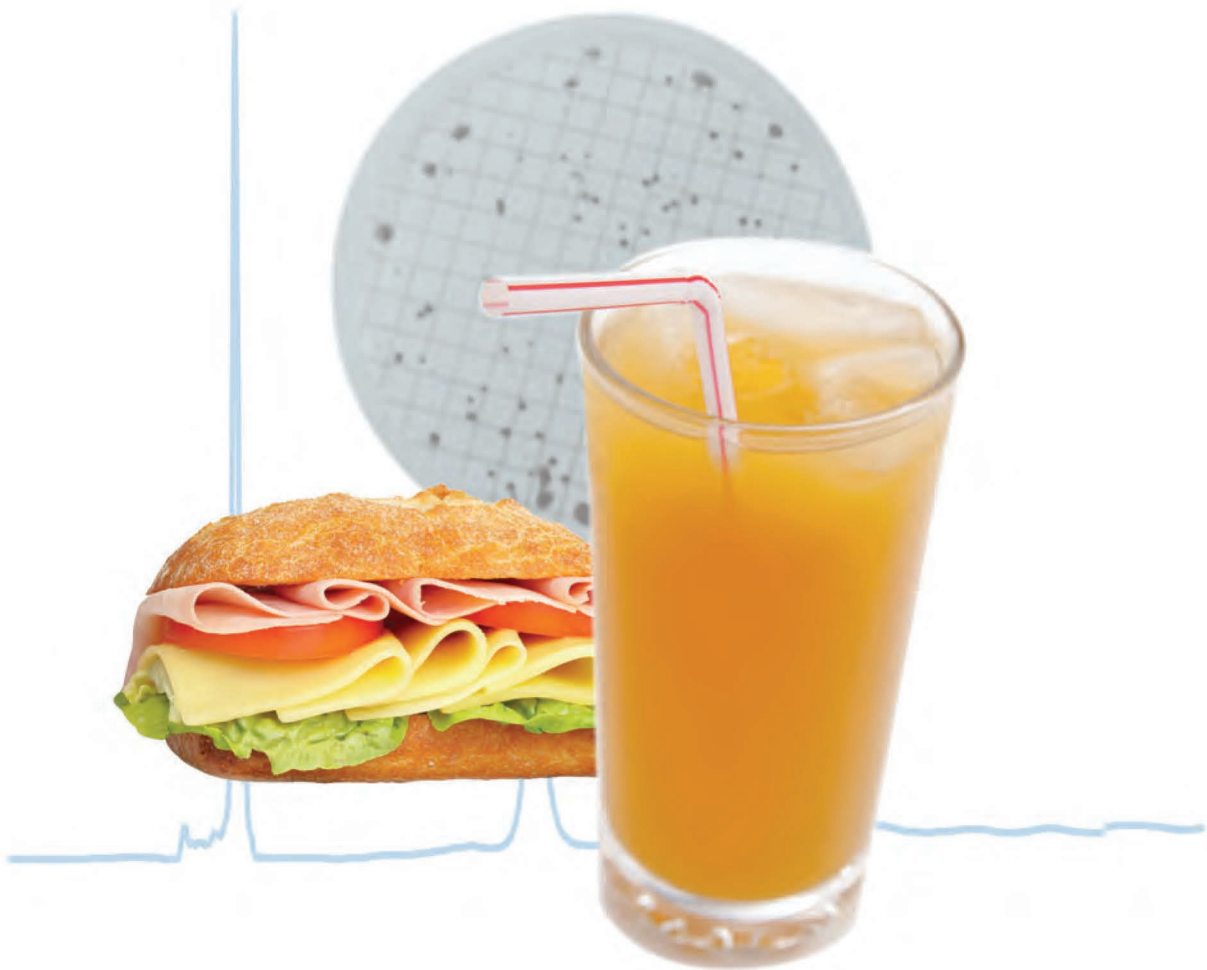


# Synchronized solutions for food and beverage testing



Choose Whatman™ products for quality and knowledgeable support from GE Healthcare

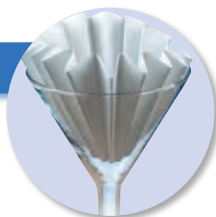


# GE Healthcare offers synchronized solutions...

## FOOD

### Clarification

- Qualitative filter papers: p. 2
- Syringe filters: p. 7



### Protein and fat analysis

- Extraction thimbles: p. 5
- Kjeldahl Weighing Boats: p. 5



### Microbiology

- Swabs for surface control: p. 13



### Sample preparation (HPLC/IC)†

- Syringe filters: p. 7
- Mini-UniPrep filters: p. 9
- Mobile phase filtration: p. 6



### Gravimetric analysis

- Quantitative filter papers: p. 3



### Moisture testing

- Glass fiber papers: p. 4



Products for  
FOOD  
applications

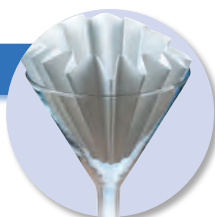


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## SOFT DRINKS†

### Clarification

- Qualitative filter papers: p. 2
- Membrane filters: p. 6



### Microbiology

- Analytical Funnels and Monitors: p. 10
- 2 ml culture media: p. 11
- MBS I System: p. 12
- Sterile membranes: p. 13
- Swabs for surface control: p. 13



### Sample preparation (HPLC/IC)†

- Syringe filters: p. 7
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- Mobile phase filtration: p. 6



### Gravimetric analysis

- Quantitative filter papers: p. 3



Products for  
SOFT DRINKS  
applications



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Applications mentioned on these pages are not exhaustive

† Including bottled water

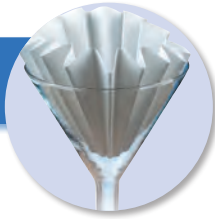
† HPLC = high-performance liquid chromatography; IC = ion chromatography

# for your specific application

## BEER

### Degassing and clarification

- Cellulose filter papers – Grades 0858, 597, 595, 0860: p. 2
- Malt analysis papers – Grades 2555, 597: p. 2



### Microbiology

- MBS I System: p. 12
- Sterile membranes: p. 13
- Analytical Funnels and Monitors: p. 10
- 2 ml culture media: p. 11
- Swabs for surface control: p. 13



### Sample preparation

- SPARTAN syringe filters: p. 7
- GD/X syringe filters: p. 8
- Mobile phase filtration: p. 6



### Culture venting

- BugStopper: p. 13



Products for  
BEER  
applications

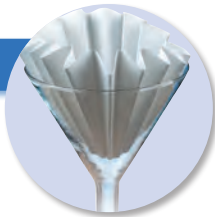


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## WINE

### Clarification

- Qualitative filter papers: p. 2
- Membrane filters: p. 6



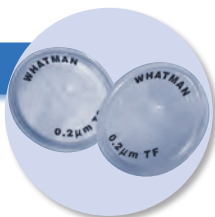
### Microbiology

- MBS I System: p. 12
- Sterile membranes: p. 13
- Analytical Funnels and Monitors: p. 10
- 2 ml culture media: p. 11
- Swabs for surface control: p. 13



### Sample preparation

- Syringe filters: p. 7



### Filterability testing

- Membrane filters: p. 6
- Syringe filters: p. 7



### Malic acid measurement

- 1Chr chromatography papers: p. 4

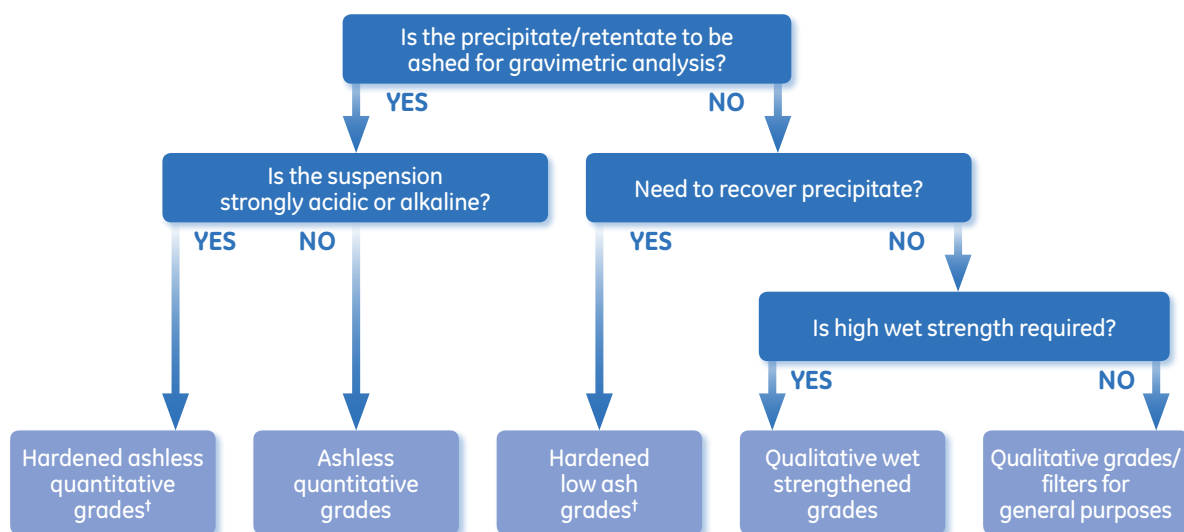
Products for  
WINE  
applications



are identified  
by this logo in  
this brochure

# Cellulose filter papers

Whatman filter papers from GE Healthcare Life Sciences are widely used in laboratory filtration and are associated with quality and reliability. Use the decision tree to identify the filter paper that meets your needs.



† Please refer to our general catalog for technical and ordering information

## Qualitative cellulose filter papers

For clarification

For degassing and clarification



Pre-pleated filter.  
Use to increase flow rate or for hard-to-filter samples.



Grade 1 qualitative filter papers.

Technical characteristics of qualitative filter papers and filters for general purposes

Grade	Nominal particle retention in liquid (µm)	Filtration speed (approx) Herzberg (s)	Typical thickness (µm)	Basis weight (g/m <sup>2</sup> )	Grade for pre-pleated version	Flow – aspect
<b>Qualitative filters</b>						
1	11	150	180	88		Medium
2	8	240	190	103	2V	Medium
3	6	325	390	187		Medium – thick
4	20–25	37	205	96		Very fast
5	2.5	1420	200	98		Slow
595 <sup>†</sup>	4–7	80	150	68	595 ½	Medium to fast – thin
597 <sup>‡</sup>	4–7	70	180	85	597 ½	Medium to fast
<b>Filters for general purposes</b>						
0858 <sup>†</sup>	7–12	55	170	75	0858 ½	Medium to fast – grained
0860 <sup>†</sup>	7–12	60	180	75	0860 ½	Medium to fast – smooth
2555 <sup>§</sup>	7–12	55	170	75	2555 ½	Medium to fast
<b>Qualitative wet strengthened filters</b>						
113	30	28	420	125	113V	Fast – creped
114	25	38	190	77	114V	Fast – smooth

<sup>†</sup> Commonly used for degassing and clarification of beer

<sup>§</sup> Commonly used for malt analysis (beer)

## Ordering information†

Diam./Grade	1	2	3	4	5	595	597	113	114
Qualitative filters – flat, 100 per pack									
90 mm	1001-090	1002-090	1003-090	1004-090	1005-090		10311809	1113-090	1114-090
110 mm	1001-110	1002-110	1003-110	1004-110	1005-110	10311610	10311810	1113-110	
125 mm	1001-125	1002-125	1003-125	1004-125	1005-125	10311611	10311811	1113-125	1114-125
150 mm	1001-150	1002-150	1003-150	1004-150	1005-150	10311612	10311812	1113-150	1114-150
185 mm	1001-185	1002-185	1003-185	1004-185	1005-185		10311814	1113-185	1114-185
240 mm	1001-240	1002-240	1003-240	1004-240	1005-240		10311820	1113-240	1114-240
270 mm	1001-270	1002-270	1003-270	1004-270					1114-270
320 mm	1001-320	1002-320	1003-320	1004-320	1005-320		10311822	1113-320	
385 mm	1001-385	1002-385							

Diam./Grade	2V	595 ½	597 ½	2555 ½	0858 ½	0860 ½	113V	114V
Qualitative filters and filters for general purposes – pre-pleated, 100 per pack								
110 mm		10311643	10311843					
125 mm	1202-125	10311644	10311844				1213-125	1214-125
150 mm	1202-150	10311645	10311845		10334345	10334547	1213-150	1214-150
185 mm	1202-185	10311647	10311847	10313947	10334347		1213-185	1214-185
210 mm		10311649						
240 mm	1202-240	10311651	10311851	10313951	10334351	10334551	1213-240	1214-240
270 mm	1202-270	10311652	10311852		10334352		1213-270	1214-320
320 mm	1202-320	10311653	10311853	10313953	10334353	10334553	1213-320	
385 mm	1202-385	10311654	10311854					

†Contact your local representative for more information on the rest of the Whatman filter paper range

## Ashless quantitative cellulose filter papers

For gravimetric analysis 

Quantitative filters are dedicated for gravimetric analysis and the preparation of samples for instrumental analysis.



Grade 41 ashless filter papers.

## Technical characteristics of ashless quantitative filter papers

Grade	Nominal particle retention in liquid (µm)	Filtration speed (approx) Herzberg (s)	Typical thickness (µm)	Basis weight (g/m <sup>2</sup> )	Grade for pre-pleated version	Flow – aspect
40 <sup>†</sup>	8	340	210	95		Medium
41 <sup>†</sup>	20	54	220	85		Fast
42 <sup>†</sup>	2.5	1870	200	100		Slow
43 <sup>†</sup>	16	155	220	95		Medium to fast
44 <sup>†</sup>	3	995	180	80		Slow to medium
589/1 <sup>§</sup>	12–25	25	190	80	589/1 ½	Fast
589/2 <sup>§</sup>	4–12	70	190	85	589/2 ½	Medium to fast
589/3 <sup>§</sup>	<2	750	150	84		Slow

<sup>†</sup>Typical ash content is 0.007%

<sup>§</sup>Typical ash content is 0.01%

## Ordering information†

Diam./Grade	40	41	42	43	44	589/1	589/2	589/3
Ashless quantitative filters – flat, 100 per pack								
90 mm	1440-090	1441-090	1442-090	1443-090	1444-090	10300009	10300109	
110 mm	1440-110	1441-110	1442-110	1443-110	1444-110	10300010	10300110	10300210
125 mm	1440-125	1441-125	1442-125	1443-125	1444-125	10300011	10300111	10300211
150 mm	1440-150	1441-150	1442-150	1443-150	1444-150	10300012	10300112	10300212
185 mm	1440-185	1441-185	1442-185	1443-185	1444-185	10300014	10300114	10300214
240 mm	1440-240	1441-240	1442-240		1444-240		10300120	
320 mm	1440-320	1441-320	1442-320					

Diam./Grade	589/1 ½	589/2 ½
Ashless quantitative filters – pre-pleated, 100 per pack		
110 mm		10300143
150 mm	10300045	10300145

† Contact your local representative for more information on the rest of the Whatman filter paper range

## Chromatography papers

### For malic acid measurement

Whatman chromatography papers are extensively used around the world.

#### Features and benefits:

- Purity and high quality
- Consistency and uniformity within the grades

Among the broad range of chromatography papers, Grade 1Chr is widely used for measurement of malic acid levels in wine production.

#### Ordering information

Product	Quantity	Code no.
1Chr sheets, 20 × 20 cm	100 per pack	3001-861

## Glass fiber papers

### For moisture testing

Whatman Moisture Test paper is dedicated for use as a sample carrier in moisture analyzers.

#### Ordering information

Product	Quantity	Code no.
Moisture Test glass fiber, 90 mm	100 per pack	5401-090E



Moisture Test paper.

# Weighing boats

## For Kjeldahl protein analysis (N-determination)

Transfer your samples completely loss-free by simply dropping the entire weighing boat containing the sample into the acid solution in the Kjeldahl digestion tube.

### Features and benefits:

- Very low nitrogen ( $\leq 0.07\%N$ ) parchment paper without glue or additives
- Fast
- Minimized interference with analytical results

### Ordering information

Product	Quantity	Code no.
Weighing boats, Grade 609 (55 × 10 × 10 mm)	100 per pack	10313032



Kjeldahl Weighing Boat in use.

# Extraction thimbles

## For fat analysis

Whatman cellulose extraction thimbles are known for their purity and consistent high quality. They can be used for Soxhlet extraction to analyze fats and extract organic compounds.

### Features and benefits:

- Made of high-quality cellulose
- Excellent mechanical strength and retention
- Support accuracy and consistency



Extraction thimbles mounted on extractors.

### Ordering information –25 per pack

Dimensions†	Wall thickness	
	1 mm	1.5 mm
10 × 50 mm	2800-105	
18 × 55 mm	2800-185	
19 × 90 mm	2800-199	
22 × 65 mm	2800-226	
22 × 80 mm	2800-228	10350211
25 × 60 mm	10350416	10350215
25 × 70 mm		10350216
25 × 80 mm	2800-258	10350217
25 × 100 mm	2800-250	10350219
26 × 60 mm	2800-266	10350220
27 × 80 mm		10350223
28 × 60 mm		10350225
28 × 80 mm	2800-288	10350226

Dimensions†	Wall thickness	
	1 mm	1.5 mm
28 × 100 mm	2800-280	10350227
28 × 120 mm	2800-282	
30 × 80 mm	2800-308	10350234
30 × 90 mm		10350235
30 × 100 mm	2800-300	10350236
31 × 80 mm	10350437	10350303
33 × 60 mm		10350238
33 × 80 mm	2800-338	10350240
33 × 100 mm	2800-330	10350243
33 × 118 mm	2800-331	10350245
33 × 130 mm		10350247
33 × 205 mm		10350250
33 × 90 mm		10350241

Dimensions†	Wall thickness		
	1 mm	1.5 mm	2 mm
33 × 94 mm	2800-339	10350242	2810-339
34 × 130 mm		10350252	
35 × 120 mm		10350254	
35 × 150 mm		10350255	
37 × 130 mm	2800-373		
40 × 85 mm			10350261
41 × 123 mm	2800-412		10350265
43 × 123 mm	2800-432		2810-432
44 × 230 mm			10350275
48 × 145 mm			10350273
48 × 200 mm			10350274
60 × 180 mm	2800-608		
75 × 250 mm			10350287†

† Internal diameter and external length

‡ Wall thickness: 2.5 mm

# Filtration membranes and units

For clarification and mobile phase filtration



Whatman membranes from GE Healthcare offer:

- Broad range of materials, pore sizes, and diameters
- Sterile version available, see page 13

Regenerated cellulose membranes (RC) are compatible with aqueous solvents and the majority of organic solvents.

All products that include RC membranes are identified with this logo in this brochure.



RC55 regenerated cellulose membranes.

## Ordering information

Membrane type	Cellulose acetate	Cellulose mixed ester	Cellulose nitrate	Nylon (Polyamide)	Regenerated cellulose	PTFE
Compatibility	Aqueous solutions	Aqueous solutions	Aqueous solutions	Aqueous and organic solutions (3<pH<10)	Aqueous and organic solutions	Organic solutions
Description	100 per pack	100 per pack	100 per pack	100 per pack	100 per pack	50 per pack
0.2 µm, 25 mm diameter	10404106	10401706	10401306	10414006		10411405
0.45 µm, 25 mm diameter	10 404006	10401606	7184-002	10414106	10410206	10411305
0.6 µm, 25 mm diameter		10401506	7186-002 <sup>†</sup>			
0.2 µm, 47 mm diameter	10404112	10401712	10401312	10414012	10410312	10411411
0.45 µm, 47 mm diameter	10404012	10401612	10401112	10414112	10410212	10411311
0.2 µm, 50 mm diameter	10404114	10401714	10401314	10414014	10410314	10411413
0.45 µm, 50 mm diameter	10404014	10401614	10401114	10414114	10410214	10411313

<sup>†</sup>0.65 µm; other membrane materials, pore sizes, and diameters are available – please contact your local representative for more information

## Whatman GV050/2 vacuum filtration unit

Whatman GV050/2 vacuum filtration unit consists of a 250 ml glass filtration funnel and 1000 ml flask, funnel base, top, and clamp.

It is a good complement for use with Whatman filtration membranes.

For information on other funnels, diameters, and volumes, please contact your local representative.

## Ordering information

Product	Quantity	Code no.
GV050/2 vacuum filter holder	1 per pack	10442200



GV050/2 vacuum filtration unit.






# Syringe and syringeless filters

For sample preparation before HPLC, U-HPLC, ion chromatography 

GE Healthcare offers a complete range of Whatman syringe and syringeless filters. Use the selection guide to identify the optimal product for your sample preparation needs. Whatman GD/X™ and Mini-UniPrep™ filters are particularly well-suited to the requirements of food and beverage testing. GE Healthcare also offers a complete range of single-membrane syringe filters: Puradisc and SPARTAN™.

Syringe and syringeless filters for sample preparation – selection guide

Type	Syringe filters without prefilter		Syringe filters with integrated prefilter	Syringeless filters
				
Product	Puradisc	SPARTAN	Whatman GD/X	Mini-UniPrep
Main feature	Complete range	Regenerated cellulose membrane HPLC-Certified	For hard-to-filter samples	For high-throughput sample preparation
Pre-filter	N/A	N/A	Multilayer glass fiber prefilter GMF 150: 10–1 µm GF/F: 0.7 µm	N/A
Dimensions	4, 13, 25, or 30 mm	13 or 30 mm	13 or 25 mm	12 × 32 mm
Main available pore sizes	0.1, 0.2, 0.45, 0.8, 1.0, 1.2, 5 µm	0.2 and 0.45 µm	0.2, 0.45, 0.7, 1.0, 1.2, 1.5, 2.7, 5.0 µm	0.2 and 0.45 µm
Main membrane materials available	Cellulose acetate, nylon, CN, PES, PVDF, PP, PTFE	Regenerated cellulose	Cellulose acetate, nylon, PES, PVDF, PP, PTFE, RC	Nylon, PES, PVDF, RC, PP, PTFE

PES = polyethersulfone; PVDF = polyvinylidene fluoride; PP = polypropylene; PTFE = polytetrafluoroethylene; CN = cellulose nitrate; RC = regenerated cellulose

## Puradisc Syringe Filter

Features and benefits:

- Broad choice of membranes and diameters
- Dedicated for routine applications

## Ordering information†

Product	Code no.	Code no.
Puradisc 25 mm		
Pore size: 0.2 µm	200 per pack	1000 per pack
Nylon	6751-2502	6753-2502
PES	6781-2502	6794-2502
PVDF	6747-2502	
PTFE	6785-2502	6798-2502
PP	6788-2502	6790-2502

Product	Code no.	Code no.
Pore size: 0.45 µm	200 per pack	1000 per pack
Nylon	6751-2504	6753-2504
PES	6781-2504	6794-2504
PVDF	6747-2504	6749-2504
PTFE	6785-2504	6798-2504
PP	6788-2504	

## Puradisc FP 30 mm

Cellulose acetate	100 per pack	500 per pack
Pore size: 0.2 µm	10462710	10462700
Pore size: 0.45 µm	10462610	10462600

## SPARTAN Syringe Filter

Features and benefits:

- Universal regenerated cellulose membrane
- HPLC-Certified
- Certificate of analysis available for each batch

## Ordering information†

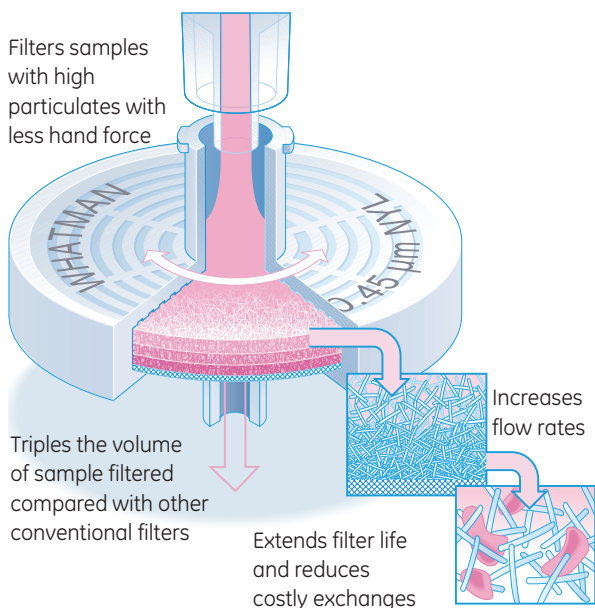
Product	Code no.	Code no.
SPARTAN 30 mm		
Regenerated cellulose	100 per pack	500 per pack
Pore size: 0.2 µm	10463060	10463062
Pore size: 0.45 µm	10463050	10463052

† Additional pore sizes, dimensions, and membrane material available – please contact your local representative for more information

## GD/X Syringe Filter

Whatman GD/X Syringe Filters are an excellent choice for filtering high-particulate or viscous solutions.

These high-quality disposable syringe filters include glass microfiber prefilters, enabling you to filter more of your sample in less time to greatly enhance laboratory efficiency.



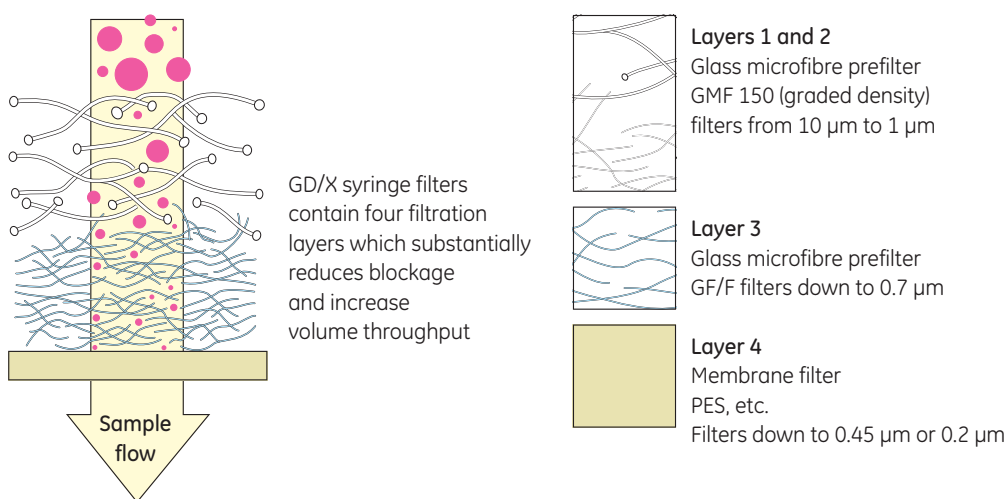
### Features and benefits:

- Integrated multilayer glass fiber prefilter (10 µm to 0.7 µm)
- Broad choice of final membrane types (0.2 or 0.45 µm)
- Increased volume throughput
- Less hand force required



Whatman GD/X Syringe Filter in use.

Features of a GD/X Syringe Filter.



Four filtration layers inside a GD/X Syringe Filter.

## Ordering information

Product	Code no.	Code no.
GD/X 25 mm		
Pore size: 0.2 µm	150 per pack	1500 per pack
Nylon	6870-2502	6871-2502
PES	6876-2502	6905-2502
PVDF	6872-2502	6873-2502
PTFE	6874-2502	6875-2502
PP	6878-2502	
CA	6880-2502	
RC	6887-2502	6888-2502

Product	Code no.	Code no.
GD/X 25 mm		
Pore size: 0.45 µm	150 per pack	1500 per pack
Nylon	6870-2504	6871-2504
PES	6876-2504	6905-2504
PVDF	6872-2504	6873-2504
PTFE	6874-2504	6875-2504
PP	6878-2504	6879-2504
CA	6880-2504	6881-2504
RC	6882-2504	6883-2504

## Mini-UniPrep Syringeless Filter

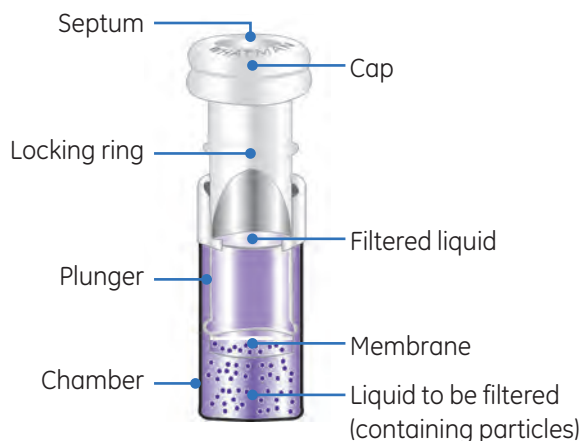


Whatman Mini-UniPrep Syringeless Filters provide a faster, easier way to remove particulates from samples being prepared for HPLC/U-HPLC analysis.

### Features and benefits:

- Replaces syringe, syringe filter, vial, and cap
- Time savings with 6-position compressor
- Waste and cost reduction
- Compatible with all major autosamplers

### Parts of a Mini-UniPrep filter:



## Workflow for Mini-UniPrep



1. Add sample.



2. Insert plunger.



3. Compress.



4. Place in autosampler.

## Ordering information

Product	Code no.	Code no.
Mini-UniPrep translucent housing – standard cap		
Pore size: 0.2 µm	100 per pack	1000 per pack
Nylon	UN203NPENYL	UN503NPENYL
PES	UN203NPEPES	UN503NPEPES
PVDF	UN203NPEAQU	UN503NPEAQU
PTFE	UN203NPEORG	UN503NPEORG
PP	UN203NPEPP	UN503NPEPP
RC	UN203NPERC	UN503NPERC

Product	Code no.	Code no.
Mini-UniPrep amber housing – standard cap		
Pore size: 0.2 µm		100 per pack
Nylon		UN203APENYL
PES		UN203APEPES
PVDF		UN203APEAQU
PTFE		UN203APEORG
PP		UN203APEPP

Product	Code no.	Code no.
Pore size: 0.45 µm		100 per pack
Nylon		UN203APUNYL
Nylon Slit Septa		US203APUNYL
PES		UN203APUPES
PVDF		UN203APUAQU
PTFE		UN203APUORG
PP		UN203APUPPP

Product	Code no.	Code no.
Mini-UniPrep translucent housing – standard cap		
Pore size: 0.45 µm	100 per pack	1000 per pack
Nylon	UN203NPUNYL	UN503NPUNYL
PES	UN203NPUPES	UN503NPUPES
PVDF	UN203NPUAQU	UN503NPUAQU
PTFE	UN203NPUORG	UN503NPUORG
PP	UN203NPUPP	UN503NPUPP
RC	UN203NPURC	UN503NPURC

Product	Code no.	Code no.
Mini-UniPrep translucent housing – slit septum cap		
Pore size: 0.2 µm	100 per pack	1000 per pack
Nylon	US203NPENYL	US503NPENYL
PES	US203NPEPES	US503NPEPES
PVDF	US203NPEAQU	US503NPEAQU
PTFE	US203NPEORG	US503NPEORG
PP	US203NPEPP	US503NPEPP

Product	Code no.	Code no.
Pore size: 0.45 µm	100 per pack	1000 per pack
Nylon	US203NPUNYL	US503NPUNYL
PES	US203NPUPES	US503NPUPES
PVDF	US203NPUAQU	US503NPUAQU
PTFE	US203NPUORG	US503NPUORG
PP	US203NPUPP	US503NPUPP




## Compressor

Mini-UniPrep Compressor, 6 position	1 per pack	CR0000006
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# Microbiology

GE Healthcare offers several options for membrane filtration-based microbiology. Use the selection guide to choose a funnel and manifold combination that meets your needs.

Microbiology using membrane filtration – selection guide

Funnel type	Ready-to-use funnels (membrane included)		Funnels (purchase membrane separately)	
	Analytical Funnels	Monitors	MBS I funnels	Stainless steel funnels
Main features	Removable membrane included	Fixed membrane included	PP autoclavable funnels (50 times)	Part of complete stainless steel system
Manifolds with funnels attached	 <p>3- or 6-position manifolds (code no. 10498761 and 10498762)<sup>†</sup>. Rubber stopper not supplied by GE Healthcare.</p>		 <p>AS220 Manifold (code no. 10445890)<sup>†</sup>; part of MBS I System</p>	 <p>AS300 and AS600 range of stainless steel manifolds</p>

<sup>†</sup> Monitors, Analytical Funnels, and MBS I funnels are not supplied with the manifolds

## Analytical Funnels and Monitors – ready-to-use units

**Analytical Funnel:** The membrane can be removed and transferred to a Petri dish.

**Microbiological Monitor:** The membrane is fixed to the unit.

Features and benefits:

- Sterilized: ready-to-use units include the membrane and funnel
- Reduced contamination
- Can be used with 2 ml media ampules
- Easy handling

### Workflow for ready-to-use units



1. Pour and filter sample.

2. Remove funnel.

### Option 1 (for use with either unit)

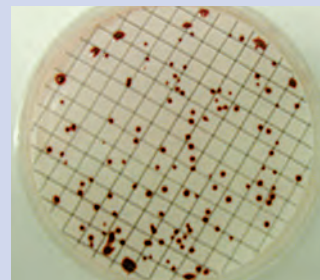


3a. Add 2 ml liquid media.

4a. Place lid on the top to create a Petri dish and incubate.

3b. Remove membrane with tweezers and transfer onto appropriate culture media on a Petri dish.

4b. Incubate.



### Option 2 (only for use with Analytical Funnels)

## Liquid media – 2 ml ampules

The ampules are designed for use with microbiological monitors. They offer:

- Time savings: pre-sterilized and ready to use
- Reduced risk of cross-contamination
- Batch-specific certificate of quality: Confirms reproducibility and reliability
- Broad range of media



2 ml media ampules.

## Ordering information

Product	Code no.	Code no.
<b>Analytical Funnels 100 ml (removable membrane) – 50 per pack<sup>†</sup></b> 47 mm		
0.2 µm, white membrane		10497507
0.2 µm, white membrane, individually bagged		10497510
0.45 µm, white membrane		10497504
0.45 µm, white membrane, individually bagged		10497506
0.45 µm, black membrane		10497508
0.45 µm, black membrane, individually bagged		10497509

## Microbiological Monitors 100 ml (fixed membrane) – 50 per pack<sup>†</sup>

	47 mm	56 mm
0.2 µm, white membrane	10497511	10497603
0.45 µm, white membrane	10497500	10497600
0.45 µm, white membrane, individually bagged	10497501	
0.45 µm, black membrane	10497502	10497601
0.8 µm, black membrane	10497503	10497602

<sup>†</sup> Black membranes have a white grid, and white membranes have a black grid

## Manifolds for use with Monitors and Analytical Funnels

3-Place Manifold, stainless steel	1 per pack	10498761
6-Place Manifold, stainless steel	1 per pack	10498762

Product	Selective for	Code no.
<b>Liquid media – 2 ml ampules – 50 per pack</b>		
Cetrimide Broth	<i>Pseudomonas aeruginosa</i>	10496146
Enterococcus Broth	Enterococci	10496120
HPC Broth with TTC	Total count at 35°C	10496151
KF- <i>Streptococcus</i> Broth	Fecal Streptococci	10496125
Mannitol Salt Broth	Staphylococci	10496121
Membrane Lauryl Sulfate PHLS/UK	Total coliforms and <i>E. coli</i>	10496187
M-Endo Coliform Broth	Coliforms	10496103
M-FC Media	Fecal coliforms	10496124
M-FC Broth with Rosolic Acid	Fecal coliforms	10496114
M-Green Yeast and Mold Broth	Yeast and mold in soft drinks	10496101
M-Green Select Broth	Fungi in sugar-based drinks	10496116
MI-Broth Media	Coliforms	10496192
MRS Broth	Lactobacilli	10496112
M-TGE Broth	Total bacteria count	10496102
Orange Serum Broth	Contaminants of juices	10496104
Pry Broth	<i>Zygosaccharomyces</i> spp.	10496106
<i>Pseudomonas</i> Broth	<i>Pseudomonas</i> sp.	10496119
Total Count Broth with TTC	Colony count	10496113
Wallerstein Broth (WL)	Yeast	10496108
Wallerstein Differential Broth	as WL with Cycloheximide for bacteria count	10496109

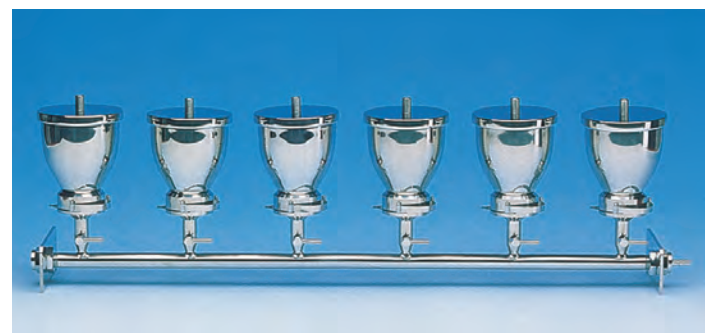
## Stainless steel vacuum filtration systems

GE Healthcare also offers a complete range of stainless steel vacuum filtration systems that are dedicated for microbiological control.

### Features and benefits:

- Stainless steel funnels and manifold
- Autoclavable
- Available in 3 or 6 positions
- Available in several funnel volumes

Contact your local representative for more information about this range.



6-position manifold.

## MBS I System – a complete solution

MBS I System combines a 2-position manifold, a membrane dispenser, and a funnel dispenser.

### AS220 Filtration Manifold for:

- Easy handling
- Minimization of cross-contamination
- Can be used with 47 mm or 50 mm diameter membranes
- Time savings: No need to flame between filtrations

### Filtration funnels for time and cost savings and waste reduction:

- Polypropylene (PP) version can be autoclaved up to 50 times:
  - Twenty PP funnels are enough for 1000 analyses
- Two volumes available:
  - 350 ml, ideal for foaming samples (i.e., beer)
  - 100 ml

### Membrane dispenser for time savings:

With each turn a membrane filter is ejected from its sterile packaging and can be removed easily with tweezers.

### Membrane-Butler delivers:

- Simple handling
- Minimization of cross-contamination
- Membrane dispensed rapidly

### MBS I starter pack

The MBS I starter pack contains Whatman systems and consumables for microbiological quality control.

Please see the Ordering information for details.



AS220 manifold with 350 ml PP funnel.



Manual Membrane-Butler membrane dispenser.



STL membranes (for use with Membrane-Butler).

## Ordering information

Product	Quantity	Code no.
<b>MBS I filtration manifold and funnels</b>		
AS220 2-place Vacuum filtration manifold for MBS I	1 per pack	10445890
MBS I funnel dispenser	1 per pack	10445870
MBS I plastic funnel of PP, autoclavable, 100ml	20 per pack	10445861
MBS I plastic funnel of ABS, 100 ml	20 per pack	10445865
MBS I plastic funnel of PP, autoclavable, 350ml	20 per pack	10445866
Autoclaving bags for MBS I plastic funnels	20 per pack	10445868
Steel frit with ring for AS220	1 per pack	10445863
<b>Membrane dispenser</b>		
Membrane-Butler – manual version	1 per pack	10477100

Product	Code no.
<b>MBS I Starter Pack</b>	
Each starter pack contains:	28992499
1 × AS220 2-place vacuum filtration manifold for MBS I	
1 × Membrane-Butler—manual version	
20 × MBS I plastic funnel of PP, autoclavable, 350 ml	
400 × Sterile membrane – 0.45 µm, 47 mm , white, for Membrane-Butler	
1 × MBS I funnel dispenser	
1 × PZ 001 Tweezers, stainless steel	
20 × Autoclaving bags for MBS I plastic funnels	
10 × VACU-GUARD 50 mm disc for pump protection	

## Sterile membranes

GE Healthcare provides a wide and versatile range of Whatman filtration membranes that consistently deliver high-quality performance.

STL membranes are dedicated for use with the Membrane-Butler.

### Ordering information

Product	Code no.	Code no.
<b>Cellulose nitrate membranes, MicroPlus type<sup>†</sup></b>		
0.45 µm, white membrane		
100 per pack	10407713	10407714
400 per pack for Membrane-Butler (STL)	10407112	10407114
0.45 µm, black membrane		
100 per pack		10407734
400 per pack for Membrane-Butler (STL)	10407132	10407134
0.45 µm, green membrane		
400 per pack for Membrane-Butler (STL)	10407170	10407172

## SwabCheck swabs

### The SwabCheck principle

The surface is wiped with a cellulose swab and any bacteria collected are transferred via the swab into a tube containing a special medium with an indicator dye, which is then incubated.

A single bacterium is sufficient to cause a color change.



Listeria SwabCheck.

Product	Code no.	Code no.
<b>Cellulose mixed ester, ME type<sup>†</sup></b>		
0.2 µm, white membrane		
	47 mm	50 mm
100 per pack	10406970	10406972
400 per pack for Membrane-Butler (STL)	10408712	10408714
0.45 µm, white membrane		
100 per pack	10406870	10406872
400 per pack for Membrane-Butler (STL)	10407312	10407314
0.45 µm, black membrane		
100 per pack	10409770	10409772
400 per pack for Membrane-Butler (STL)	10407332	10407334
0.45 µm, green membrane		
100 per pack	10409470	10409472
400 per pack for Membrane-Butler (STL)	10407370	10407372

<sup>†</sup>All of the above membranes are sterile and individually packed. Black membranes have a white grid, white membranes have a black grid, and green membranes have a black grid.

### Features and benefits:

- Qualitative hygiene control
- Sterile packed and ready to use
- Rapid results
- Long shelf-life

### Ordering information

Product	Quantity	Code no.
Listeria SwabCheck, units ready to use	25 per pack	10498408
Coliform SwabCheck, units ready to use	25 per pack	10498406
Hygiene SwabCheck, units ready to use	25 per pack	10498407

Please contact your local representative for information about the rest of our SwabCheck range.

## Culture venting in standard flasks (125 to 2500 ml)

BugStopper units prevent bacteria and viruses from entering or exiting a culture vessel, while allowing air and gas to pass through the membrane.

- Autoclavable 50 times: Repeated use minimizes costs
- Two sizes available: BugStopper and BugStopper 10
- Ideal for venting of bacteria or yeast cultures

### Ordering information

Product	Quantity	Code no.
BugStopper	10 per pack	6713-3010
BugStopper 10	10 per pack	6713-6010



BugStopper 10 (left) and BugStopper (right).

For local office contact information, visit:  
[www.gelifesciences.com/contact](http://www.gelifesciences.com/contact)

[www.gelifesciences.com/whatman](http://www.gelifesciences.com/whatman)

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