NEWSTAR 新星®

Life Sciences

Product Guide

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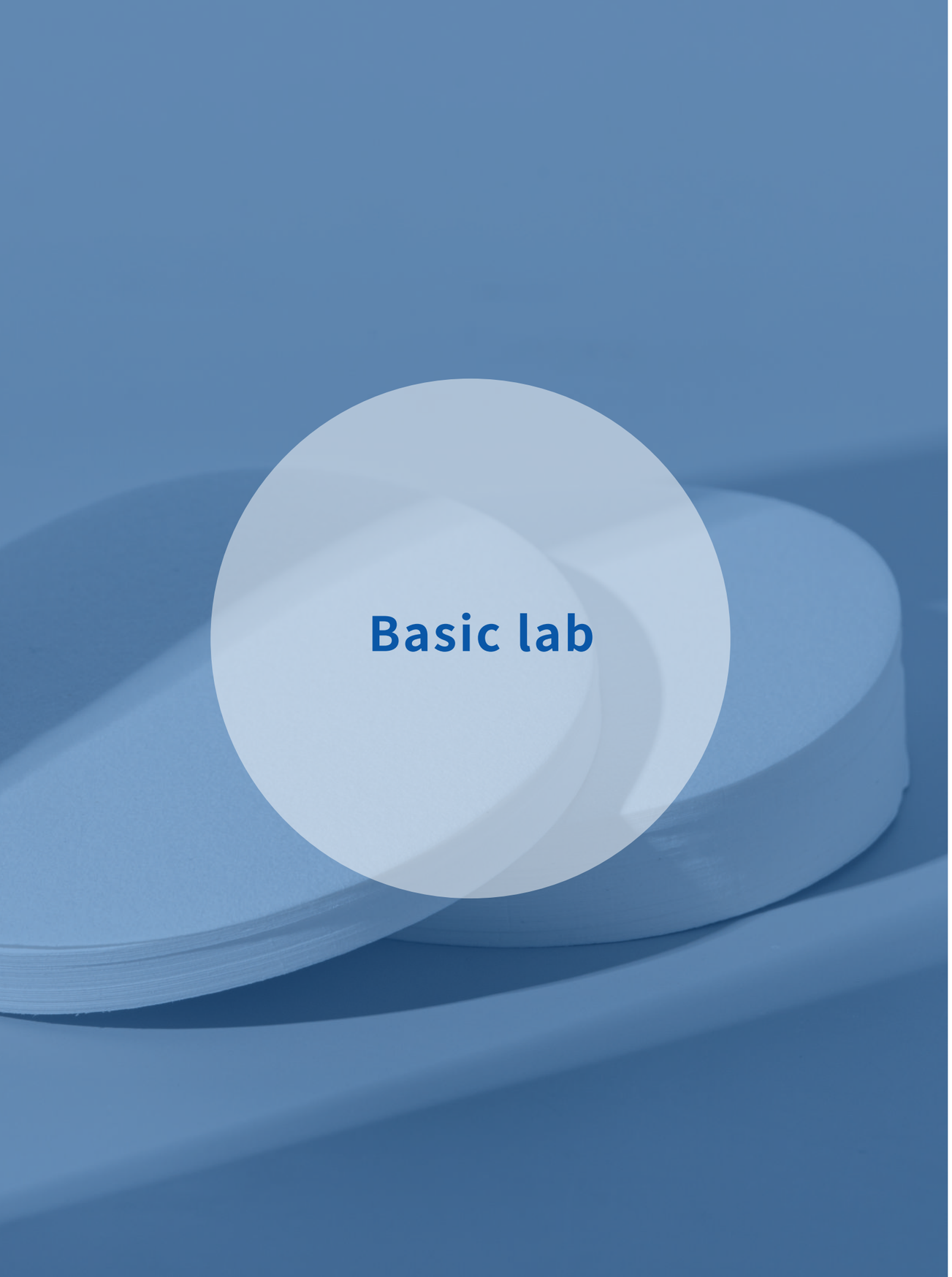

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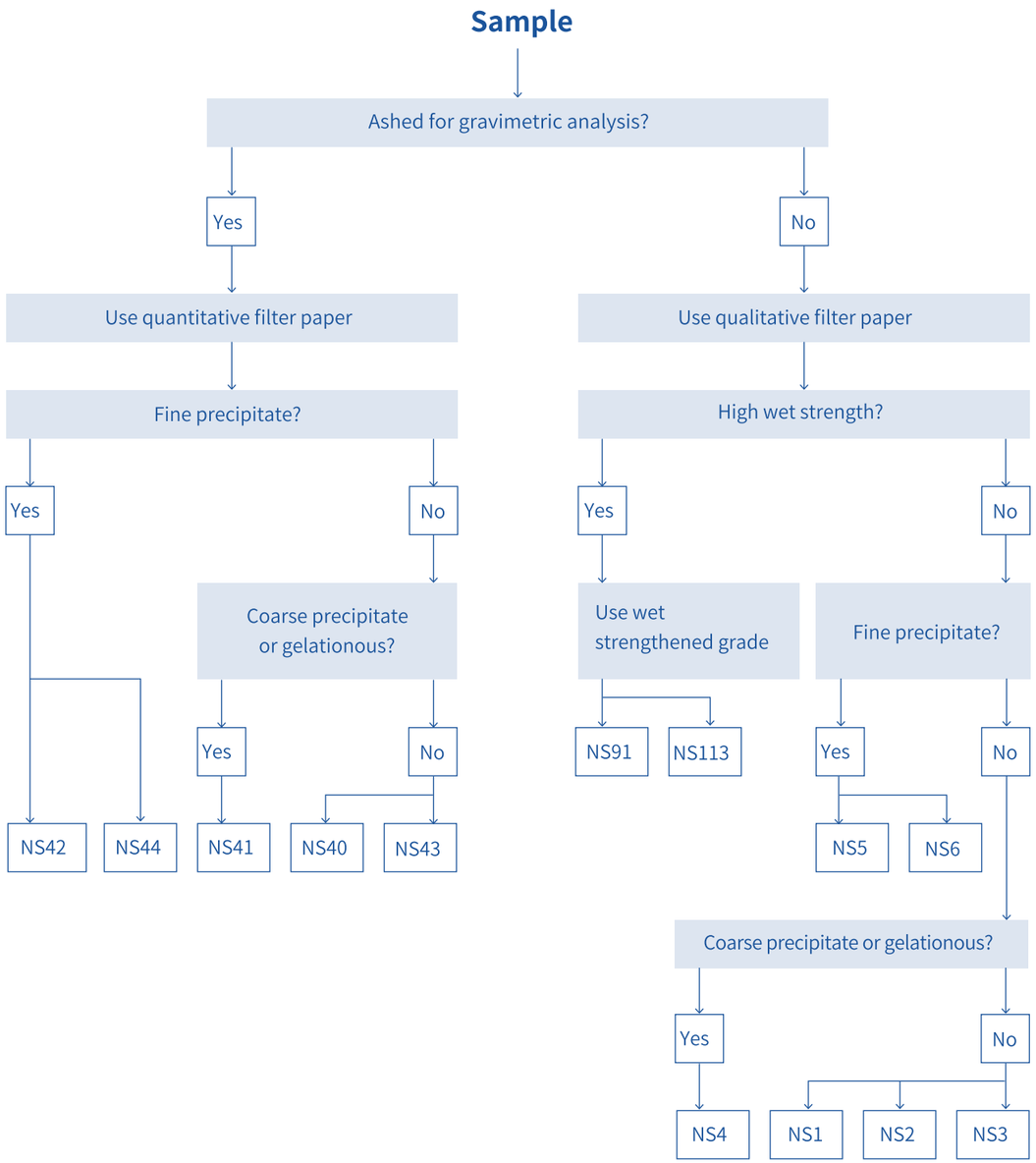


Cellulose filter papers

NEWSTaR cellulose filter papers

Cellulose filter papers are indispensible in laboratory and industrial filtrations. NEWSTaR supplies you with a broad range of cellulose filter papers with retention and flow rate combinations for numerous filtration applications. For production of the high quality NEWSTAR cellulose filter papers, we use cotton linters with a high level of α-cellulose. In order to ensure the continuously high quality of our filter papers, only the most experienced paper specialists select the raw materials. We pay more attention to continuous in-process quality control; additionally, regular checks and exact analyses of raw materials and products assure constant high quality and product uniformity.

Cellulose filter papers

NEWSTaR qualitative filter papers - standard grades

NEWSTaR qualitative filter papers are are particularly suited for general laboratory filtrations s to determine and identify materials. NEWSTAR qualitative filterpapers containing nearly 100% high alpha-cellulose are produced under tightly contr-olled manufacturing condition.The average ash content is less than 0.15 %.The speed of filtration and particle retention depends on the particular grade of qualitative filter paper.

NS 1: 11 µm

NS 1 is the most widely used filter paper for general applications. It has medium flow rate and medium particle retention. It is often used in qualitative analytical separations for precipitates such as calcium oxalate (hot) ,lead sulfate and calcium carbonate. This grade is frequently used for liquids clarifications, soil analysis , seed testing procedures, gas detection, air pollution monitoring, separating solid foodstuffs from associated liquid or extracting liquid.

NS 2: 8 µm

NS 2 has slightly lower filtration speed than NS 1 with finer particle retention and higher absorption. This grade is used to retain particles above 8 µm in size in routine laboratory applications. It is also used in environmental and agricultural laboratories for soil testing plant growth trials.

NS 3: 6µm

NS 3 has excellent loading capacity because it is twice as thick as NS 1. The extra thickness gives higher wet strength and superior absorbency. It is suitable for use as a sample carrier. NS 3 is also ideal for use in Büchner funnels and for dye filtration.

NS 4: 20-25µm

NS 4 is widely used for the filtration of gelatinous precipitates and coarse particles such as magnesium hydroxide，aluminum hydroxide and ferric hydroxide. As a fast filter, this grade is also found in routine clean-up analysis of insoluble liquids such as biological fluids and organic elements.

Cellulose filter papers

NEWSTaR qualitative filter papers - standard grades

NS 5: 2.5 µm

NS 5 is a slow grade qualitative filter paper which is designed to retain fine particles encountered in qualitative analysis. NS 5 is widely used in Büchner funnels and to clarify cloudy suspensions. NS 5 is very useful for the clarific-ation of water and soil analysis.

NS 6: 3 µm

The flow rate of NS 6 is faster than NS 5 with similar particle retention. NS 6 is used in the filtration of fine precipitates and recommended for boiler water analysis and gas filtration.

Specifications – qualitative filter papers – standard grades

Grade	Speed	Particle retention in liquid (µm)[1]	Flow rate (s)[2]	Thickness (mm)	Basis weight (g/m^2)	Wet burststrength (mm H_2O)[3]	Ash content (<%)[4]
NS 1	Medium	11	40-50	0.18	87	260	0.15
NS 2	Medium	8	55-60	0.21	103	290	0.15
NS 3	Medium-slow	6	80-90	0.38	187	350	0.15
NS 4	Fast	20-25	15-20	0.21	97	260	0.15
NS 5	Slow	2.5	250-300	0.19	99	350	0.15
NS 6	Slow	3	90-100	0.18	102	350	0.15

1 Particle retention rating at 98% efficiency
2 Flow rate is the time for filtering 10ml(23±1°C)distillated water through $10cm^2$ filter paper
3 Wet burst strength is measured by wet burst strength instrument
4 Ash is determined by ignition of the cellulose filter at 900°C in air

Cellulose filter papers

Order information – qualitative filter papers – standard grades

NS 1

Catalog number	Description	Qty/pk
NS1001-070	NS 1 Qualitative filter paper standard grade, circle, 70 mm	100
NS1001-085	NS 1 Qualitative filter paper standard grade, circle, 85 mm	100
NS1001-090	NS 1 Qualitative filter paper standard grade, circle, 90 mm	100
NS1001-110	NS 1 Qualitative filter paper standard grade, circle, 110 mm	100
NS1001-125	NS 1 Qualitative filter paper standard grade, circle, 125 mm	100
NS1001-150	NS 1 Qualitative filter paper standard grade, circle, 150 mm	100
NS1001-185	NS 1 Qualitative filter paper standard grade, circle, 185 mm	100
NS1001-240	NS 1 Qualitative filter paper standard grade, circle, 240 mm	100
NS1001-270	NS 1 Qualitative filter paper standard grade, circle, 270 mm,	100
NS1001-320	NS 1 Qualitative filter paper standard grade, circle, 320 mm	100
NS1001-385	NS 1 Qualitative filter paper standard grade, circle, 385 mm	100
NS1001-400	NS 1 Qualitative filter paper standard grade, circle, 400mm	100
NS1001-813	NS 1 Qualitative filter paper standard grade, sheet, 26x31 mm	1000
NS1001-824	NS 1 Qualitative filter paper standard grade, sheet, 75x100 mm	500
NS1001-917	NS 1 Qualitative filter paper standard grade, sheet, 460x570 mm	100
NS1001-918	NS 1 Qualitative filter paper standard grade, sheet, 460x570 mm	500
NS1001-929	NS 1 Qualitative filter paper standard grade, sheet, 600x600 mm	100
NS1001-931	NS 1 Qualitative filter paper standard grade, sheet, 580x680 mm	100
NS1001-932	NS 1 Qualitative filter paper standard grade, sheet, 580x680 mm	500

NS 2

Catalog number	Description	Qty/pk
NS1002-070	NS 2 Qualitative filter paper standard grade, circle, 70 mm	100
NS1002-090	NS 2 Qualitative filter paper standard grade, circle, 90 mm	100
NS1002-110	NS 2 Qualitative filter paper standard grade, circle, 110 mm	100
NS1002-125	NS 2 Qualitative filter paper standard grade, circle, 125 mm	100
NS1002-150	NS 2 Qualitative filter paper standard grade, circle, 150 mm	100
NS1002-185	NS 2 Qualitative filter paper standard grade, circle, 185 mm	100
NS1002-240	NS 2 Qualitative filter paper standard grade, circle, 240 mm	100
NS1002-270	NS 2 Qualitative filter paper standard grade, circle, 270 mm	100
NS1002-320	NS 2 Qualitative filter paper standard grade, circle, 320 mm	100
NS1002-385	NS 2 Qualitative filter paper standard grade, circle, 385 mm	100
NS1002-500	NS 2 Qualitative filter paper standard grade, circle, 500 mm	100
NS1002-917	NS 2 Qualitative filter paper standard grade, sheet, 460x570 mm	100
NS1002-929	NS 2 Qualitative filter paper standard grade, sheet, 600x600 mm	100
NS1002-931	NS 2 Qualitative filter paper standard grade, sheet, 580x680 mm	100

Cellulose filter papers

Order information – qualitative filter papers – standard grades

NS 3

Catalog number	Description	Qty/pk
NS1003-070	NS 3 Qualitative filter paper standard grade, circle, 70 mm	100
NS1003-090	NS 3 Qualitative filter paper standard grade, circle, 90 mm	100
NS1003-110	NS 3 Qualitative filter paper standard grade, circle, 110 mm	100
NS1003-125	NS 3 Qualitative filter paper standard grade, circle, 125 mm	100
NS1003-150	NS 3 Qualitative filter paper standard grade, circle, 150 mm	100
NS1003-185	NS 3 Qualitative filter paper standard grade, circle, 185 mm	100
NS1003-240	NS 3 Qualitative filter paper standard grade, circle, 240 mm	100
NS1003-320	NS 3 Qualitative filter paper standard grade, circle, 320 mm	100
NS1003-917	NS 3 Qualitative filter paper standard grade, sheet, 460x570 mm	100

NS 4

Catalog number	Description	Qty/pk
NS1004-070	NS 4 Qualitative filter paper standard grade, circle, 70 mm	100
NS1004-090	NS 4 Qualitative filter paper standard grade, circle, 90 mm	100
NS1004-110	NS 4 Qualitative filter paper standard grade, circle, 110 mm	100
NS1004-125	NS 4 Qualitative filter paper standard grade, circle, 125 mm	100
NS1004-150	NS 4 Qualitative filter paper standard grade, circle, 150 mm	100
NS1004-185	NS 4 Qualitative filter paper standard grade, circle, 185 mm	100
NS1004-240	NS 4 Qualitative filter paper standard grade, circle, 240 mm	100
NS1004-270	NS 4 Qualitative filter paper standard grade, circle, 270 mm	100
NS1004-320	NS 4 Qualitative filter paper standard grade, circle, 320 mm	100
NS1004-400	NS 4 Qualitative filter paper standard grade, circle, 400 mm	100
NS1004-917	NS 4 Qualitative filter paper standard grade, sheet, 460x570 mm	100
NS1004-930	NS 4 Qualitative filter paper standard grade, sheet, 580x580 mm	100

Cellulose filter papers

Order information – qualitative filter papers – standard grades

NS 5

Catalog number	Description	Qty/pk
NS1005-070	NS 5 Qualitative filter paper standard grade, circle, 70 mm	100
NS1005-090	NS 5 Qualitative filter paper standard grade, circle, 90 mm	100
NS1005-110	NS 5 Qualitative filter paper standard grade, circle, 110 mm	100
NS1005-125	NS 5 Qualitative filter paper standard grade, circle, 125 mm	100
NS1005-150	NS 5 Qualitative filter paper standard grade, circle, 150 mm	100
NS1005-185	NS 5 Qualitative filter paper standard grade, circle, 185 mm	100
NS1005-240	NS 5 Qualitative filter paper standard grade, circle, 240 mm	100
NS1005-320	NS 5 Qualitative filter paper standard grade, circle, 320 mm	100
		100

NS 6

Catalog number	Description	Qty/pk
NS1006-070	NS 6 Qualitative filter paper standard grade, circle, 70 mm, 100 per pack	100
NS1006-090	NS 6 Qualitative filter paper standard grade, circle, 90 mm, 100 per pack	100
NS1006-110	NS 6 Qualitative filter paper standard grade, circle, 110 mm, 100 per pack	100
NS1006-125	NS 6 Qualitative filter paper standard grade, circle, 125 mm, 100 per pack	100
NS1006-150	NS 6 Qualitative filter paper standard grade, circle, 150 mm, 100 per pack	100
NS1006-185	NS 6 Qualitative filter paper standard grade, circle, 185 mm, 100 per pack	100
NS1006-240	NS 6 Qualitative filter paper standard grade, circle, 240 mm, 100 per pack	100

Cellulose filter papers

NEWSTaR quantitative filter papers – ashless grades (ash＜0.01%)

NEWSTaR quantitative filters are designed for gravimetric analysis and the preparation of samples for instrumental analysis. They are very pure filters ideal for a wide range of critical analytical filtration procedures with maximum 0.01% ash.

NS 40: 8 µm

NS 40 has medium flow rate and particle retention. It is the most commonly used ashless filter paper. NS 40 is used for gravimetric analysis of numerous components (e.g.: cements,copper, clay, bismuth, silicon, iron) in heavy industries such as construction, mining or steel. NS 40 is also found in general soil analysis for separating solid from aqueous extracts. NS 40 is also used as a high purity filter for speedy filtering of trace elements such as silver chromate, lead sulfate, zinc and ammonium hydroxides.

NS 41: 20-25 µm

NS 41 is the fastest ashless quantitative filter paper for filtration of coarse particles and gelatinous precipitates such as aluminum hydroxide, iron hydroxide, zirconium hydroxide and cobalt sulfide. NS 41 is recommended for fast analysis procedures for unstable precipitates such as silicon. It is also used to determine gaseous compounds in air pollution testing.

NS 42: 2.5 µm

NS 42 is a filter paper for critical gravimetric analysis of very fine particles such as metastannic acid , lead sulfate, barium sulfate ,stannic sulfide, calcium oxalate and calcium fluoride.

NS 43: 16 µm

NS 43 is intermediate in particle retention between Grades 40 and 41.NS 43 is widely used in inorganic analysis in the construction, mining and steel industries, particle collection in air pollution monitoring, soil analysis and foodstuffs analysis.

NS 44: 3 µm

NS 44 with fine particle retention is thinner than NS 42. The flow rate of NS 44 is twice of NS 42.It’ s a filter paper for critical gravimetric analysis and metal determination of very fine particles such as barium and lead sulfates, calcium oxalate and calcium fluoride.

Cellulose filter papers

Specifications – quantitative filter papers – ashless grades

Grade	Speed	Particle retention in liquid (µm)[1]	Flow rate (s)[2]	Thickness (mm)	Basis weight (g/m²)	Wet burststrength (mm H_2O)[3]	Ash content (<%)[4]
NS 40	Medium	8	80-90	0.21	95	280	0.01
NS 41	Fast	20	20-30	0.22	85	280	0.01
NS 42	Slow	2.5	200-240	0.2	100	280	0.01
NS 43	Medium-fast	16	40-60	0.22	95	280	0.01
NS 44	Slow	3	150-180	0.18	77	280	0.01

1 Particle retention rating at 98% efficiency
2 Flow rate is the time for filtering 10ml(23±1°C)distillated water through 10cm² filter paper
3 Wet burst strength is measured by wet burst strength instrument
4 Ash is determined by ignition of the cellulose filter at 900°C in air

Order information – quantitative filter papers – ashless grades

NS 40

Catalog number	Description	Qty/pk
NS1440-070	NS 40 Ashless quantitative filter paper, circle, 70 mm	100
NS1440-090	NS 40 Ashless quantitative filter paper, circle, 90 mm	100
NS1440-110	NS 40 Ashless quantitative filter paper, circle, 110mm	100
NS1440-125	NS 40 Ashless quantitative filter paper, circle, 125mm	100
NS1440-150	NS 40 Ashless quantitative filter paper, circle, 150mm	100
NS1440-185	NS 40 Ashless quantitative filter paper, circle, 185mm	100
NS1440-240	NS 40 Ashless quantitative filter paper, circle, 240mm	100
NS1440-320	NS 40 Ashless quantitative filter paper, circle, 320mm	100
NS1440-6168	NS 40 Ashless quantitative filter paper, circle, 450mm	100
NS1440-917	NS 40 Ashless quantitative filter paper,sheet，460mmx 570 mm	100

NS 41

Catalog number	Description	Qty/pk
NS1441-070	NS 41 Ashless quantitative filter paper, circle, 70 mm	100
NS1441-090	NS 41 Ashless quantitative filter paper, circle, 90 mm	100
NS1441-110	NS 41 Ashless quantitative filter paper, circle, 110mm	100
NS1441-125	NS 41 Ashless quantitative filter paper, circle, 125mm	100
NS1441-150	NS 41 Ashless quantitative filter paper, circle, 150mm	100
NS1441-185	NS 41 Ashless quantitative filter paper, circle, 185mm	100
NS1441-240	NS 41 Ashless quantitative filter paper, circle, 240mm	100
NS1441-320	NS 41 Ashless quantitative filter paper, circle, 320mm	100
NS1441-866	NS 41 Ashless quantitative filter paper, sheet,203 mm x 254 mm	100
NS1441-917	NS 41 Ashless quantitative filter paper, sheet,460 mm x 570 mm	100

Cellulose filter papers

Order information – quantitative filter papers – ashless grades

NS 42

Catalog number	Description	Qty/pk
NS1442-070	NS 42 Ashless quantitative filter paper , circle, 70 mm	100
NS1442-090	NS 42 Ashless quantitative filter paper, circle, 90 mm	100
NS1442-110	NS 42 Ashless quantitative filter paper , circle, 110 mm	100
NS1442-125	NS 42 Ashless quantitative filter paper , circle, 125 mm	100
NS1442-150	NS 42 Ashless quantitative filter paper , circle, 150 mm	100
NS1442-185	NS 42 Ashless quantitative filter paper , circle, 185 mm	100
NS1442-240	NS 42 Ashless quantitative filter paper , circle, 240mm	100
NS1442-320	NS 42 Ashless quantitative filter paper , circle, 320mm	100
NS1442-917	NS 42 Ashless quantitative filter paper , sheet, 460mm x 570 mm	100

NS 43

Catalog number	Description	Qty/pk
NS1443-090	NS 43 Ashless quantitative filter paper, circle, 90 mm	100
NS1443-110	NS 43 Ashless quantitative filter paper, circle, 110 mm	100
NS1443-125	NS 43 Ashless quantitative filter paper, circle, 125 mm	100
NS1443-150	NS 43 Ashless quantitative filter paper, circle, 150 mm	100
NS1443-185	NS 43 Ashless quantitative filter paper, circle, 185 mm	100

NS 44

Catalog number	Description	Qty/pk
NS1444-070	NS 44 Ashless quantitative filter paper, circle, 70 mm	100
NS1444-090	NS 44 Ashless quantitative filter paper, circle, 90 mm	100
NS1444-110	NS 44 Ashless quantitative filter paper, circle, 110 mm	100
NS1444-125	NS 44 Ashless quantitative filter paper, circle, 125 mm	100
NS1444-150	NS 44 Ashless quantitative filter paper, circle, 150mm	100
NS1444-185	NS 44 Ashless quantitative filter paper, circle, 185 mm	100
NS1444-240	NS 44 Ashless quantitative filter paper, circle, 240 mm	100

Cellulose filter papers

NEWSTaR cellulose chromatography papers

NEWSTaR cellulose chromatography papers are made of pure cotton linters with an alpha-cellulose content of nearly 100% .They are manufactured and tested specifically for chromatographic techniques which ensures the wicking capability and uniformity of capillary action.

NS 1 Chr

NS 1 Chr is the standard chromatography paper with medium flow rate. The smooth, uniform white surface provides good resolution for general analytical separations.

NS 2 Chr

NS 2 Chr is the thin paper with a flow rate lower than NS 1 Chr .As it offers higher resolution ,NS 2 Chr is ideal for optical or radiometric scanning.

NS 3 Chr

NS 3 Chr is recommended for general applications with medium/heavy solute loading. This medium thickness paper is frequently used for separation of inorganic compounds.

NS 4 Chr

NS 4 Chr offers a higher flow rate than NS 1Chr.It is ideal for routine chromatography when loading is relatively low. NS 4 Chr is recommended for routine quality control where high resolution is not required and speed is important.

ZD 3 chr

ZD 3 chr is widely used as a blotting paper with medium thickness. This paper is also recommended for general chromatography and electrophoresis.

ZD 31 chr

ZD 3 chr the thick paper with extremely high flow .It is recommended for electrophoresis of large molecules.

NSWB08

Thickness 0.8 mm, Flow rate 170 mm/30 min. For separation of relatively large molecules by electrophoresis.

Cellulose filter papers

Specifications – cellulose chromatography papers – standard grades

Grade	Flow rate(mm/30 min)	Thickness(mm)
NS 1 Chr	130	0.18
NS 2 Chr	115	0.18
NS 3 Chr	130	0.36
NS 4 Chr	180	0.21
ZD 3 Chr	130	0.34
ZD 31 Chr	225	0.50
NSWB08	170	0.80

Order information –cellulose chromatography papers

NS 1 Chr

Catalog number	Description	Qty/pk
NS3001-964	NS 1 Chr strips, 11×21.3cm with 12 strips of 1.5cm， NS 1 Chr sheet divided into 15mm lanes for running up to 12 samples in parallel	100
NS3001-845	NS 1 Chr sheets, 10×30cm	100
NS3001-861	NS 1 Chr sheets, 20×20cm	100
NS3001-878	NS 1 Chr sheets, 25×25cm	100
NS3001-917	NS 1 Chr sheets, 46×57cm	100
NS3001-931	NS 1 Chr sheets, 58×68cm	100
NS3001-604	NS 1 Chr roll, 1.0cm×100m	1
NS3001-614	NS 1 Chr roll, 2.0cm×100m	1
NS3001-640	NS 1 Chr roll, 3.0cm×100m	1
NS3001-652	NS 1 Chr roll, 4.0cm×100m	1
NS3001-653	NS 1 Chr roll, 5.0cm×100m	1
NS3001-672	NS 1 Chr roll, 10.0cm×100m	1
NS3001-681	NS 1 Chr roll, 15.0cm×100m	1
NS3001-651	NS 1 Chr roll, 1.5"×300ft	1

NS 2 Chr

Catalog number	Description	Qty/pk
NS3002-917	NS 2 Chr sheets, 46×57cm	100
NS3002-911	NS 2 Chr sheets, 58×60cm	100

NS 3 Chr

Catalog number	Description	Qty/pk
NS3003-917	NS 3 Chr sheets, 46×57cm	100

NS 4 Chr

Catalog number	Description	Qty/pk
NS3004-917	NS 4 Chr sheets, 46×57cm	100
NS3004-614	NS 4 Chr roll, 2.0cm×100m	1

Cellulose filter papers

Order information –cellulose chromatography papers

ZD 3 Chr

Catalog number	Description	Qty/pk
NS1030-024	ZD 3 Chr circles, 2.4cm	100
NS1030-025	ZD 3 Chr circles, 2.5cm	100
NS3030-6185	ZD 3 Chr sheets, 11×14cm	100
NS3030-6132	ZD 3 Chr sheets, 12×14cm	100
NS3030-153	ZD 3 Chr sheets, 15×17.5cm	100
NS3030-6188	ZD 3 Chr sheets, 15×20cm	100
NS3030-221	ZD 3 Chr sheets, 18×34cm	100
NS3030-861	ZD 3 Chr sheets, 20×20cm	100
NS3030-6461	ZD 3 Chr sheets, 26×41cm	100
NS3030-347	ZD 3 Chr sheets, 35×43cm	100
NS3030-392	ZD 3 Chr sheets, 35×45cm	100
NS3030-335	NZD 3 Chr sheets, 31.5×35.5cm	100
NS3030-917	ZD 3 Chr sheets, 46×57cm	100
NS3030-931	ZD 3 Chr sheets, 58×68cm	100
NS3030-6189	ZD 3 Chr sheets, 4×5.25"	100
NS3030-6187	ZD 3 Chr sheets, 6×8"	100
NS3030-866	ZD 3 Chr sheets, 8×10"	100
NS3030-614	ZD 3 Chr roll, 2cm×100m	1
NS3030-662	ZD 3 Chr roll, 7.5cm×100m	1
NS3030-672	ZD 3 Chr roll, 10cm×100m	1
NS3030-675	ZD 3 Chr roll, 12.5cm×100m	1
NS3030-681	ZD 3 Chr roll, 15cm×100m	1
NS3030-690	ZD 3 Chr roll, 19cm×100m	1
NS3030-700	ZD 3 Chr roll, 23cm×100m	1
NS3030-704	ZD 3 Chr roll, 27cm×100m	1

ZD 31 Chr

Catalog number	Description	Qty/pk
NS3031-901	ZD 31 Chr sheets, 2×5cm	1000
NS3031-915	ZD 31 Chr sheets, 46×57cm	25
NS3031-917	ZD 31 Chr sheets, 46×57cm	100
NS3031-681	ZD 31 Chr roll, 15.0cm×100m	1

NSWB08

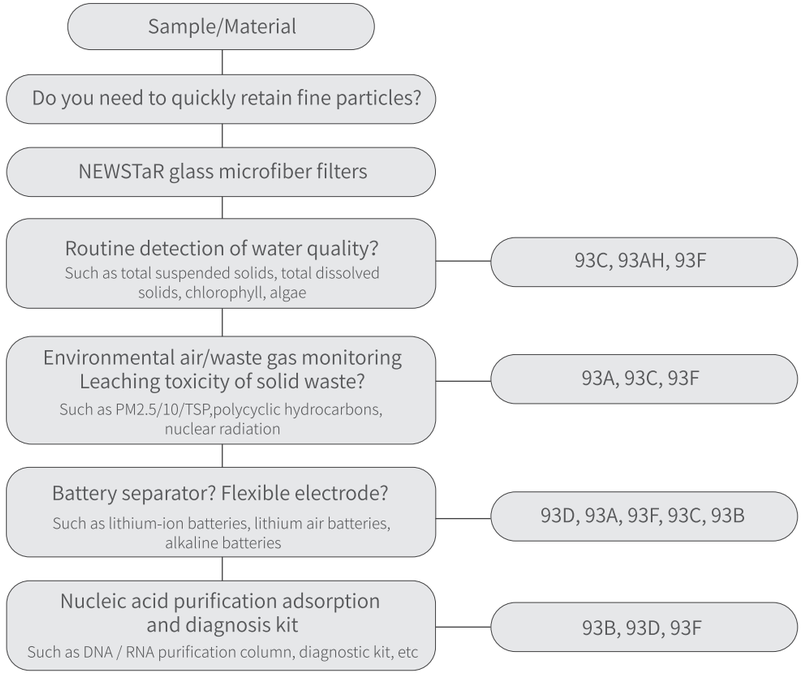
Catalog number	Description	Qty/pk
NSWB08	NSWB08 Chr sheets, 7.5×10cm	100

Glass microfiber filters

Glass microfiber filter

NEWSTaR glass microfiber filters are manufactured from 100% borosilicate glass without binder. These depth filters combine fast flow rates with high loading capacity and the retention of very fine particles. Glass microfiber filters can be used at temperaturesup to 550°C.Glass microfiber filters are biologically inert and resistant to most solvents and reagents with the exception of hydrofluoric acid and highly concentrated alkali solutions.

Selection guide



Glass microfiber filters

93A:1.6μm

Features:
- Fine particle retention
- High flow rate
- Good loading capacity

Application:
- Water pollution monitoring of effluents, for filtration of water, algae and bacteria cultures
- Food stuff analyses, protein filtration
- Radioimmunoassay of weak β emitters
- Recommended for gravimetric determination of airborne particulates, stack sampling, and absorption methods of air pollution monitoring

Typical properties

Grade	Nominal basis weight(g/m²)	Nominal thickness(mm)	Typical particle retention in liquid(μm)	Typical water flow rate(ml/min)	Pressure drop (mbar)*
93A	52	0.23	1.6	510	38

*A=10cm², flow rate 400cm³/s

Ordering information

Catalog number	Description	Package (Quantity/pack)
NS1093A047	93A glass microfiber filters, Diameter: 47mm, Typical particle retention in liquid: 1.6μm	100
NS1093A090	93A glass microfiber filters, Diameter: 90mm, Typical particle retention in liquid: 1.6μm	50
NS1093A110	93A glass microfiber filters, Diameter: 110mm, Typical particle retention in liquid: 1.6μm	50

93B:1.0μm

Features:
- Two times thicker than 93A
- Higher wet strength
- Fine particle retention
- Good flow rate

Application:
- Particularly useful where liquid clarification or solids quantification is required for heavily-loaded,fine particulate suspensions
- Can be used as a finely retentive membrane prefilter
- Liquid scintillation counting (LSC)

Typical properties

Grade	Nominal basis weight(g/m²)	Nominal thickness(mm)	Typical particle retention in liquid(μm)	Typical water flow rate(ml/min)	Pressure drop (mbar)*
93B	143	0.7	1.0	210	95

*A=10cm², flow rate 400cm³/s

Ordering information

Catalog number	Description	Package (Quantity/pack)
NS1093B047	93B glass microfiber filters, Diameter: 47mm, Typical particle retention in liquid: 1.0μm	100
NS1093B090	93B glass microfiber filters, Diameter: 90mm, Typical particle retention in liquid: 1.0μm	50

Glass microfiber filters

93C:1.2μm

Features:
- Fine particle retention
- Good flow rate.

Application:
- The standard filter in many parts of the world for the collection of suspended solids in potable water and natural and industrial wastes
- Fast and efficient clarification of aqueous liquids containing low to medium levels of fine particulates
- Widely used for cell harvesting
- Liquid scintillation counting, and binding assays

Typical properties

Grade	Nominal basis weight(g/m²)	Nominal thickness(mm)	Typical particle retention in liquid(μm)	Typical water flow rate(ml/min)	Pressure drop (mbar)*
93C	52	0.24	1.2	335	55

*A=10cm², flow rate 400cm³/s

Ordering information

Catalog number	Description	Package (Quantity/pack)
NS1093C047	93C glass microfiber filters, Diameter: 47mm, Typical particle retention in liquid: 1.2μm	100
NS1093C090	93C glass microfiber filters, Diameter: 90mm, Typical particle retention in liquid: 1.2μm	50
NS1093C110	93C glass microfiber filters, Diameter: 110mm, Typical particle retention in liquid: 1.2μm	50

93D:2.7μm

Features:
- Faster in flow rate and overall filtration speed than cellulose filter papers of similar particle retention
- Thick, high loading capacity

Application:
- Membrane prefilter
- Retention of contaminants in organic solvents such as oils and fats

Typical properties

Grade	Nominal basis weight(g/m²)	Nominal thickness(mm)	Typical particle retention in liquid(μm)	Typical water flow rate(ml/min)	Pressure drop (mbar)*
93D	120	0.53	2.7	920	140

*A=10cm², flow rate 400cm³/s

Ordering information

Catalog number	Description	Package (Quantity/pack)
NS1093D025	93D glass microfiber filters, Diameter: 25mm, Typical particle retention in liquid: 2.7μm	100
NS1093D047	93D glass microfiber filters, Diameter: 47mm, Typical particle retention in liquid: 2.7μm	100
NS1093D090	93D glass microfiber filters, Diameter: 90mm, Typical particle retention in liquid: 2.7μm	50

Glass microfiber filters

93F:0.7μm

Features:
- Retain fine particles down to 0.7 μm
- Unlike membrane filters with a comparable retention value, it has a very rapid flow rate and an extremely high loading capacity

Application:
- The material upon which the EPA Method TCLP 1311 for Toxicity Characteristic Leaching Procedure was developed
- Recommended for DNA binding and purification
- As a prefilter for the successful clarification of extremely difficult biochemical solutions and fluids,and nucleic acids

Typical properties

Grade	Nominal basis weight(g/m^2)	Nominal thickness(mm)	Typical particle retention in liquid(μm)	Typical water flow rate(ml/min)	Pressure drop (mbar)*
93F	75	0.45	0.7	110	120

*A=10cm^2, flow rate 400cm^3/s

Ordering information

Catalog number	Description	Package (Quantity/pack)
NS1093F047	93F glass microfiber filters, Diameter: 47mm, Typical particle retention in liquid: 0.7μm	100
NS1093F090	93F glass microfiber filters, Diameter: 90mm, Typical particle retention in liquid: 0.7μm	50

93AH:1.5μm

Features:
- High retention efficiency at high flow rates, high loading capacity
- Smooth surface
- Be pre-fired and withstand temperatures over 550°C

Application:
- Recommended for water pollution monitoring
- Cell harvesting
- Air pollution monitoring

Typical properties

Grade	Nominal basis weight(g/m^2)	Nominal thickness(mm)	Typical particle retention in liquid(μm)	Typical water flow rate(ml/min)	Pressure drop (mbar)*
93AH	65	0.3	1.5	400	--

*A=10cm^2, flow rate 400cm^3/s

Ordering information

Catalog number	Description	Package (Quantity/pack)
NS1093AH090	93AH glass microfiber filters, Diameter: 90mm, Typical particle retention in liquid: 1.5μm	50
NS1093AH110	93AH glass microfiber filters, Diameter: 110mm, Typical particle retention in liquid: 1.5μm	50

Environmental monitoring

Quartz fiber filter

Quartz fiber filters are made with 100% pure quartz microfiber with zero binders. Exhibit greater chemical resistance at high temperatures than glass microfiber. Excellent choice for use in environments with extreme temperature up to 900°C and/or aggressive chemical exposure.

Features and Benefits
- Excellent retention of very fine particles.
- Exceptional chemical and thermal resistance.
- Excellent weight and dimensional stability with lowest trace metal content.
- High Permeation enables large volume of air to pass through.
- Higher temperature stability than glass microfiber filters; up to 900°C.
- Excellent chemical stability with practically no filter-mass loss in the presence of acid gases.

Typical properties

Nominal basis weight	Nominal thickness	Pore size	Typical retention efficiency in air (0.3μm)
85g/m^2	2.2μm	440μm	＞99.99%

Ordering information

Catalog number	Description	Package (Quantity/pack)
Qua47	Quartz fiber filters, Diameter: 47mm	100
Qua90	Quartz fiber filters, Diameter: 90mm	100
Qua8*10"	Quartz fiber filters,Size:203*254mm	100

Syringe filters

Syringe filter selection guide

By Application:

Type of Filtration	1st Choice	Alternatives
HPLC* UHPLC* LC/MS * GC	Nylon, PES	Hydrophilic PTFE
ICP-MS	Hydrophilic PTFE	GF+Hydrophilic PTFE
Undiluted solvent	Hydrophilic PTFE, RC	Nylon
Air / Strong acid / Strong base	Hydrophobic PTFE	-
Protein analysis * Buffer	Hydrophilic PVDF	RC
Tissue/Cell culture	PES	CA
High particle solvent	GF prefilter + Hydrophilic PTFE	-
High particle aqueous	GF prefilter + Nylon	-

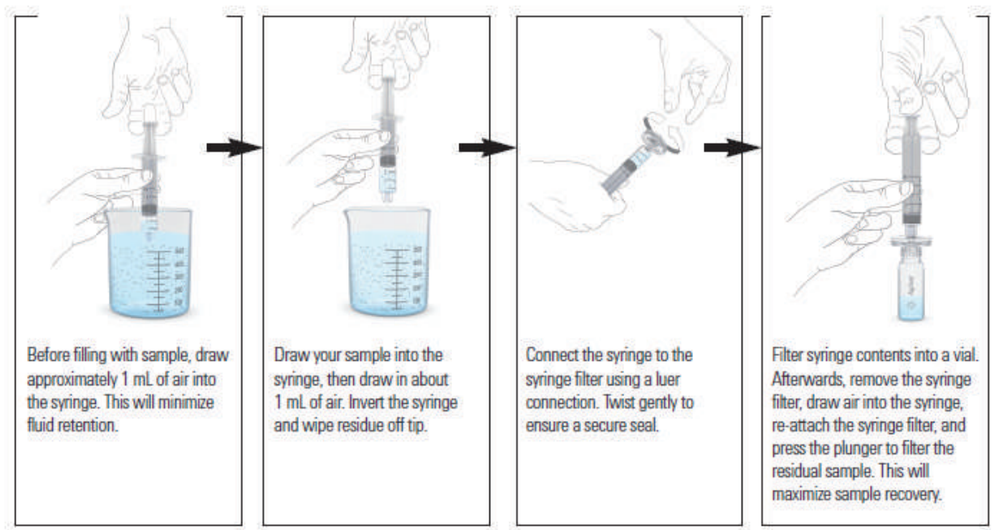
By Sample Volume:

Sample volume	Syringe filter diameter	Hold-up volume
0.1-1ml	4mm	＜10μl
1-10ml	13mm	＜25μl
5-100ml	25mm	＜100μl
100-200ml	33mm	＜125μl

How to use a syringe filter?

Step by step instructions

Follow these steps to realize the full benefits of filtration

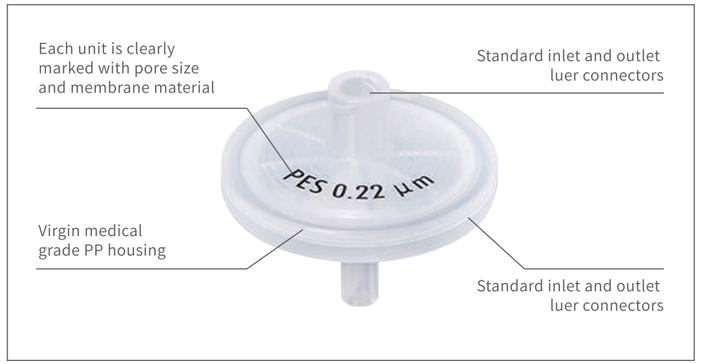


Syringe filters

EcoStar™ syringe filter For general lab filtration

Features:

- Wide range of filter materials
- Diameter 4mm, 13mm, 25mm, 33mm are available
- Virgin medical grade PP housing
- Ultrasonic welded



Technical properties:

Diameter	4mm	13mm	25mm	33mm
Membrane material	Nylon, PES, MCE, CA, RC, Hydrophobic PTFE, Hydrophilic PTFE, Hydrophilic PVDF, Glass Fiber, PP			
Pore Size	0.1μm, 0.22μm, 0.45μm, 0.65μm, 0.7μm, 0.8μm, 1.2μm			
Effective Filtration Aera	0.125cm²	0.65cm²	3.9cm²	4.5cm²
Maximum Pressure	5bar	5bar	5.2bar	5.2bar
Hold-up Volume(μl)	＜10	＜25	＜100	＜125
Suggested capacity per filter unit (ml)	＜1	＜10	＜100	＜200
Housing	Virgin medical grade PP			
Inlet/Outlet	FLL/ML			

Syringe filters

EcoStar™ nylon syringe filter

Applications:

- Aqueous and/or organic samples
- Ideal for alcohols and weak solvents filtration

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20800402	Ecostar™ Nylon syringe filter, Diameter: 4mm, Pore Size: 0.22μm	200
NS20800404	Ecostar™ Nylon syringe filter, Diameter: 4mm, Pore Size: 0.45μm	200
NS20801301	Ecostar™ Nylon syringe filter, Diameter: 13mm, Pore Size: 0.1μm	100
NS20801302	Ecostar™ Nylon syringe filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS20801304	Ecostar™ Nylon syringe filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS20801308	Ecostar™ Nylon syringe filter, Diameter: 13mm, Pore Size: 0.8μm	100
NS20802501	Ecostar™ Nylon syringe filter, Diameter: 25mm, Pore Size: 0.1μm	100
NS20802502	Ecostar™ Nylon syringe filter, Diameter: 25mm, Pore Size: 0.22μm	100
NS20802504	Ecostar™ Nylon syringe filter, Diameter: 25mm, Pore Size: 0.45μm	100
NS20802508	Ecostar™ Nylon syringe filter, Diameter: 25mm, Pore Size: 0.8μm	100
NS20803302	Ecostar™ Nylon syringe filter, Diameter: 33mm, Pore Size: 0.22μm	100
NS20803304	Ecostar™ Nylon syringe filter, Diameter: 33mm, Pore Size: 0.45μm	100

EcoStar™ PES (polyethersulfone) syringe filter

Applications:

- Aqueous samples
- Buffer solutions
- Tissue culture media

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20810402	Ecostar™ PES syringe filter, Diameter: 4mm, Pore Size: 0.22μm	200
NS20810404	Ecostar™ PES syringe filter, Diameter: 4mm, Pore Size: 0.45μm	200
NS20811301	Ecostar™ PES syringe filter, Diameter: 13mm, Pore Size: 0.1μm	100
NS20811302	Ecostar™ PES syringe filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS20811304	Ecostar™ PES syringe filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS20811308	Ecostar™ PES syringe filter, Diameter: 13mm, Pore Size: 0.8μm	100
NS20812501	Ecostar™ PES syringe filter, Diameter: 25mm, Pore Size: 0.1μm	100
NS20812502	Ecostar™ PES syringe filter, Diameter: 25mm, Pore Size: 0.22μm	100
NS20812504	Ecostar™ PES syringe filter, Diameter: 25mm, Pore Size: 0.45μm	100
NS20812508	Ecostar™ PES syringe filter, Diameter: 25mm, Pore Size: 0.8μm	100
NS20813302	Ecostar™ PES syringe filter, Diameter: 33mm, Pore Size: 0.22μm	100
NS20813304	Ecostar™ PES syringe filter, Diameter: 33mm, Pore Size: 0.45μm	100

Syringe filters

EcoStar™ MCE(mixed cellulose este) syringe filter

Applications:

- General purpose filtration
- Clarification and particulate removal

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20821302	Ecostar™ MCE syringe filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS20821304	Ecostar™ MCE syringe filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS20822502	Ecostar™ MCE syringe filter, Diameter: 25mm, Pore Size: 0.22μm	100
NS20822504	Ecostar™ MCE syringe filter, Diameter: 25mm, Pore Size: 0.45μm	100

EcoStar™ CA(cellulose acetate) syringe filter

Applications:

- Aqueous samples
- Buffer solutions
- Tissue culture media

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20831302	Ecostar™ CA syringe filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS20831304	Ecostar™ CA syringe filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS20832502	Ecostar™ CA syringe filter, Diameter: 25mm, Pore Size: 0.22μm	100
NS20832504	Ecostar™ CA syringe filter, Diameter: 25mm, Pore Size: 0.45μm	100
NS20833302	Ecostar™ CA syringe filter, Diameter: 33mm, Pore Size: 0.22μm	100
NS20833304	Ecostar™ CA syringe filter, Diameter: 33mm, Pore Size: 0.45μm	100

Syringe filters

EcoStar™ RC(regenerated cellulose) syringe filter

Applications:

· Filtration of organic and aqueous solutions in HPLC
· Purification of aqueous and organic solutions
· Filtration of protein solutions

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20841302	Ecostar™ RC syringe filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS20841304	Ecostar™ RC syringe filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS20842502	Ecostar™ RC syringe filter, Diameter: 25mm, Pore Size: 0.22μm	100
NS20842504	Ecostar™ RC syringe filter, Diameter: 25mm, Pore Size: 0.45μm	100

EcoStar™ hydrophilic PVDF(polyvinylidene fluoride) syringe filter

Applications:

· Aqueous or mild organic solutions
· Biological solutions

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20851302	Ecostar™ Hydrophilic PVDF syringe filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS20851304	Ecostar™ Hydrophilic PVDF syringe filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS20852502	Ecostar™ Hydrophilic PVDF syringe filter, Diameter: 25mm, Pore Size: 0.22μm	100
NS20852504	Ecostar™ Hydrophilic PVDF syringe filter, Diameter: 25mm, Pore Size: 0.45μm	100
NS20853302	Ecostar™ Hydrophilic PVDF syringe filter, Diameter: 33mm, Pore Size: 0.22μm	100
NS20853304	Ecostar™ Hydrophilic PVDF syringe filter, Diameter: 33mm, Pore Size: 0.45μm	100

Syringe filters

EcoStar™ hydrophilic PTFE(polytetrafluoroethylene) syringe filter

Applications:

· Filtration of organic and aqueous solutions in HPLC
· Purification of aqueous and organic solutions

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20860402	Ecostar™ Hydrophilic PTFE syringe filter, Diameter: 4mm, Pore Size: 0.22μm	200
NS20860404	Ecostar™ Hydrophilic PTFE syringe filter, Diameter: 4mm, Pore Size: 0.45μm	200
NS20861302	Ecostar™ Hydrophilic PTFE syringe filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS20861304	Ecostar™ Hydrophilic PTFE syringe filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS20862502	Ecostar™ Hydrophilic PTFE syringe filter, Diameter: 25mm, Pore Size: 0.22μm	100
NS20862504	Ecostar™ Hydrophilic PTFE syringe filter, Diameter: 25mm, Pore Size: 0.45μm	100
NS20863302	Ecostar™ Hydrophilic PTFE syringe filter, Diameter: 33mm, Pore Size: 0.22μm	100
NS20863304	Ecostar™ Hydrophilic PTFE syringe filter, Diameter: 33mm, Pore Size: 0.45μm	100

EcoStar™ hydrophobic PTFE(polytetrafluoroethylene) syringe filter

Applications:

· Organic based samples
· Air/gas venting

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20871302	Ecostar™ Hydrophobic PTFE syringe filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS20871304	Ecostar™ Hydrophobic PTFE syringe filter , Diameter: 13mm, Pore Size:0.45μm	100
NS20872502	Ecostar™ Hydrophobic PTFE syringe filter , Diameter: 25mm, Pore Size:0.22μm	100
NS20872504	Ecostar™ Hydrophobic PTFE syringe filter , Diameter: 25mm, Pore Size:0.45μm	100
NS20873302	Ecostar™ Hydrophobic PTFE syringe filter , Diameter: 33mm, Pore Size:0.22μm	100
NS20873304	Ecostar™ Hydrophobic PTFE syringe filter , Diameter: 33mm, Pore Size:0.45μm	100

Syringe filters

EcoStar™ glass fiber syringe filter

Applications:

· Used as a pre-filter
· Purification of organic solvents and strong acids

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20881307	Ecostar™ Glass Fiber syringe filter, Diameter: 13mm, Pore Size: 0.7µm	100
NS20881310	Ecostar™ Glass Fiber syringe filter, Diameter: 13mm, Pore Size: 1.0µm	100
NS20882507	Ecostar™ Glass Fiber syringe filter, Diameter: 25mm, Pore Size: 0.7µm	100
NS20882510	Ecostar™ Glass Fiber syringe filter, Diameter: 25mm, Pore Size: 1.0µm	100

EcoStar™ PP(polypropylene) syringe filter

Applications:

· Used as a pre-filter
· Big particles filtration

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS20891302	Ecostar™ PP syringe filter, Diameter: 13mm, Pore Size: 0.22µm	100
NS20891304	Ecostar™ PP syringe filter, Diameter: 13mm, Pore Size: 0.45µm	100
NS20892502	Ecostar™ PP syringe filter, Diameter: 25mm, Pore Size: 0.22µm	100
NS20892504	Ecostar™ PP syringe filter, Diameter: 25mm, Pore Size: 0.45µm	100

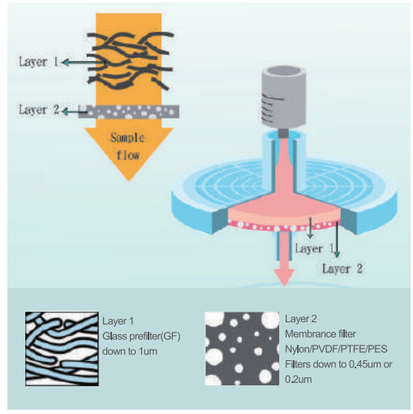
Syringe filters

FlowStar™ syringe filter

For general lab filtration

Features and Advantages:

· High particulate loaded samples filtration
· With glass fiber pre-filter
· Can process one time more sample volume than common filters.



Specifications:

Diameter	13mm	25mm
Pre-filter	Glass Fiber	
Membrane	Nylon, PES, RC, Hydrophilic PTFE, Hydrophilic PVDF	
Pore Size	GF/0.7µm+0.22µm, GF/0.7µm +0.45µm	
Effective Filtration Area	0.65cm^2	3.9cm^2
Maximum Pressure	5bar	5.2bar
Material of Housing	Medical grade PP	
Inlet/Outlet	Female Luer Lock/Male Slip Luer	

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NSGF801302	FlowStar™ syringe filter, GF pre-filter+Nylon, Diameter: 13mm, Pore Size: 0.7µm+0.22µm	100
NSGF801304	FlowStar™ syringe filter, GF pre-filter+Nylon, Diameter: 13mm, Pore Size: 0.7µm+0.45µm	100
NSGF802502	FlowStar™ syringe filter, GF pre-filter+Nylon, Diameter: 25mm, Pore Size: 0.7µm+0.22µm	100
NSGF802504	FlowStar™ syringe filter, GF pre-filter+Nylon, Diameter: 25mm, Pore Size: 0.7µm+0.45µm	100
NSGF811302	FlowStar™ syringe filter, GF pre-filter+PES, Diameter: 13mm, Pore Size: 0.7µm+0.22µm	100
NSGF811304	FlowStar™ syringe filter, GF pre-filter+PES, Diameter: 13mm, Pore Size: 0.7µm+0.45µm	100
NSGF812502	FlowStar™ syringe filter, GF pre-filter+PES, Diameter: 25mm, Pore Size: 0.7µm+0.22µm	100
NSGF812504	FlowStar™ syringe filter, GF pre-filter+PES, Diameter: 25mm, Pore Size: 0.7µm+0.45µm	100
NSGF861302	FlowStar™ syringe filter, GF pre-filter+ Hydrophilic PTFE, Diameter: 13mm, Pore Size: 0.7µm+0.22µm	100
NSGF861304	FlowStar™ syringe filter, GF pre-filter+ Hydrophilic PTFE, Diameter: 13mm, Pore Size: 0.7µm+0.45µm	100
NSGF862502	FlowStar™ syringe filter, GF pre-filter+ Hydrophilic PTFE, Diameter: 25mm, Pore Size: 0.7µm+0.22µm	100
NSGF862504	FlowStar™ syringe filter, GF pre-filter+ Hydrophilic PTFE, Diameter: 25mm, Pore Size: 0.7µm+0.45µm	100

Syringe filters

BioStar™ syringe filter For sterile filtration

Applications:

- NEWSTaR offers four types of Membrane
- Tissue culture media preparation
- Sterile filtration and clarification of biological fluids
- Buffers

Specifications:

Diameter	33mm
Memebrane	Nylon, PES, Hydrophilic PVDF, Hydrophilic PTFE
Pore Size	0.22μm, 0.45μm
Effective Filtration Area	4.5cm²
Maximum Pressure	5bar
Material of Housing	Medical grade PP
Inlet/Outlet	Female Luer Lock/Male Slip Luer
Sterilized	Gamma radiation

Ordering information:

Catalog number	Description	Package (Quantity/pack)
NS2S813302	BioStar™ PES syringe filter, Diameter: 33mm, Pore Size: 0.22μm,Sterile, Individually packed	50
NS2S813304	BioStar™ PES syringe filter, Diameter: 33mm, Pore Size: 0.45μm,Sterile, Individually packed	50
NS2S853302	BioStar™ Hydrophilic PVDF syringe filter , Diameter: 33mm, Pore Size: 0.22μm,Sterile,Individually packed	50
NS2S853304	BioStar™ Hydrophilic PVDF syringe filter, Diameter: 33mm, Pore Size: 0.45μm,Sterile,Individually packed	50
NS2S863302	BioStar™ Hydrophilic PTFE syringe filter , Diameter: 33mm, Pore Size: 0.22μm,Sterile,Individually packed	50
NS2S863304	BioStar™ Hydrophilic PTFE syringe filter, Diameter: 33mm, Pore Size: 0.45μm,Sterile,Individually packed	50
NS2S803302	BioStar™ Nylon syringe filter, Diameter: 33mm, Pore Size: 0.22μm,Sterile,Individually packed	50
NS2S803304	BioStar™ Nylon syringe filter, Diameter: 33mm, Pore Size: 0.45μm,Sterile,Individually packed	50
NS2S833302	BioStar™ CA syringe filter, Diameter: 33mm, Pore Size: 0.22μm,Sterile,Individually packed	50
NS2S833304	BioStar™ CA syringe filter, Diameter: 33mm, Pore Size: 0.45μm,Sterile,Individually packed	50

Syringe filters

VentStar™ syringe filter For sterile venting

Applications:

- Sterile venting of small containers
- General sterile filtration of gases and air
- Sterilizing or clarifying organic solutions
- Decreases contamination risks, ideal for gas lines for CO_2 incubators
- Aggressive solvents filtration

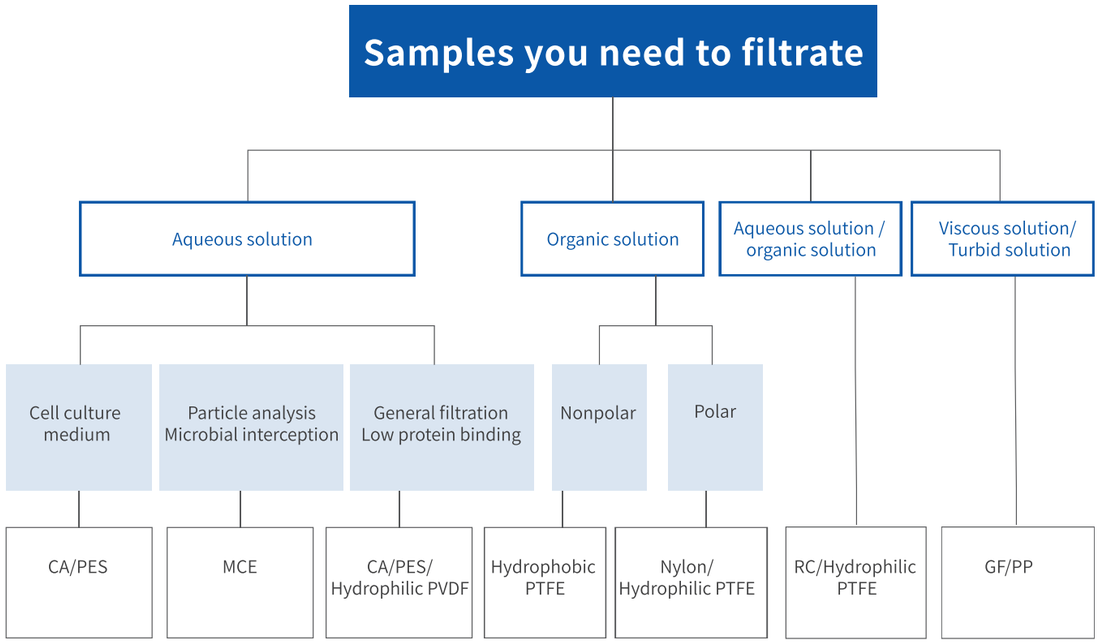
Specifications:

Material	Hydrophobic PTFE with PP supported
Housing	PP
Effective Filtration Area	19.6cm²
Inlet/Outle	1/4'' to 1/2'' Hose Barb

Ordering information:

Catalog number	Description	Inlet/Outlet	Packaging (Pcs/Box)
NS20875002	VentStar™ Hydrophobic PTFE syringe filter, Diameter: 50mm, Pore Size: 0.22μm	1/4'' to 1/2'' Hose Barb	12
NS20875004	VentStar™ Hydrophobic PTFE syringe filter, Diameter: 50mm, Pore Size: 0.45μm	1/4'' to 1/2'' Hose Barb	12
NS20875001	VentStar™ Hydrophobic PTFE syringe filter, Diameter: 50mm, Pore Size: 0.1μm	1/4'' to 1/2'' Hose Barb	12
NS20875002J	VentStar™ Hydrophobic PTFE syringe filter, Diameter: 50mm, Pore Size: 0.22μm	1/8'' NPT to 1/2'' Hose Barb	12

Membrane selection guide



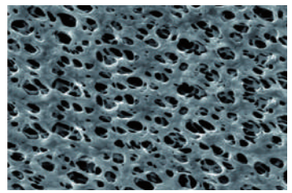
NEWSTaR nylon membrane filter

Features and Advantages:

- Hydrophilic
- High protein binding capacity, minimizes interference from proteins during testing
- Low extractables ensures tests will be clean and pure leading to more consistent results
- Compatible with many aqueous and organic solutions
- High strength and heat resistance

Applications:

- General laboratory filtration
- Sterilization, clarification of aqueous and organic solutions
- HPLC sample preparation



Specifications:

Wettability	Hydrophilic
pH Range	4-13
Pore Size	0.1, 0.22, 0.45, 1.2, 3.0, 5.0μm
Color/Surface	White/Flat
Diameter	ϕ13, ϕ25, ϕ47, ϕ50, ϕ60, ϕ90, ϕ100mm

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS30801302	Nylon disc membrane filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS30801304	Nylon disc membrane filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS30802502	Nylon disc membrane filter, Diameter: 25mm, Pore Size: 0.22μm	50
NS30802504	Nylon disc membrane filter, Diameter: 25mm, Pore Size: 0.45μm	50
NS30804702	Nylon disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	50
NS30804704	Nylon disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	50
NS30805002	Nylon disc membrane filter, Diameter: 50mm, Pore Size: 0.22μm	50
NS30805004	Nylon disc membrane filter, Diameter: 50mm, Pore Size: 0.45μm	50
NS30806002	Nylon disc membrane filter, Diameter: 60mm, Pore Size: 0.22μm	50
NS30806004	Nylon disc membrane filter, Diameter: 60mm, Pore Size: 0.45μm	50
NS30809002	Nylon disc membrane filter, Diameter: 90mm, Pore Size: 0.22μm	50
NS30809004	Nylon disc membrane filter, Diameter: 90mm, Pore Size: 0.45μm	50
NS308010002	Nylon disc membrane filter, Diameter: 100mm, Pore Size: 0.22μm	50
NS308010004	Nylon disc membrane filter, Diameter: 100mm, Pore Size: 0.45μm	50
NS308014202	Nylon disc membrane filter, Diameter: 142mm, Pore Size: 0.22μm	50
NS308014204	Nylon disc membrane filter, Diameter: 142mm, Pore Size: 0.45μm	50
NS308020002	Nylon disc membrane filter, Diameter: 200mm, Pore Size: 0.22μm	50
NS308020004	Nylon disc membrane filter, Diameter: 200mm, Pore Size: 0.45μm	50
NS308030002	Nylon disc membrane filter, Diameter: 300mm, Pore Size: 0.22μm	100
NS308030004	Nylon disc membrane filter, Diameter: 300mm, Pore Size: 0.45μm	100

Membrane filters

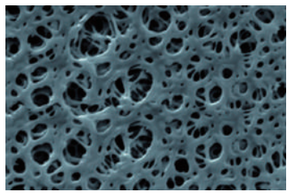
NEWSTaR PES(polyethersulfone) membrane filter

Features and Advantages:

- High flow rates and throughputs due to the highly asymmetric pore structure
- Inherently hydrophilic
- Low protein binding and high drug compatibility, maximize recovery of critical media components
- High thermal resistance

Applications:

- General/sterile filtration
- Biological filtration
- Pharmaceutical filtration
- Bacterial isolation/enumeration
- Liquid of high temperature filtration



Specifications:

Wettability	Hydrophilic
pH Range	3-14
Pore Size	0.1，0.22，0.45，0.65，1.2μm
Color/Surface	White/Flat
Diameter	ϕ13，ϕ25，ϕ47，ϕ50，ϕ60，ϕ90，ϕ100mm

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS30811302	PES disc membrane filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS30811304	PES disc membrane filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS30812502	PES disc membrane filter, Diameter: 25mm, Pore Size: 0.22μm	50
NS30812504	PES disc membrane filter, Diameter: 25mm, Pore Size: 0.45μm	50
NS30814702	PES disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	50
NS30814704	PES disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	50
NS30815002	PES disc membrane filter, Diameter:50mm, Pore Size: 0.22μm	50
NS30815004	PES disc membrane filter, Diameter:50mm, Pore Size: 0.45μm	50
NS30816002	PES disc membrane filter, Diameter:60mm, Pore Size: 0.22μm	50
NS30816004	PES disc membrane filter, Diameter:60mm, Pore Size: 0.45μm	50
NS30819002	PES disc membrane filter, Diameter:90mm, Pore Size: 0.22μm	50
NS30819004	PES disc membrane filter, Diameter:90mm, Pore Size: 0.45μm	50
NS308110002	PES disc membrane filter, Diameter:100mm, Pore Size: 0.22μm	50
NS308110004	PES disc membrane filter, Diameter:100mm, Pore Size: 0.45μm	50

Membrane filters

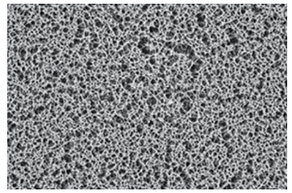
NEWSTaR MCE (mixed cellulose ester) membrane filter

Features and Advantages:

- Hydrophilic
- Biologically inert
- High porosity for increased flow rates without compromising filter integrity
- Uniform pore structure provides consistent flow and diffusion rates

Applications:

- Aqueous filtration
- The recovery and retention of E. Coli bacteria
- Sterility testing
- Gravimetric analysis with ashing techniques
- Air monitoring
- Particle monitoring



Specifications:

Wettability	Hydrophilic
pH Range	3-8
Pore Size	0.1，0.22，0.45，0.65，0.8，1.2，3.0，5.0，8.0μm
Color/Surface	White/Flat
Diameter	ϕ13，ϕ25，ϕ47，ϕ50，ϕ60，ϕ90，ϕ100mm

Order Information:

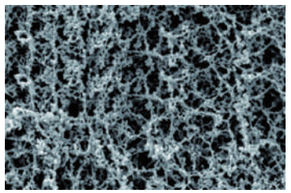
Catalog number	Description	Packaging (Pcs/Box)
NS30822502	MCE disc membrane filter, Diameter: 25mm, Pore Size: 0.22μm	50
NS30822504	MCE disc membrane filter, Diameter: 25mm, Pore Size: 0.45μm	50
NS30822506	MCE disc membrane filter, Diameter: 25mm, Pore Size: 0.65μm	50
NS30822512	MCE disc membrane filter, Diameter: 25mm, Pore Size: 1.2μm	50
NS30824702	MCE disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	50
NS30824704	MCE disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	50
NS30825002	MCE disc membrane filter, Diameter: 50mm, Pore Size: 0.22μm	50
NS30825004	MCE disc membrane filter, Diameter: 50mm, Pore Size: 0.45μm	50
NS30826002	MCE disc membrane filter, Diameter: 60mm, Pore Size: 0.22μm	50
NS30826004	MCE disc membrane filter, Diameter: 60mm, Pore Size: 0.45μm	50
NS30829002	MCE disc membrane filter, Diameter: 90mm, Pore Size: 0.22μm	50
NS30829004	MCE disc membrane filter, Diameter: 90mm, Pore Size: 0.45μm	50
NS308210002	MCE disc membrane filter, Diameter: 100mm, Pore Size: 0.22μm	50
NS308210004	MCE disc membrane filter, Diameter: 100mm, Pore Size: 0.45μm	50

Membrane filters

NEWSTaR CA (cellulose acetate) membrane filter

Features and Advantages:
- Low protein binding
- Hydrophilic
- Strength and dimension stability
- Uniform pore structure

Applications:
- Protein and enzyme filtration
- Biological fluid filtration and sterilization
- Tissue culture media sterilization
- Clarification of aqueous solutions, nutrient media ,buffers and sera



Specifications:

Wettability	Hydrophilic
pH Range	3-9
Pore Size	0.22，0.45，0.65，0.8，1.2μm
Color/Surface	White/Flat
Diameter	ϕ13，ϕ25，ϕ47，ϕ50，ϕ60mm，ϕ90mm

Order Information:

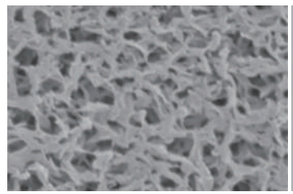
Catalog number	Description	Packaging (Pcs/Box)
NS30831302	CA disc membrane filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS30831304	CA disc membrane filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS30832506	CA disc membrane filter, Diameter: 25mm, Pore Size: 0.22μm	50
NS30832512	CA disc membrane filter, Diameter: 25mm, Pore Size: 0.45μm	50
NS30834702	CA disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	50
NS30834704	CA disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	50
NS30835002	CA disc membrane filter, Diameter: 50mm, Pore Size: 0.22μm	50
NS30835004	CA disc membrane filter, Diameter: 50mm, Pore Size: 0.45μm	50
NS30836002	CA disc membrane filter, Diameter: 60mm, Pore Size: 0.22μm	50
NS30836004	CA disc membrane filter, Diameter: 60mm, Pore Size: 0.45μm	50
NS30839002	CA disc membrane filter, Diameter: 90mm, Pore Size: 0.22μm	50
NS30839004	CA disc membrane filter, Diameter: 90mm, Pore Size: 0.45μm	50

Membrane filters

NEWSTaR hydrophilic PVDF membrane filter

Features and Advantages:
- Hydrophilic
- Low protein binding capacity, minimizes interference from proteins during testing
- Low extractables ensures tests will be clean and pure leading to more consistent results

Applications:
- General laboratory filtration
- Steriliza tion, clarification of aqueous and organic solvent solutions



Specifications:

Wettability	Hydrophilic
pH Range	3-9
Pore Size	0.22，0.45，0.65，0.8，1.2μm
Color/Surface	White/Flat
Diameter	ϕ13，ϕ25，ϕ47，ϕ50，ϕ90mm

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS30852502	Hydrophilic PVDF disc membrane filter, Diameter: 25mm, Pore Size: 0.22μm	50
NS30852504	Hydrophilic PVDF disc membrane filter, Diameter: 25mm, Pore Size: 0.45μm	50
NS30854702	Hydrophilic PVDF disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	50
NS30854704	Hydrophilic PVDF disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	50
NS30855002	Hydrophilic PVDF disc membrane filter, Diameter: 50mm, Pore Size: 0.22μm	50
NS30855004	Hydrophilic PVDF disc membrane filter, Diameter: 50mm, Pore Size: 0.45μm	50
NS30856002	Hydrophilic PVDF disc membrane filter, Diameter: 60mm, Pore Size: 0.22μm	50
NS30856004	Hydrophilic PVDF disc membrane filter, Diameter: 60mm, Pore Size: 0.45μm	50
NS30859002	Hydrophilic PVDF disc membrane filter, Diameter: 90mm, Pore Size: 0.22μm	50
NS30859004	Hydrophilic PVDF disc membrane filter, Diameter: 90mm, Pore Size: 0.45μm	50

Membrane filters

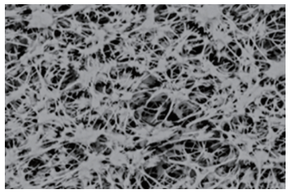
NEWSTaR hydrophilic PTFE(polytetrafluoroethylene) membrane filter

Features and Advantages:

· Hydrophilic
· Chemically resistant to all solvents, acids and bases
· PTFE membrane with supporting layer polyester or polypropylene
· High temperature resistance

Applications:

· Aggressive solvents filtration
· Filtration of HPLC samples and mobile phases



Specifications:

Wettability	Hydrophilic
pH Range	1-14
Pore Size	0.1，0.22，0.45，1.0μm
Color/Surface	White/Flat
Diameter	ϕ13，ϕ25，ϕ47，ϕ50mm，ϕ60mm，ϕ90mm

Order Information:

Catalog number	Description	Packaging (Pcs/Box)
NS30862502	Hydrophilic PTFE disc membrane filter, Diameter: 25mm, Pore Size: 0.22μm	50
NS30862504	Hydrophilic PTFE disc membrane filter, Diameter: 25mm, Pore Size: 0.45μm	50
NS30864702	Hydrophilic PTFE disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	50
NS30864704	Hydrophilic PTFE disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	50
NS30865002	Hydrophilic PTFE disc membrane filter, Diameter: 50mm, Pore Size: 0.22μm	50
NS30865004	Hydrophilic PTFE disc membrane filter, Diameter: 50mm, Pore Size: 0.45μm	50
NS30866002	Hydrophilic PTFE disc membrane filter, Diameter: 60mm, Pore Size: 0.22μm	50
NS30866004	Hydrophilic PTFE disc membrane filter, Diameter: 60mm, Pore Size: 0.45μm	50
NS30869002	Hydrophilic PTFE disc membrane filter, Diameter: 90mm, Pore Size: 0.22μm	50
NS30869004	Hydrophilic PTFE disc membrane filter, Diameter: 90mm, Pore Size: 0.45μm	50

Membrane filters

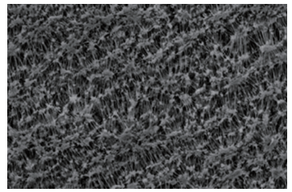
NEWSTaR hydrophobic PTFE(polytetrafluoroethylene) membrane filter

Features and Advantages:

· Hydrophobic
· Chemically resistant to all solvents, acids and bases
· PTFE membrane with supporting layer polyester or polypropylene
· High temperature resistance

Applications:

· Aggressive solvents filtration
· Air and gas filtration
· Phase separations
· Aerosol sampling



Specifications:

Wettability	Hydrophobic
pH Range	1-14
Pore Size	0.01μm (for gas filtration)，0.1，0.22，0.45，1.2，3.0，5.0，10.0μm
Color/Surface	White/Flat
Diameter	ϕ13，ϕ25，ϕ47，ϕ50，ϕ90mm

Order Information:

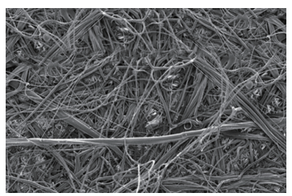
Catalog number	Description	Packaging (Pcs/Box)
NS30871302	Hydrophobic PTFE disc membrane filter, Diameter: 13mm, Pore Size: 0.22μm	100
NS30871304	Hydrophobic PTFE disc membrane filter, Diameter: 13mm, Pore Size: 0.45μm	100
NS30872506	Hydrophobic PTFE disc membrane filter, Diameter: 25mm, Pore Size: 0.22μm	50
NS30872512	Hydrophobic PTFE disc membrane filter, Diameter: 25mm, Pore Size: 0.45μm	50
NS30874702	Hydrophobic PTFE disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	50
NS30874704	Hydrophobic PTFE disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	50
NS30875002	Hydrophobic PTFE disc membrane filter, Diameter: 50mm, Pore Size: 0.22μm	50
NS30875004	Hydrophobic PTFE disc membrane filter, Diameter: 50mm, Pore Size: 0.45μm	50
NS30879002	Hydrophobic PTFE disc membrane filter, Diameter: 90mm, Pore Size: 0.22μm	50
NS30879004	Hydrophobic PTFE disc membrane filter, Diameter: 90mm, Pore Size: 0.45μm	50

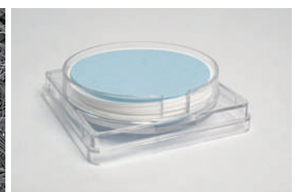
Membrane filters

NEWSTaR PP(polypropylene) membrane filter

Features and Advantages:
- Hydrophobic
- Wide chemical compatibility
- Low extractable levels

Applications:
- Aqueous and organic solvent filtration
- Depth filtration
- Ion chromatography
- Gas filtration





Specifications:

Wettability	Hydrophobic
pH Range	1-14
Pore Size	0.22，0.45, 1.0，3.0, 5.0μm
Color/Surface	White/Flat
Diameter	ϕ13，ϕ25，ϕ47，ϕ50，ϕ60，ϕ90mm

Order Information

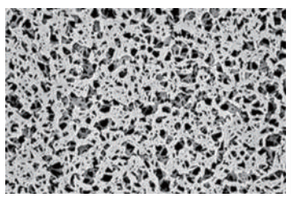
Catalog number	Description	Packaging (Pcs/Box)
NS30894702	PP disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	50
NS30894704	PP disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	50
NS30895002	PP disc membrane filter, Diameter: 50mm, Pore Size: 0.22μm	50
NS30895004	PP disc membrane filter, Diameter: 50mm, Pore Size: 0.45μm	50
NS30896002	PP disc membrane filter, Diameter: 60mm, Pore Size: 0.22μm	50
NS30896004	PP disc membrane filter, Diameter: 60mm, Pore Size: 0.45μm	50
NS30899002	PP disc membrane filter, Diameter: 90mm, Pore Size: 0.22μm	50
NS30899004	PP disc membrane filter, Diameter: 90mm, Pore Size: 0.45μm	50

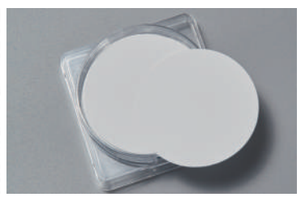
Membrane filters

NEWSTaR hydrophobic PVDF membrane filter

Features and Advantages:
- Hydrophobic
- Compatible with many organic solutions
- High strength and heat resistance

Applications:
- Filtration of organic solutions
- General filtration





Specifications:

Wettability	Hydrophobic
pH Range	1-8
Pore Size	0.22μm，0.45μm
Color/Surface	White/Flat
Diameter	ϕ13，ϕ25，ϕ47，ϕ50，ϕ60，ϕ90mm

Order Information

Catalog number	Description	Packaging (Pcs/Box)
NS30922502	Hydrophobic PVDF disc membrane filter, Diameter: 25mm, Pore Size: 0.22μm	50
NS30922504	Hydrophobic PVDF disc membrane filter, Diameter: 25mm, Pore Size: 0.45μm	50
NS30924702	Hydrophobic PVDF disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	50
NS30924704	Hydrophobic PVDF disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	50
NS30925002	Hydrophobic PVDF disc membrane filter, Diameter: 50mm, Pore Size: 0.22μm	50
NS30925004	Hydrophobic PVDF disc membrane filter, Diameter: 50mm, Pore Size: 0.45μm	50
NS30926002	Hydrophobic PVDF disc membrane filter, Diameter: 60mm, Pore Size: 0.22μm	50
NS30926004	Hydrophobic PVDF disc membrane filter, Diameter: 60mm, Pore Size: 0.45μm	50
NS30929002	Hydrophobic PVDF disc membrane filter, Diameter: 90mm, Pore Size: 0.22μm	50
NS30929004	Hydrophobic PVDF disc membrane filter, Diameter: 90mm, Pore Size: 0.45μm	50

Membrane filters

NEWSTaR polycarbonate track etched (PCTE) membrane filter

Features and Advantages:

- Absolute pore size and density allows for precise size separation
- Direct thickness and pore size measurements provide accurate characteristics
- Smooth, thin, glass-like surface is suitable for microscopy and cellular applications
- Superior strength allows for aggressive handling
- Low protein binding ensures clean results
- Resists chemical staining to ease microscopic visualization

Applications:

- Removal of red blood cells from plasma
- Flow control of reagents through assays
- Precise filtration and prefiltration
- Fuel testing
- Cytology
- Microscopy

Specifications:

Wettability	Hydrophilic
pH Range	3-11
Pore Size	0.22，0.45μm
Color/Surface	Semi-translucent/Flat
Diameter	ϕ47，ϕ50，ϕ90mm

Order Information

Catalog number	Description	Packaging (Pcs/Box)
PCTE4702	PCTE disc membrane filter, Diameter: 47mm, Pore Size: 0.22μm	100
PCTE4704	PCTE disc membrane filter, Diameter: 47mm, Pore Size: 0.45μm	100

Sample vials

Brief introduction

High quality sample vial is a key point to get reliable analysis results. All NEWSTAR sample vials, caps, septa are passed by strict physical and chemical tests to ensure quality and cleanliness. The test results show that the production, treatment and packaging of the sample vials, caps and septa are strictly controlled. Our products don’t contain the substances that affect the analysis and detection of the samples. We can provide a full range of sample vials, caps and septa，they are compatible with all autosamplers.

Sample vials selection guide

Material	Type	Coefficient of thermal expansion	Features
Borosilicate glass	7.0	(6.2-7.5) ×10^{-6}/K(20-300°C)	Economy type Competitive price For disposable test
Neutral glass	5.0	⩽5×10^{-6}/K(20-300°C)	Good price For test and sample storage

Septa selection guide

PTFE/ Silicone

- Recommended for multiple injections and sample storage
- Excellent resealing characteristics
- It has chemical compatibility of PTFE before piercing and chemical compatibility of silicone after piercing
- Used for most common HPLC and GC analyses, not as resistant to coring as PTFE/ Silicone/PTFE
- Temperature range: -40°C to 200°C
- Economical

PTFE/ Silicone /PTFE

- Recommended for multiple injections and sample storage
- Excellent resealing characteristics
- It has chemical compatibility of PTFE before piercing and chemical compatibility of silicone after piercing
- Temperature range: -40°C to 200°C
- Superior performance for ultra analysis, repeat injections, internal standards

Pre-slit PTFE/ Silicone

- Good ventilation to prevent the formation of vacuum in the sample vial, so as to achieve excellent s ampling reproducibility
- Eliminate the blockage of the bottom needle after sampling
- Good resealing characteristics
- Recommended for multiple injections
- Temperature range: -40°C to 200°C

Sample vials

8-425 screw top sample vial

- Sample vials with graduation and write-on spot for easy identification of samples;
- Two types for choice：High quality 5.0 type neutral glass；7.0 type low borosilicate glass is the first choice for flux analysis because of its high performance price ratio;
- Suitable for various Japanese autosamplers；
- Suitable for 5mm diameter vial inserts.

Ordering information of 8-425 Screw top sample vials

NSV8C72

NSV8A52

Catalog number	Description	Graduation and write-on spot	Package(pcs/pk)
NSV8C71	2ml clear narrow screw top vial,8-425, 11.6×32mm,7.0 type low borosilicate glass	Without	100
NSV8C72	2ml clear narrow screw top vial,8-425, 11.6×32mm,7.0 type low borosilicate glass	With	100
NSV8C51	2ml clear narrow screw top vial,8-425, 11.6×32mm,5.0 type neutral glass	Without	100
NSV8C52	2ml clear narrow screw top vial,8-425, 11.6×32mm,5.0 type neutral glass	With	100
NSV8A51	2ml amber narrow screw top vial,8-425, 11.6×32mm,5.0 type neutral glass	Without	100
NSV8A52	2ml amber narrow screw top vial,8-425, 11.6×32mm,5.0 type neutral glass	With	100

Ordering information of 8-425 Screw caps with septa

NSC8AH

NSC8AS

NSC8FH

Catalog number	Caps	Septa	Size	Package(pcs/pk)
NSC8AH	8-425 black screw PP cap with centre hole	White PTFE/red silicone	Φ8×1.5mm, Φ5.5mm centre hole	100
NSC8FH	8-425 black screw PP cap with centre hole	Natural PTFE/ white silicone	Φ8×1.5mm, Φ5.5mm centre hole	100
NSC8FHP	8-425 black screw PP cap with centre hole	Pre-slit natural PTFE/ white silicone	Φ8×1.5mm, Φ5.5mm centre hole	100
NSC8DH	8-425 black screw PP cap with centre hole	Red PTFE/ white silicone/ red PTFE	Φ8×1.5mm, Φ5.5mm centre hole	100
NSC8AS	8-425 black screw PP cap, closed-top	White PTFE/red silicone	Φ8×1.5mm, Φ5.5mm centre hole	100
NSC8FS	8-425 black screw PP cap, closed-top	Natural PTFE/ white silicone	Φ8×1.5mm, Φ5.5mm centre hole	100

Sample vials

9-425 screw top sample vial

- Used on all common autosamplers;
- Sample vials with graduation and write-on spot for easy identification of samples;
- Short thread high neck design makes it easier to be grabbed by autosamplers;
- Two types for choice：High quality 5.0 type neutral glass；7.0 type low borosilicate glass is the first choice for flux analysis because of its high performance price ratio;
- The wide opening of the cap can effectively prevent the risk caused by the deviation of the injection needle；
- Suitable for 6mm diameter vial inserts.

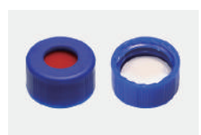
Ordering information of 9-425 Screw top sample vials

NSV9C71

NSV9A52

Catalog number	Description	Graduation and write-on spot	Package(pcs/pk)
NSV9C71	2ml clear 9mm screw top vial,11.6×32mm, 7.0 type low borosilicate glass	Without	100
NSV9C72	2ml clear 9mm screw top vial,11.6×32mm, 7.0 type low borosilicate glass	With	100
NSV9C51	2ml clear 9mm screw top vial,11.6×32mm, 5.0 type neutral glass	Without	100
NSV9C52	2ml clear 9mm screw top vial,11.6×32mm, 5.0 type neutral glass	With	100
NSV9A51	2ml amber 9mm screw top vial,11.6×32mm, 5.0 type neutral glass	Without	100
NSV9A52	2ml amber 9mm screw top vial,11.6×32mm, 5.0 type neutral glass	With	100
NSV9CP1	2ml PP sample vial,9mm screw top, 11.6×32mm	— —	100

Ordering information of 9-425 Screw caps with septa



NSC9AH

NSC9FH

NSC9FHP

Catalog number	Caps	Septa	Size	Package(pcs/pk)
NSC9AH	9mm blue screw PP cap with centre hole	White PTFE/red silicone	Φ9×1 mm, Φ6mm centre hole	100
NSC9FH	9mm blue screw PP cap with centre hole	Natural PTFE/ white silicone	Φ9×1 mm, Φ6mm centre hole	100
NSC9AHP	9mm blue screw PP cap with centre hole	Pre-slit white PTFE/ white silicone	Φ9×1 mm, Φ6mm centre hole	100
NSC9FHP	9mm blue screw PP cap with centre hole	Pre-slit natural PTFE/ white silicone	Φ9×1 mm, Φ6mm centre hole	100
NSC9DH	9mm blue screw PP cap with centre hole	Red PTFE/ white silicone/ red PTFE	Φ9×1 mm, Φ6mm centre hole	100
NSC9AS	9mm blue screw PP cap, closed-top	White PTFE/red silicone	Φ9×1 mm	100
NSC9FS	9mm blue screw PP cap, closed-top	Natural PTFE/ white silicone	Φ9×1 mm	100

Sample vials

Vial insert

· Suitable for the sample injection test of trace samples;
· Vial inserts with conical bottom has smaller residual volume than vial inserts with flat bottom ;
· Polymer feet can protect the injection needle and increase the liquid level for injection.

Ordering information of vial inserts

NSIF8

NSIC9

NSICP8

Catalog number	Description	Suitable for	Size	Package	Pcs/pk
NSIF8	250μL glass vial insert, flat bottom	8-425 Screw top sample vials	31×5 mm	Common plastic box	100
NSIC8	150μL glass vial insert without PP polymer feet , conical bottom	8-425 Screw top sample vials	29×5 mm	Common plastic box	100
NSICP8	150μL glass vial insert with PP polymer feet, conical bottom	8-425 Screw top sample vials	29×5 mm	Common plastic box	100
NSICP8A	150μL glass vial insert with PP polymer feet, conical bottom	8-425 Screw top sample vials	29×5 mm	Acrylic box	100
NSIF9	300μL glass vial insert, flat bottom	9mm/10mm/11mm sample vials	31×6 mm	Common plastic box	100
NSIC9	250μL glass vial insert without PP polymer feet , conical bottom	9mm/10mm/11mm sample vials	29×5.7 mm	Common plastic box	100
NSICP9	250μL glass vial insert with PP polymer feet , conical bottom	9mm/10mm/11mm sample vials	29×5.7 mm	Common plastic box	100
NSICP9A	250μL glass vial insert with PP polymer feet , conical bottom	9mm/10mm/11mm sample vials	29×5.7 mm	Acrylic box	100

Sample vials

10-425 screw top sample vial

· Vials have a 40% larger opening for easier sample preparation;
· High quality 5.0 type neutral glass;
· PP caps have wide chemical compatibility;
· Suitable for 6mm diameter vial inserts.

Ordering information of 10-425 screw top sample vials

NSV10C52

Catalog number	Description	Graduation and write-on spot	Package(pcs/pk)
NSV10C52	2ml clear 10-425 screw top vial, 11.6×32mm,5.0 type neutral glass	With	100
NSV10A52	2ml amber 10-425 screw top vial, 11.6×32mm,5.0 type neutral glass	With	100

Ordering information of 10-425 screw caps with septa

NSC10AH

Catalog number	Caps	Septa	Size	Package(pcs/pk)
NSC10AH	10-425 black screw PP cap with centre hole	White PTFE/red silicone	Φ10×1.5mm, Φ7mm centre hole	100
NSC10A1H	10-425 black screw PP cap with centre hole	Red PTFE/ white silicone	Φ10×1.5mm, Φ7mm centre hole	100
NSC10AS	10-425 black screw PP cap with centre hole	Natural PTFE/ natural silicone	Φ10×1.5mm	100

Sample vials

11-425 crimp top sample vial

- Sample vials with graduation and write-on spot for easy identification of samples;
- Two types for choice：High quality 5.0 type neutral glass；7.0 type low borosilicate glass is the first choice for flux analysis because of its high performance price ratio;
- The aluminum caps must be installed on the sample vials with the crimpers. At present, the crimp top aluminum cap has the best sealing effect in all of the caps, which is commonly used for heating analysis such as GC, HPLC, etc；
- Suitable for 6mm diameter vial inserts.

Ordering information of 11-425 crimp top sample vials

NSV11C72

NSV11A51

Catalog number	Description	Graduation and write-on spot	Package(pcs/pk)
NSV11C71	2ml clear 11mm crimp top vial,11.6×32mm, 11.6×32mm,7.0 type low borosilicate glass	Without	100
NSV11C72	2ml clear 11mm crimp top vial,11.6×32mm, 11.6×32mm,7.0 type low borosilicate glass	With	100
NSV11C51	2ml clear 11mm crimp top vial,11.6×32mm, 5.0 type neutral glass	Without	100
NSV11C52	2ml clear 11mm crimp top vial,11.6×32mm, 5.0 type neutral glass	With	100
NSV11A51	2ml amber 11mm crimp top vial,11.6×32mm, 5.0 type neutral glass	Without	100
NSV11A52	2ml amber 11mm crimp top vial,11.6×32mm, 5.0 type neutral glass	With	100
NSV11CP1	2ml PP sample vial,11mm crimp top, 11.6×32mm	— —	100

Ordering information of 11-425 crimp top caps with septa

NSC11AH

NSC11DH

Catalog number	Caps	Septa	Size	Package(pcs/pk)
NSC11AH	11mm crimp top silvery aluminum cap with centre hole	White PTFE/ red silicone	Φ11×1mm, Φ5.5mm centre hole	100
NSC11FH	11mm crimp top silvery aluminum cap with centre hole	Natural PTFE/ white silicone	Φ11×1mm, Φ5.5mm centre hole	100
NSC11DH	11mm crimp top silvery aluminum cap with centre hole	Red PTFE/ white silicone/ red PTFE	Φ11×1mm, Φ5.5mm centre hole	100
NSC11A1H	11mm crimp top silvery aluminum cap with centre hole (3 points non-slip)	White PTFE/ red silicone	Φ11×1mm, Φ5.5mm centre hole	100

Sample vials

13-425 screw top sample vial

- 13-425 standard screw top；
- Sample vials with graduation and write-on spot for easy identification of samples;
- Two types for choice: Clear 7.0 type low borosilicate glass vial is suitable as cleaning vial; Amber high quality 5.0 type neutral glass vial is suitable as storage vial.

Ordering information of 13-425 screw top sample vials

NSV4C72

Catalog number	Description	Graduation and write-on spot	Package(pcs/pk)
NSV4C71	4ml clear screw top vial,13-425, 14.5×45mm,7.0 type low borosilicate glass	Without	100
NSV4C72	4ml clear screw top vial,13-425,14.5×45mm, 7.0 type low borosilicate glass	With	100
NSV4A51	4ml amber screw top vial,13-425,14.5×45mm, 5.0 type neutral glass	Without	100
NSV4A52	4ml amber screw top vial,13-425,14.5×45mm, 5.0 type neutral glass	With	100

Ordering information of 13-425 screw caps with septa

NSC13AH

Catalog number	Caps	Septa	Size	Package(pcs/pk)
NSC13AH	13-425 black screw PP cap with centre hole	White PTFE/ red silicone	Φ13×1.5mm, Φ8.5mm centre hole	100
NSC13BB	13-425 black screw PP cap, closed top	Natural PTFE/ natural silicone	Φ13×1.5mm	100
NSC13BH	13-425 black screw PP cap with centre hole	Natural PTFE/ white silicone	Φ13×1.5mm, Φ8.5mm centre hole	100

Sample vials

18mm screw thread headspace vial

- Wide compatibility, suitable for multi-functional automatic processing platform;
- The screw cap is made of magnetic absorption material, which can be absorbed by the automatic mechanical arm. At the same time, the surface is electroplated to ensure that it will not rust after use;
- The rounded bottom is more sturdy and more resistant to the high pressure within the vial during the heating process.

Ordering information of 18mm screw thread headspace vials

NSVA20C7

Catalog number	Description	Package(pcs/pk)
NSVA10C7	10ml clear precision screw thread headspace vial, round bottom, 22.5×46mm,7.0 type low borosilicate glass	100
NSVA20C7	20ml clear precision screw thread headspace vial,round bottom, 22.5×75.5mm,7.0 type low borosilicate glass	100
NSVA20C5	20ml clear precision screw thread headspace vial, round bottom, 22.5×75.5mm,5.0 type neutral glass	100
NSVA20A7	20ml amber precision screw thread headspace vial, round bottom, 22.5×75.5mm,7.0 type low borosilicate glass	100

Ordering information of 18mm screw thread headspace caps with septa

NSC18CSH

Catalog number	Caps	Septa	Size	Package(pcs/pk)
NSC18CSH	Slivery magnetic precision screw metal cap with centre hole	Blue PTFE/white silicone	Φ18×1.5mm, Φ8mm centre hole	100
NSC18BS	Black screw PP cap with centre hole	Natural PTFE/ natural silicone	Φ18×1.5mm, Φ8mm centre hole	100

Sample vials

20mm crimp top headspace vial

- Suitable for multi-functional automatic processing platform;
- Magnetic absorption crimp top cap is available;
- The rounded bottom is more sturdy and more resistant to the high pressure within the vial during the heating process;
- The flat bottom sample vial can achieve the highest heating efficiency in manual headspace injection, but it is only suitable for some types of instruments;
- Bevelled top design can effectively prevent leakage under high pressure.

Ordering information of 20mm crimp top headspace vials

NSVH20C7

Catalog number	Description	Package(pcs/pk)
NSVH10C7	10ml clear crimp top headspace vial, flat bottom, 22.5×46mm,7.0 type low borosilicate glass	100
NSVH10C5	10ml clear crimp top headspace vial, flat bottom, 22.5×46mm,5.0 type neutral glass	100
NSVH20C7	20ml clear crimp top headspace vial, flat bottom, 22.5×75.5mm,7.0 type low borosilicate glass	100
NSVH20C5	20ml clear crimp top headspace vial, flat bottom, 22.5×75.5mm,5.0 type neutral glass	100
NSVH20C5R	20ml clear crimp top headspace vial, round bottom, 23×75.5mm,5.0 type neutral glass	100
NSVH20A5	20ml amber crimp top headspace vial, flat bottom, 22.5×75.5mm, 5.0 type neutral glass	100

Ordering information of 20mm crimp top headspace caps with septa

NSC20BDH

Catalog number	Caps	Septa	Size	Package(pcs/pk)
NSC20BSH	Slivery crimp top aluminum cap with centre hole	Natural PTFE/ Natural silicone	Φ20×3mm, Φ10mm centre hole	100
NSC20BDH	Double colors (slivery metal/ blue aluminum) magnetic crimp top cap with centre hole	Natural PTFE/ Natural silicone	Φ20×3mm, Φ10mm centre hole	100
NSC20BS	Slivery crimp top aluminum cap with centre hole	White PTFE/ Blue silicone	Φ20×3mm, Φ10mm centre hole	100

Sample vials

24-400 screw top storage vial

· 20ml,40ml,60ml storage vials are available;
· Keep the pH value unchanged;
· Ensure that the samples don' t volatilize in the storage vials ;
· Amber vials are suitable for the low photo-stability samples;
· Caps with the centre hole has sealing of closed-top caps before piercing.

Ordering information of 24-400 screw top storage vials

NSV20A7

NSV40A7

NSV60A7

Catalog number	Description	Package(pcs/pk)
NSV20C7	20ml clear screw top storage vial,27.5×57mm, 7.0 type low borosilicate glass	100
NSV20A7	20ml amber screw top storage vial,27.5×57mm, 7.0 type low borosilicate glass	100
NSV40C7	40ml clear screw top storage vial,27.5×95mm, 7.0 type low borosilicate glass	100
NSV40A7	40ml amber screw top storage vial,27.5×95mm, 7.0 type low borosilicate glass	100
NSV60C7	60ml clear screw top storage vial,27.5×140mm, 7.0 type low borosilicate glass	100
NSV60A7	60ml amber screw top storage vial,27.5×140mm, 7.0 type low borosilicate glass	100

Ordering information of 24-400 screw top storage caps with septa

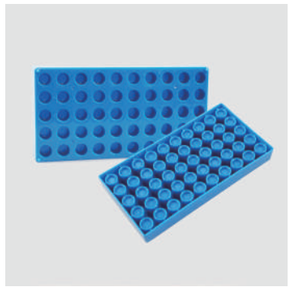
NSC22BS

NSC22DH

Catalog number	Caps	Septa	Size	Package(pcs/pk)
NSC22BS	Black screw top PP cap, closed-top	Natural PTFE/ Natural silicone	Φ22×3mm	100
NSC22BH	Black screw top PP cap with centre hole	Natural PTFE/ Natural silicone	Φ22×3mm, Φ15mm centre hole	100
NSC22DS	White screw top PP cap, closed-top	Beige PTFE/ Beige silicone	Φ22×3mm	100
NSC22DH	White screw top PP cap with centre hole	Beige PTFE/ Beige silicone	Φ22×3mm, Φ15mm centre hole	100
NSC22DW	White screw top PP cap with centre hole	Natural PTFE/ Natural silicone	Φ22×3mm, Φ15mm centre hole	100

Sample vials

Related accessories



Vials Rack

· 50 holes;
· Suitable for 2ml and 4ml sample vials ;
· Polypropylene(PP);
· Strong structure, stable standing

Ordering information of vials rack

Catalog number	Color	Suitable for	Material	Holes	Package(pcs/pk)
NSR002	Blue	2ml vial	PP	50	1
NSR004	Blue	4ml vial	PP	50	1

Handheld crimpers & decappers

· Lightweight and streamlined design help to eliminate hand pain;
· Durable: Crimpers for 11mm caps can be used at least 100000 times; Crimpers for 20mm caps can be used at least 60000 times.

Ordering information of Handheld Crimpers & Decappers

Catalog number	Description	Suitable for	Package(pcs/pk)
NSHD2S	Handheld crimper	11mm crimp top vials	1
NSHD2O	Handheld decapper	11mm crimp top vials	1
NSHD20S	Handheld crimper	20mm crimp top vials	1
NSHD20O	Handheld decapper	20mm crimp top vials	1

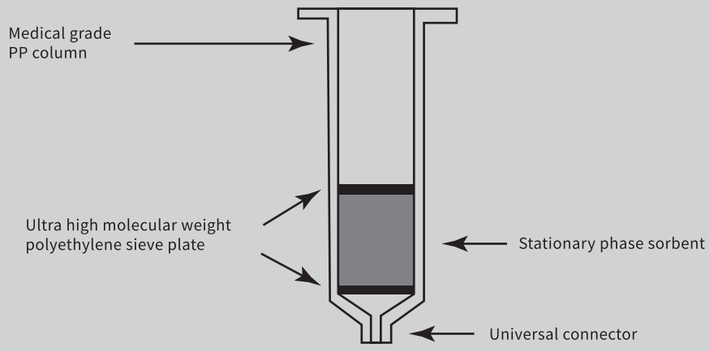
SPE

Introduction

The primary goal of solid phase extraction (SPE) is the selective extraction of the components of interest from a complex sample or much larger sample volume prior to actual analysis (e.g. HPLC, GC). As SPE works on the principle of liquid chromatography, this is achieved by using strong but reversible interactions between the analyte and surface of the stationary phase. Typical interactions are hydrophobic (the van der Waals force), polar (hydrogen bonding, dipole-dipole interaction) or ion exchange interactions. Interaction between the stationary phase and matrix should not occur. It is thus meaningful to carry out appropriate sample pre-treatment as this emphasizes the differences in chemical properties between the substance to be analyzed and matrix components so that these are then achieved by altering the pH or the ionic strength of the sample solution.

Under these conditions, the analyte is enriched as a narrow zone on the stationary phase. Subsequent to a washing step, which serves to remove possible adsorbed sample components, the actual selective elution of the analyte takes place.

Components of SPE



SPE principles and techniques

SPE is a chromatographic technique first developed during the mid-1980s and is increasingly used for sample pre-treatment. The main objectives of SPE are removal of interfering matrix components and selective concentration and isolation of the analytes. This is done either by retaining the substance of interest and washing off everything else or by retaining the interfering substances and eluting the product of interest. Compared to traditional liquid / liquid extraction, SPE is more rapid, uses less solvent, eliminates emulsions, and can be automated. Additionally, a sample preparation task can often be solved more specifically by using SPE, since different interactions of the analyte with the adsorbent are possible, and methods can be optimized by adjusting chromatographic conditions. SPE offers a multitude of adsorbents for polar, hydrophobic and / or ionic interactions and has been widely used in medicine, food, environmental protection, commodity inspection, cosmetics and other fields. The most popular SPE products are: Normal Phase, Reversed Phase, Ion Exchange Phase and Mix Mode. It is important to select the most suitable product for each application and sample.

SPE

Silica based SPE

C18	Silica	NH_2
PSA	SCX	SAX

SPE-silica based SPE

C18

C18 is the most broadly used SPE cartridge. It can be used to adsorb non-polar, slightly polar and mid-polar compounds. Polar materials such as salt cannot be retained on the sorbent, which makes C18 an excellent choice for desalting samples. In addition, non-polar and slightly polar disruptors in matrix such as fats, PAHs and phthalates can be retained by the sorbent, leaving ionic analytes eluted in the collector for reconstitution.

- Sorbent:C18
- Aimed compound:non-polar, slightly polar and mid-polar compounds
- Sample solvents:aqueous solvents or aqueous solvents containing a small amount of methanol

- Application:For reversed phase extraction of non-polar to moderately polar compounds, such as antibiotics, barbiturates, benzodiazepines, caffeine, drugs, dyes, essential oils, fat-soluble vitamins, fungicides, herbicides, pesticides, hydrocarbons, parabens, phenols, phthalate esters, steroids, surfactants, theophylline and water-soluble vitamins.

Ordering information

Catalog number	Description	Package(pcs/pk)
50C1850006	C18 SPE column,500mg/6ml	30

Silica

Silica is the most polar SPE sorbent. It is very effective for separating compounds with similar structures and extracting polar compounds in non-polar solvents. In addition, the silica surface silanols have slight anion exchange properties that can be used to remove organic acids and phenols in extracts.

- Sorbent:Silica
- Aimed compound: mid-polar compounds and polar compounds
- Sample solution:non-polar solvents

- Application:Extract polar compounds from non-polar matrix.
  Remove polar hydrocarbons, organic acids, and phenols in extracts.
  Separate compounds with very similar structures (isomers)

Ordering information

Catalog number	Description	Package(pcs/pk)
50SI50006	Silica SPE column,500mg/6ml	30

SPE-silica based SPE

NH_2

NH_2 has both polar and weak anion exchange interactions. It can effectively absorb compounds with a polar functional group (-OH, -NH_2, -SH, etc.) by hydrogen bonding from non-polar solvents such as hexane. In addition, it has weaker anion exchange property than SAX (a quaternary amine sorbent that is always charged) and is therefore an excellent choice for retention of very strong anions that are always irreversibly adsorbed on a SAX sorbent, such as sulfonic acid.

Application:
- Extract polar compounds from non-polar matrix.
- Remove polar hydrocarbons, organic acids, and phenols in extracts.
- Separate compounds with very similar structures (isomers).

Ordering information

Catalog number	Description	Package(pcs/pk)
50$NH_2$50006	NH2 SPE column,500mg/6ml	30

PSA

PSA sorbent contains two different amino groups, one primary and one secondary. It gives comparatively higher pKa and ionic capacity relative to NH2. The PSA sorbent is an excellent choice for extracting polar compounds from non-polar solvents. The compounds that are retained too strongly on a NH2 sorbent can be effectively eluted on a PSA sorbent. In addition, the PSA functional group is a very effective bidentate ligand in chelation applications.

Application:
- Extract polar compounds from non-polar matrix.
- Remove polar hydrocarbons, organic acids, and phenols in extracts.
- Separate compounds with very similar structures (isomers).

Ordering information

Catalog number	Description	Package(pcs/pk)
50PSA50006	PSA SPE column,500mg/6ml	30

SPE-silica based SPE

SCX

SCX sorbent has benzenesulfonic acid as a bonded functional group with a very low pKa. The presence of the benzene ring in the functional group increases its potential for non-polar interaction. The two properties are quite useful in the absorption of cationic organic compounds from aqueous systems where non-polar compounds are seen.

SCX

Application:
· Basic compounds in aqueous solution

Ordering information

Catalog number	Description	Package(pcs/pk)
50SCX50006	SCX SPE column,500mg/6ml	30

SAX

SAX sorbent has trimethylaminopropyl as a bonded functional group with a very high pKa. The presence of the benzene ring in the functional group increases its potential for non-polar interaction. The two properties are quite useful in the absorption of anionic organic compounds from aqueous systems where non-polar compounds are seen.

SAX

Application:
· Carboxylic acids in aqueous solution.

Ordering information

Catalog number	Description	Package(pcs/pk)
50SAX100006	SAX SPE column,500mg/6ml	30

SPE

Inorganic SPE

Florisil | GCB | Alumina | PA

Florisil

Florisil is a highly selective adsorbent that has extensive utility in sample preparation, preparative and analytical chromatography. This sorbent is unique because it is comprised of extremely white, hard-powdered synthetic magnesium-silica gel.The main components of the sorbent are SiO_2(84%),MgO (15.5%),Na_2SO (0.5%) .

Florisil

Application:
- For extraction of drugs, dyes, herbicides, pesticides, nitrogen compounds, organic acids, phenols, steroids, PCBs, and PAHs.

Ordering information

Catalog number	Description	Package(pcs/pk)
50FL50006	Florisil SPE column,500mg/6ml	30
50FL100006	Florisil SPE column,1000mg/6ml	30

GCB

GCB SPE columns are packed with ultrapure graphitized carbon particles that have been optimized for the absorption of pigments in food, fruits, vegetables, and small organic residues in wastewater. The powerful retention mechanisms of these products are appropriate for a broad range of analytes. In addition, careful manufacturing techniques result in lower carbon fines on the wall of the device.

GCB

Application:
- In agriculture residues analysis, used to remove pigments in fruits and vegetables.
- For purification of samples such as groundwater, fruits, and vegetables.

Ordering information

Catalog number	Description	Package(pcs/pk)
50GCB50006	GCB SPE column,500mg/6ml	30
50GCB25006	GCB SPE column,250mg/6ml	30

Alumina

Alumina, like silica, is an extremely polar sorbent. The alumina surface tends to be slightly more stable under high pH conditions than unfunctionalized silica. The small particle size of the alumina range ensures high extraction efficiency, even when small bed masses are used.

Alumina

Features:
- Available in acidic (A), basic (B), and neutral (N) formats
  High extraction efficiency
- Better high pH stability than unfunctionalized silica

Ordering information

Catalog number	Description	Package(pcs/pk)
50NAL100006	Alumia N SPE column,1000mg/6ml	30
50AAL50006	Alumia A SPE column,500mg/6ml	30
50BAL200012	Alumia B SPE column,2000mg/12ml	30

PA

Polyamide(PA) is polymerized from amide monomer. The amide bond is easy to generate hydrogen bond with other polar bond groups. The PA SPE column can remove artificial pigments and other interfering substances in the sample.

PA

Ordering information

Catalog number	Description	Package(pcs/pk)
50PA50006	PA SPE column,500mg/6ml	30

SPE

Polymeric SPE

HLB	MCX	WCX
MAX	WAX	

HLB

HLB based on co-polymerization of N-vinylpyrrolidonre (hydrophilic) and divinylbenzene (hydrophobic), is designed for a broad range of compounds from aqueous samples. Due to its unique features such as monodispersed particles, good chemical and meachnical stability and optimized surface chemistry, SelectCore HLB is popularly employed in the sample preparation for advanced liquid and gas chromatography.

HLB

Application:
- Pharmaceutical residues in animal tissue, such as tetracyclines, chloromycetin, sulfonamides, abamectin, macrolide antibiotics, nitrofurans, and pesticides in vegetables.
- Environmental samples, such as PAHs, PAEs, phenols, and endocrine disruptors.
- Biological samples, pharmaceuticals, and metabolites in plasma, serum, or urine.

Ordering information

Catalog number	Description	Package(pcs/pk)
50HLB06003	HLB SPE column,60mg/3ml	50
50HLB20006	HLB SPE column,200mg/6ml	30
50HLB50006	HLB SPE column,500mg/6ml	30

SPE-polymeric SPE

MCX

MCX is a highly cross-linked PVP-DVB copolymer with sulfonic acid as the functional group. It has both non-polar and cation exchange interactions and is therefore an excellent choice for extraction of basic organic compounds.

MCX

Application:
- Basic compounds, such as sulfonamides and clenbuterol.
- Biological samples, pharmaceuticals, and metabolites in plasma, serum, or urine.

Ordering information

Catalog number	Description	Package(pcs/pk)
50MCX06003	MCX SPE column,60mg/3ml	50

WCX

WCX is a highly cross-linked PVP-DVB copolymer with carboxyl as the functional group. It has both non-polar and weak cation exchange interactions and is therefore an excellent choice for extraction of strong basic compounds.

WCX

Application:
- Strong basic compounds, quaternary ammonium salts.

Ordering information

Catalog number	Description	Package(pcs/pk)
50WCX06003	WCX SPE column,60mg/3ml	50

SPE-polymeric SPE

MAX

MAX is a highly cross-linked PVP-DVB copolymer with a quaternary amino as the functional group. It has both non-polar and anion exchange interactions and is therefore an excellent choice for extraction of acidic organic compounds, especially those containing carboxyl and phenolic hydroxy.

MAX

Application:
· Compounds with groups as carboxyl and phenolic hydroxyl.

Ordering information

Catalog number	Description	Package(pcs/pk)
50MAX06003	MAX SPE column,60mg/3ml	50
50MAX20006	MAX SPE column,200mg/6ml	30

WAX

WAX is a highly cross-linked PVP-DVB copolymer with piperazine as the functional group. It has both non-polar and weak anion exchange interactions and is therefore an excellent choice for extraction of strong acidic compounds.

WAX

Application:
· For purification of strong acidic compounds.

Ordering information

Catalog number	Description	Package(pcs/pk)
50WAX15006	WAX SPE column,150mg/6ml	30

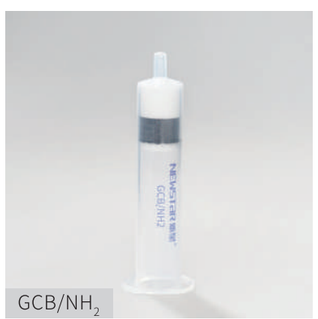
SPE

Composite SPE

GCB/NH_2

GCB/NH_2

GCB/NH_2 SPE columns are packed with ultrapure graphitized carbon particles and NH_2 sorbents.So GCB/NH_2 SPE column has advantages of both materials.



GCB/NH_2

Application:
· Widely used in analysis of pesticide residues (many different varieties) in foods
· To remove pigments, fatty acids, and phenols from analytes

Ordering information

Catalog number	Description	Package(pcs/pk)
50GN50006	GCB/NH2 SPE column,500mg/6ml	30

SPE

Specialty SPE

BAP SPE column is specially designed for the extraction and purification of benzo(a)pyrene in food.BAP SPE column has the characteristics of simple method, good purification effect, and less solvent use.

DPT SPE composite column is specially designed for purifying agricultural residues in tea. Compared with conventional columns, DPT SPE columns have the characteristics of fast dripping rate, good purification effect, and high recovery rate.

SDR SPE column is specially designed for the extraction and detection of Sudan in food. SDR SPE column is characterized by high sensitivity, good reproducibility, low reagent consumption, high oil removal rate, etc.

SDR

Ordering information

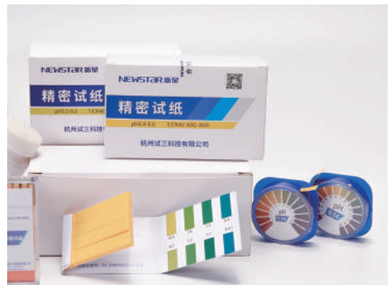
Catalog number	Description	Package(pcs/pk)
50BAP50006	BAP SPE column,500mg/6ml	30
50DPT100006	DPT SPE column,1000mg/6ml	30
50DPT200012	DPT SPE column,2000mg/12ml	20
50SDR50006	SDR SPE column,500mg/6ml	30

Test papers

pH indicator paper

pH indicator papers have been on the market for decades and are the appreciated standard for many applications. NEWSTaR pH indicator papers make it easy to measure pH value without the use of any instruments. For each pH value , NEWSTAR pH indicator papers show a single color which can be matched with the color scale at intervals of 0.2–1 pH unit. The booklet format is particularly suitable for industrial and educational use as it is economical.

Universal indicator papers have been impregnated with a mixture of several indicators. Universal indicator papers with four different segments are plastic support strips. The resulting combination of color differences gives an extremely clear and accurate pH value.



Advantages:

- Quick and easy method without sample preparation
- Brilliant color scales ensure reliable results
- Inexpensive

Test papers

Ordering information—pH indicator paper

Universal indicator paper

Catalog number	pH range	Graduation	Size	Presentation
NS401014B	1-14	1-2-3-4-5-6-7-8-9-10-11-12-13-14	9mm×60mm	80strips/booklet
NS401014H	1-14	1-2-3-4-5-6-7-8-9-10-11-12-13-14	9mm×70mm	5 booklets of 20 strips
NS401014T	1-14	1-2-3-4-5-6-7-8-9-10-11-12-13-14	9mm×70mm	10 booklets of 20 strips
NS401014R	1-14	1-2-3-4-5-6-7-8-9-10-11-12-13-14	8mm×5m	1reel/box
NS400014F	0-14	0-1-2-3-4-5-6-7-8-9-10-11-12-13-14	5mm×76mm	4 different segments, 100 strips/ box
NS400014H	0-14	0-1-2-3-4-5-6-7-8-9-10-11-12-13-14	9mm×70mm	5 booklets of 20 strips
NS400014T	0-14	0-1-2-3-4-5-6-7-8-9-10-11-12-13-14	9mm×70mm	10 booklets of 20 strips
NS400014R	0-14	0-1-2-3-4-5-6-7-8-9-10-11-12-13-14	8mm×5m	1reel/box
NS400011R	0-11	0-1-2-3-4-5-6-7-8-9-10-11	8mm×5m	1reel/box
NS401010R	1-10	1-2-3-4-5-6-7-8-9-10	8mm×5m	1reel/box

Special indicator paper

Catalog number	pH range	Graduation	Size	Presentation
NS400550B	0.5-5.0	0.5-1.0-1.5-2.0-2.5-3.0-3.5-4.0-4.5-5.0	9mm×60mm	80strips/booklet
NS400550H	0.5-5.0	0.5-1.0-1.5-2.0-2.5-3.0-3.5-4.0-4.5-5.0	9mm×70mm	5 booklets of 20 strips
NS403854B	3.8-5.4	3.8-4.1-4.4-4.6-4.8-5.1-5.4->5.4	9mm×60mm	80strips/booklet
NS403854H	3.8-5.4	3.8-4.1-4.4-4.6-4.8-5.1-5.4->5.4	9mm×70mm	5 booklets of 20 strips
NS405590B	5.5-9.0	5.5-6.0-6.5-7.0-7.5-8.0-8.5-9.0	9mm×60mm	80strips/booklet
NS405590H	5.5-9.0	5.5-6.0-6.5-7.0-7.5-8.0-8.5-9.0	9mm×70mm	5 booklets of 20 strips
NS406480B	6.4-8.0	6.4-6.7-7.0-7.2-7.5-7.7-8.0-＞8.0	9mm×60mm	80strips/booklet
NS405470B	5.4-7.0	＜5.4-5.4-5.8-6.2-6.4-6.7-7.0-＞7.0	9mm×60mm	80strips/booklet
NS401430B	1.4-3.0	1.4-1.7-1.9-2.1-2.5-3.0	9mm×60mm	80strips/booklet
NS408210B	8.2-10.0	8.2-8.5-8.8-9.0-9.3-9.7-10.0->10.0	9mm×60mm	80strips/booklet
NS409513B	9.5-13.0	9.5-10.0-10.5-11.0-11.5-12.0-12.5-13.0	9mm×60mm	80strips/booklet
NS402747B	2.7-4.7	2.7-3.1-3.5-3.9-4.3-4.7	9mm×60mm	80strips/booklet
NS406984B	6.9-8.4	6.9-7.2-7.5-7.8-8.1-8.4	9mm×60mm	80strips/booklet

Test papers

Acid-alkali indicator paper

Acid-Alkali indicator papers are the pH indicator papers with no color charts.

Litmus paper blue, litmus paper red and litmus paper neutral

Litmus papers made from high purity litmus to secure high sensitivity and clear color change. They are widely used in general tests for acid or alkaline reactions. The change occurs around pH 5-8. Litmus paper blue changes color to red when the liquid is acidic. Litmus paper red changes color to blue when the liquid is alkali. Litmus papers are ideal for educational use.

- Litmus paper blue
- Litmus paper neutral
- Litmus paper red

Congo red paper

Congo red paper changes color from blue to red in the range pH 3-5. Congo red paper is used to determinate the neutralization point in weak alkali/strong acid rea

Phenolphthalein paper

Phenolphthalein paper is white. It changes color to red at pH 10 and changes color to pink at pH 8.3. It is usually used in the determination of the neutralization point in strong alkali/weak acid reactions.

Phenol red paper

Phenol red paper changes to yellow at pH 6.7 and becomes red at pH 8.4.It’ s useful for the determination of the weak acidity or weak alkalinity of the solution.

Methyl orange paper

Methyl orange paper changes to red at pH 3.1 and becomes yellow at pH 4.4.It’ s useful for the determination of the acidity of the solution.

Ordering information—acid-alkali indicator paper

Ordering information

Catalog number	Product	pH range	Size	Presentation
NS40LRB	Litmus paper red	pH <5 red />8 blue	9mm×60mm	80strips/booklet
NS40LRH	Litmus paper red	pH <5 red />8 blue	9mm×70mm	5 booklets of 20 strips
NS40LRT	Litmus paper red	pH <5 red />8 blue	9mm×70mm	10 booklets of 20 strips
NS40LRR	Litmus paper red	pH <5 red />8 blue	8mm×5m	1reel/box
NS40LBB	Litmus paper blue	pH <5 red />8 blue	9mm×60mm	80strips/booklet
NS40LBH	Litmus paper blue	pH <5 red />8 blue	9mm×70mm	5 booklets of 20 strips
NS40LBT	Litmus paper blue	pH <5 red />8 blue	9mm×70mm	10 booklets of 20 strips
NS40LBR	Litmus paper blue	pH <5 red />8 blue	8mm×5m	1reel/box
NS40LNH	Litmus paper neutral	pH <5 red />8 blue	9mm×70mm	5 booklets of 20 strips
NS40LNT	Litmus paper neutral	pH <5 red />8 blue	9mm×70mm	10 booklets of 20 strips
NS40LNR	Litmus paper neutral	pH <5 red />8 blue	8mm×5m	1reel/box
NS40CRH	Congo red paper	pH <3 blue />5 red	9mm×70mm	5 booklets of 20 strips
NS40PTH	Phenolphthalein paper	pH＜8.3white/pH ﹥10red	9mm×70mm	5 booklets of 20 strips
NS40PRH	Phenol red paper	pH＜6.7yellow/pH ﹥8.4red	9mm×70mm	5 booklets of 20 strips
NS40MOH	Methyl orange paper	pH＜3.1 red /pH ﹥4.4 yellow	9mm×70mm	5 booklets of 20 strips

Specialized test paper

Lead acetate paper:

Lead acetate paper is useful for the detecting hydrogen sulfide. When wetted with distilled water, lead acetate paper can detect as little as 5 ppm of H2S or in a gas stream or in the atmosphere. The paper will turn black if there is H2S in a gas stream or in the atmosphere.

Starched &Potassium iodide paper:

Starched &Potassium iodide paper is widely used for detecting oxidizing agents(e.g. Cl2, Br2, H2O2, HNO2 etc.). In acid solution, oxidizing agents react with the iodide in the test paper, then the paper will turn blue.

Cobalt chloride paper:

When exposed to moisture in the air, the color of the cobalt chloride paper will change from blue to pink. So cobalt chloride paper is used for detecting the humidity in air.

Methyl violet paper:

Methyl violet paper changes to blue or green if there are free mineral acids in the vinegar with light color.

Thymol blue paper

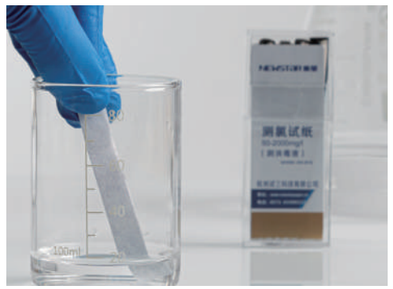
Purple spots will appear on the thymol blue paper if there are free mineral acids in the vinegar with deep color.

Turmeric paper

Turmeric papers is widely used for detecting boric acid or borates. Turmeric paper will turn blue if there is boric acid or borate in the solution.

Test papers

Specialized test paper



Chlorine test paper

Total residual chlorine exists in water in the form of free chlorine,chloramines and organic chloramines. Chlorine test paper is used for detecting the concentration of total residual chlorine in the water.

Residual chlorine test paper

Residual chlorine exists in water in the form of hypochlorite, hypochlorite ion and elemental chlorine. Residual chlorine test paper is used for detecting the concentration of residual chlorine in the water.

Daily test paper

Daily test papers with two different segments are plastic support strips. The resulting combination of color differences gives an extremely clear and accurate pH value. Diagnostic test papers with high stability and sensitivity are widely used for the detection of pH values of saliva，urine，drinking water，cosmetics and so on in daily life. The pH range of daily test paper is 4.0 to 9.0. These papers show a single color which can be matched with the color scale at intervals of 0.25–0.5pH unit.

Body fluid test paperr

Body fluid test papers are used for the detection of pH values of saliva，urine and so on. If the pH value is out of the normal pH range, there will be inflammations in the human body.

Test papers

Ordering information—specialized test paper

Ordering Information

Catalog number	Product	Range	Graduation	Presentation	Presentation
NS40LAH	Lead acetate paper	--	--	9mm×70mm	5 booklets of 20 strips
NS40PIH	Starched &Potassium iodide paper	--	--	9mm×70mm	5 booklets of 20 strips
NS40CCH	Cobalt chloride paper	--	--	9mm×70mm	5 booklets of 20 strips
NS40MVH	Methyl violet paper	--	--	9mm×70mm	5 booklets of 20 strips
NS40TBH	Thymol blue paper	--	--	9mm×70mm	5 booklets of 20 strips
NS40TMH	Turmeric paper	--	--	9mm×70mm	5 booklets of 20 strips
NS40CT12H	Chlorine Test Papers	10-2000ppm	10-25-50-100-150-200-300-500-1000-2000mg/L	9mm×70mm	5 booklets of 20 strips
NS40CT12R		10-2000ppm	10-25-50-100-150-200-300-500-1000-2000mg/L	8mm×5m	1reel/box
NS40CT52H		50-2000ppm	50-100-150-200-500-1000-2000mg/L	9mm×70mm	5 booklets of 20 strips
NS40CT01H	Residual chlorine Test Paper	0-10ppm	0-0.5-1-3-5-10mg/L	9mm×70mm	100strips/box
NS40CT02H		0-25ppm	0-0.5-1-3-5-10-25mg/L	9mm×70mm	100strips/box
NS40DTH	Daily test paper	pH4.0-9.0	4.0-4.5-5.0-5.5-5.75-6.0-6.25-6.5-6.75-7.0-7.25 7.5-8.0-8.5-9.0	5mm×75mm	2 different segments, 100strips/box
NS40BFH	Body fluid test paper	pH4.5-7.5	4.5-5.0-5.5-6.0-6.5-7.0-7.5	9mm×70mm	5 booklets of 20 strips

Life sciences

Western blotting

Blotting paper

These papers are made of cotton linters only with α-cellulose content of > 98%. These highly pure papers are not only ideal for blotting and chromatography, but also for a wide range of absorption applications like those common in the life sciences and diagnostics

Specifications

Grade	ZD3 chr	NSWB08
Thickness	0.34mm	0.8mm
Capillary rise	130mm/30min	180mm/30min
Water absorption	360mg/cm2 Middle	900g/m^2, High
Application	Electrotransfer	Semi-dry blotting

Ordering Information

Catalog number	Description	Quantity/pack
NS10ZD31114	ZD3 chr，11cm x 14cm	100 sheet
NS10ZD31214	ZD3 chr，2cm x 14cm	100 sheet
NS10ZD32020	ZD3 chr，20cm x 14cm	100 sheet
NS10NSWB084657	NSWB08，46cm x 57cm	25 sheet
NS10NSWB082530	NSWB08，25cm x 30cm	1 reel

Western blotting

Blotting membrane

Nitrocellulose blotting membrane

Nitrocellulose blotting membrane is the membrane of choice for all protein or immunoblotting applications. The high sensitivity of Nitrocellulose Transfer Membrane ensures excellent results in all transfers, especially in protein blotting.

Features & Benefits:
- For procedures that require optimum resolution
- Membrane of choice for protein or immunoblotting applications
- Low background, easily blocked
- BSA binding capacity up to 100 μg/cm^2
- Wets out naturally
- Compatible with all detection systems

Application:
- Western blotting
- Protein & immunoblotting
- Northern blotting
- Southern blotting
- Dot/slot blotting
- Radiographic, chromogenic and chemiluminescent detection systems

PVDF blotting membrane

PVDF is a naturally hydrophobic transfer membrane. It has a high binding capacity, which prevents protein from passing through the membrane, and a low background that provides for an excellent signal-noise ratio. It also has exceptional tensile strength, preventing it from cracking, tearing, breaking or curling. This membrane also has broad chemical compatibility.

Features & Benefits:
- Superior strength: Can withstand aggressive handling or be used with automated equipment without breaking or tearing
- Low extractables: Ensures tests will be clean with consistent results
- Exceptional sensitivity: Detects low-level components
- Hydrophobic: For high protein binding
- Lot-to-lot consistency: Quality checks ensure consistent binding for dependable results every time
- BSA protein binding capacity : 125 μg/cm^2
- High range of chemical: Resistant to most commonly used chemicals compatible with chemically aggressive solvents

Application:
- Western blotting
- Immunoblotting
- Solid phase assays
- Amino acid or protein analyses

Ordering Information

Catalog number	Description	Quantity/pack
WBNC022	Nitrocellulose blotting membrane,0.22μm,30cm×3m	1
WBNC045	Nitrocellulose blotting membrane,0.45μm,30cm×3m	1
WBPVDF022	PVDF blotting membrane,0.22μm,30cm×3m	1
WBPVDF045	PVDF blotting membrane,0.45μm,30cm×3m	1

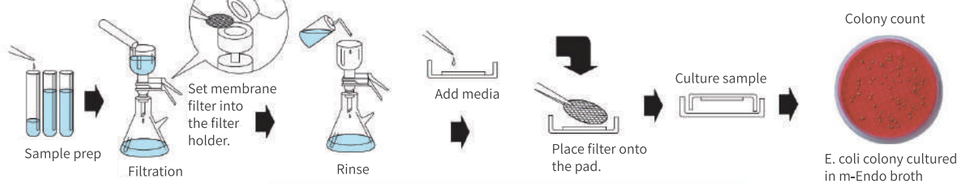
Sterile MCE gridded membranes

Sterile MCE gridded membrane

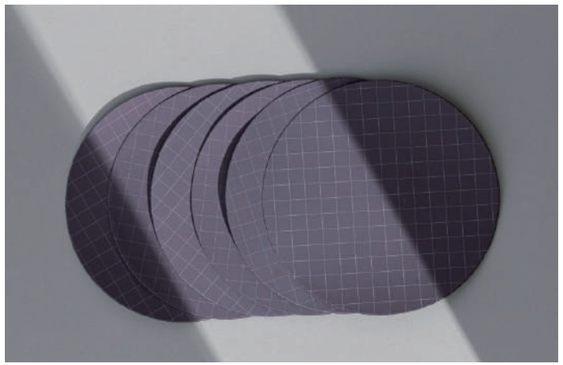
Features
- Grids are convenient for colony identification and counting. Grids don't enhance or inhibit colony growth;
- High rate of microbiology recovery;
- Saves time as sterilized by gamma radiation;
- Continuous packed membranes are matched with Millipore、whatman、sartorius dispensers；because there are no protective papers, it’s easy to remove the filter with forceps; reduces the risk of accidental contamination
- To facilitate traceability, the catalogue number, lot number, pore size are printed on the lables

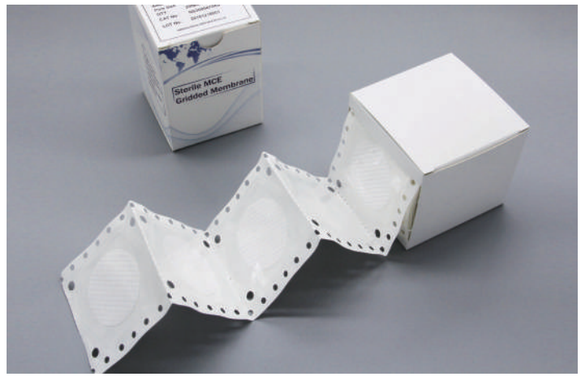
Applications
- White membranes with black grid are used for the detection of bacteria, especially E.coli, colony count and particle detection in dyeing medium;
- Black membranes with white grid are used for the detection of yeast , mold and Legionella sp,colony count and particle detection
- Air monitoring

Sample filtration and growth procedures



Sterile MCE gridded membranes





Specifications

Pore Size (μm)	0.45	Grid width (mm)	3.1
Bubble point(bar)	2.6	Bubble point(psi)	37
Thickness (μm)	140	Porosity (%)	75
Water flow rate (ml/cm²) (20°C,0.7bar)	60	Air flow rate (L/min.cm²) (20°C,0.7bar)	4
Protein binding (μg/cm²)	150	Extractables (%)	＜1.0
Max. temperature (°C)	130	Chemical Compatibility	pH 4-8
Retention rate of E. coli (%)	100	Rate of recovery (%)	90

Ordering Information

Catalog number	Description	Package(pcs/pk)
NS30904704SC	Sterile MCE Gridded Membrane, 47mm, 0.45μm, white, black grid, continuous package	150
NS30904704S	Sterile MCE Gridded Membrane, 47mm, 0.45μm, white, black grid, individually packed	200
NS30905004SC	Sterile MCE Gridded Membrane, 50mm, 0.45μm, white, black grid, continuous package	150
NS30905004S	Sterile MCE Gridded Membrane, 50mm, 0.45μm, white, black grid, individually packed	200
NS30914704SC	Sterile MCE Gridded Membrane, 47mm, 0.45μm, black, white grid, continuous package	150
NS30914704S	Sterile MCE Gridded Membrane, 47mm, 0.45μm, black, white grid, individually packed	200
NS30915004SC	Sterile MCE Gridded Membrane, 50mm, 0.45μm, black, white grid, continuous package	150
NS30915004S	Sterile MCE Gridded Membrane, 50mm, 0.45μm, black, white grid, individually packed	200
NS30824704S	Sterile MCE Membrane, 47mm, 0.45μm, white, individually packed	200
NS30825004S	Sterile MCE Membrane, 50mm, 0.45μm, white, individually packed	200

Pure water machine filtration

Pure water machine final sterilization filter

NEWSTaR pure water machine final sterilization filter is specially developed for laboratory pure water machine and ultra pure water machine final filtration. This series of capsule filters has a delicate appearance, with good matching between the inlet and outlet of the equipment. They are available in 1/4"Plug-in connector and 1/4"Hose barb connector.

Applications

- Sterilization and filtration of small to medium volume samples.
- Liquid filtration of low concentration proteins, preservatives, or other important ingredients.
- Sterilization and filtration of culture media and buffer solutions.

Specifications

Membrane	PES, Pore Size: 0.22μm
Housing	PP, Resistant to gamma rays
Maximum working pressure	5.5 Bar at 22°C
Maximum positive pressure difference	5.0 Bar at 22°C
Maximum reverse pressure difference	2.1 Bar at 22°C
Maximum operating temperature	80°C
minimum burst pressure	8.0 Bar at 22°C
Sterilization method	gamma rays
Filtration area	290cm²
Bio safety	Endotoxin≤0.25EU/ml Extractale≤25mg

Ordering Information

Catalog number	Description	Connector	Package(Qty/pk)
NS20814002L	Pure water machine final sterilization filter, Diameter:40mm, Pore size:0.22μm	Inlet:1/4" Plug-in, Outlet:1/4" Hose barb	1
NS20814002G	Pure water machine final sterilization filter, Diameter:40mm, Pore size:0.22μm	Inlet:1/4" NPT, Outlet:1/4" Hose barb	1
NS20815002G	Pure water machine final sterilization filter, Diameter:50mm, Pore size:0.22μm	Inlet:1/4" NPT, Outlet:1/4" Hose barb	1

Vacuum filters

Disposable vacuum filter

Disposable vacuum filter is an ideal experimental consumable for sterilization and filtration of cell culture medium, biological fluid and aqueous solution. The filter uses polystyrene (PS) of USP grade VI as raw material. At present, the product models are 250ml, 500ml and 1000ml. The whole filtration system consists of a vacuum upper cup and a receiving bottle.Clear scale marks are printed on the upper cup and solvent bottle. There are two kinds of filter membrane materials for choose: PES and hydrophilic PVDF. The pore size of the filter membrane is 0.22μm and 0.45μm.

Applications

· PES membrane is designed to remove particulates during general filtration and its low protein and drug binding characteristics make it ideally suited for use in life science applications.

· Hydrophilic PVDF membrane is a supported, hydrophilic membrane that exhibits broad chemical compatibility and low protein binding. It' s suited for sterilizing and clarifying filtration of biological solutions, preparation of protein-containing solutions prior to chromatography or other instrument analyses.

· The membrane with 0.45μm is suited for clarification and particle removal.The membrane with 0.22μm is suited for sterilizing filtration.

Specifications

Membrane	PES, hydrophilic PVDF		
Housing	PS		
Pore size of membrane	0.22μm,0.45μm		
Volume	250ml	500ml	1000ml
Diameter of membrane	50mm	90mm	90mm
Filtration area	15.3cm²	54.2cm²	54.2cm²
Sterilization	γ radiation		

Vacuum filters

Disposable vacuum filter

Ordering Information

Catalog number	Description	Quantity/pack
NS408125002	Disposable vacuum filter upper cup,PES,250ml,0.22μm	1
NS408125004	Disposable vacuum filter upper cup,PES,250ml,0.45μm	1
NS408150002	Disposable vacuum filter upper cup,PES,500ml,0.22μm	1
NS408150004	Disposable vacuum filter upper cup,PES,500ml,0.45μm	1
NS4081100002	Disposable vacuum filter upper cup,PES,1000ml,0.22μm	1
NS4081100004	Disposable vacuum filter upper cup,PES,1000ml,0.45μm	1
NS408125002B	Disposable vacuum filter upper cup+receiving bottle,PES,250ml,0.22μm	1
NS408125004B	Disposable vacuum filter upper cup+receiving bottle,PES,250ml,0.45μm	1
NS408150002B	Disposable vacuum filter upper cup+receiving bottle,PES,500ml,0.22μm	1
NS408150004B	Disposable vacuum filter upper cup+receiving bottle,PES,500ml,0.45μm	1
NS4081100002B	Disposable vacuum filter upper cup+receiving bottle,PES,1000ml,0.22μm	1
NS4081100004B	Disposable vacuum filter upper cup+receiving bottle,PES,1000ml,0.45μm	1
NS408525002	Disposable vacuum filter upper cup,hydrophilic PVDF,250ml,0.22μm	1
NS408525004	Disposable vacuum filter upper cup,hydrophilic PVDF,250ml,0.45μm	1
NS408550002	Disposable vacuum filter upper cup,hydrophilic PVDF,500ml,0.22μm	1
NS408550004	Disposable vacuum filter upper cup,hydrophilic PVDF,500ml,0.45μm	1
NS4085100002	Disposable vacuum filter upper cup,hydrophilic PVDF,1000ml,0.22μm	1
NS4085100004	Disposable vacuum filter upper cup,hydrophilic PVDF,1000ml,0.45μm	1
NS408525002B	Disposable vacuum filter upper cup+receiving bottle,hydrophilic PVDF,250ml,0.22μm	1
NS408525004B	Disposable vacuum filter upper cup+receiving bottle,hydrophilic PVDF,250ml,0.45μm	1
NS408550002B	Disposable vacuum filter upper cup+receiving bottle,hydrophilic PVDF,500ml,0.22μm	1
NS408550004B	Disposable vacuum filter upper cup+receiving bottle,hydrophilic PVDF,500ml,0.45μm	1
NS4085100002B	Disposable vacuum filter upper cup+receiving bottle,hydrophilic PVDF,1000ml,0.22μm	1
NS4085100004B	Disposable vacuum filter upper cup+receiving bottle,hydrophilic PVDF,1000ml,0.45μm	1

In vitro diagnosis (IVD)

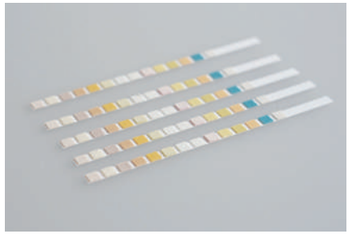
In vitro diagnosis (IVD)

In vitro diagnosis (IVD) is a kind of product and service that can obtain clinical diagnosis information and judge disease or body function by detecting human samples (blood, body fluid, tissue, etc.) outside the human body. Because of its rapid and accurate diagnosis in the early stage of disease, it plays an increasingly important role in clinical medicine and related medical research fields. IVD has been rapidly developed in the global medical service market. Rapid point-of-care tests are among the most widely used analytical technologies in diagnostics.Due to their high performance, ease of use and cost effectiveness, diagnostic rapid tests can deliver semiquantitative or quantitative results. NEWSATR provides a variety of high-quality cellulose materials and glass fiber materials for the production of in vitro diagnostic analysis products such as dipstick colorimetric assays,lateral-flow immunoassays and flow-through immunoassays.

Dipstick colorimetric assays

Dipstick colorimetric assay

Dipstick colorimetric assays, in which a cellulose pad is impregnated with a color reagent, are widely used in urine testing and environmental assays. The base cellulose is a key part of the system, and the correct choice of absorbency, wicking rate, and wet strength are critical to producing a working assay. NEWSTaR cellulose materials for dipstick colorimetric assays offer highly consistent and inert substrates for absorption of the active chemicals required for development of dipstick tests.The purity of the cellulose base material coupled with our quality manufacturing practices make these papers an exceptional choice for large-scale manufacturing.



Specifications

Grade	Thickness (μm@53KPa)	Water absorption (g/m²)
ZD3	340	360
ZD31	450	480
ZD2	200	220
ZD4	380	420
ZD8	500	520
NF72	800	720

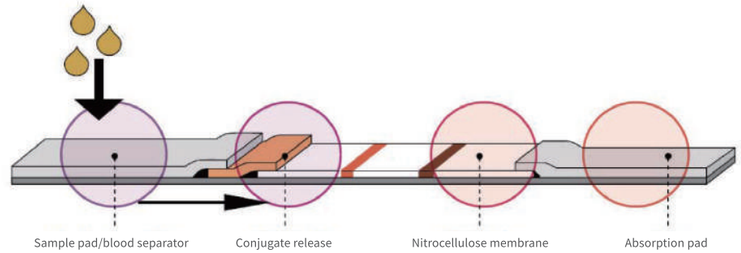
Ordering information

Catalog number	Grade	Dimensions	Quantity/pack
NS10ZD3R1	ZD3	7cm×100m	8
NS10ZD3R2	ZD3	30cm×100m	2
NS10ZD31R1	ZD31	7cm×100m	8
NS10ZD31R2	ZD31	30cm×100m	2
NS10ZD2R1	ZD2	2cm×100m	12
NS10ZD2R2	ZD2	30cm×100m	3
NS10ZD4R1	ZD4	7cm×100m	8
NS10ZD4R2	ZD4	30cm×100m	2
NS10ZD8R1	ZD8	7cm×100m	8
NS10ZD8R2	ZD8	30cm×100m	2
NS10NF72R1	NF72	7cm×100m	8

Lateral-flow immunoassays

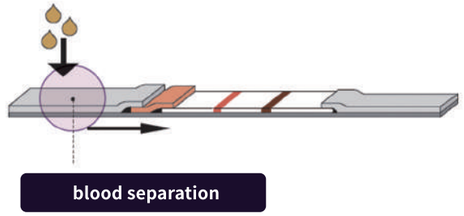
Lateral-flow immunoassay

NEWSTaR can provide wide range of blood separation products, conjugate release pads,and absorbents for lateral-flow immunoassays.The components of the lateral-flow immunoassay system are shown in the drawing below.The sample flows through the device and comes in contact with dried reagents, usually a tagged secondary antibody. The antibody and analyte migrate to a capture zone of membrane-immobilized antibody. Any unreacted tagged antibody flows past the capture zone.



Sample pad

Sample pads begin the assay by transporting samples from the point of application to the test components.



Features

- Consistent absorbency and wicking rates: Ensures test-to-test reproducibility
- Product manufactured in controlled environments from highest-quality.materials: No false results due to sample contamination
- Low protein binding: Minimal loss of analyte, so test sensitivity is maintained
- Naturally hydrophilic: Rapid rewetting after prolonged storage
- Wide range of thickness, absorbency and wicking rate
- Compatible with most styles of housings
- Minimal leakage along the strip: No contamination of test results

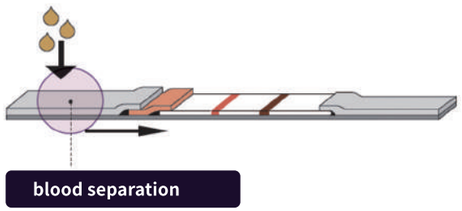
Specifications

Grade	Material	Features	Thickness (μm@53KPa)	Wickingrate (s/2cm)	Water absorption (g/m²)
NGF64	Glass fiber	High flow rate, good loading capacity	360	11	550
NGF66	Glass fiber	High flow rate, good loading capacity	500	12	800

Ordering information

Catalog number	Grade	Dimensions	Quantity/pack
NS10NGF642030	NGF64	200x300mm	50
NS10NGF662030	NGF66	200x300mm	50

Blood separators pad



NEWSTaR offers a family of blood separators to meet the strict requirements of the rapid diagnostic market. These products enable whole blood analysis, with no red cell hemolysis.

Features

- Separation in 30 -120 seconds: Rapid assays save time
- No appreciable red cell hemolysis: Improved reproducibility
- Consistency of materials: Reliability
- Materials suitable for use in a range of tests: Flexibility in test optimization
- Choice of separation times: Allows for test optimization
- Separators appropriate for a range of blood volumes: Enhances the separation rate according to the volume of blood available

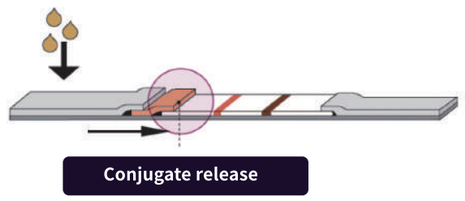
Specifications

Grade	Material	Features	Thickness (μm@53KPa)	Wicking rate (s/2cm)	Water absorption (g/m^2)
NFS5	Glass fiber	Can be used as a lateral flow blood separator with two drops of whole blood	370	14	500
NVF2	Glass fiber	Vertical separator used as single or multiple layers for separation of a wide range of blood volumes	750	12	800

Ordering information

Catalog number	Grade	Dimensions	Quantity/pack
NS10NFS52030	NFS5	200x300mm	50
NS10NVF22030	NVF2	200x300mm	50

Conjugate release pad



Conjugate release pads are critical to lateral-flow immunoassays. To ensure consistent performance, the conjugate release pads must dry without damage or aggregation and release rapidly when the sample comes into contact with it. NEWSTAR conjugate release pads do not require treatment prior to conjugate application, as they are inherently hydrophilic. The open structure of the material allows rapid penetration by both conjugate and sample.

Features

- Higher level of conjugate release: Less waste means reduced reagent costs
- Higher capture line intensity, as more conjugate gets to the capture line: Improved sensitivity
- Pad rewets naturally and rapidly every time: Improved consistency

Specifications

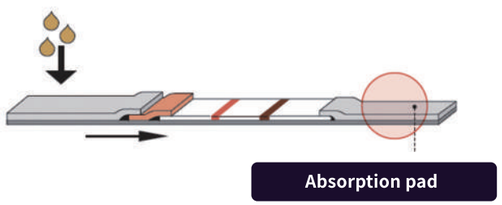
Grade	Material	Thickness (μm@53KPa)	Wicking rate (s/2cm)	Water absorption (g/m^2)	Percent release of gold conjugate (after 90s)
NFS5	Glass fiber	370	14	500	>94
NGF64	Glass fiber	360	11	550	>90
NPF14	PE fiber	400	5	450	>95

Ordering information

Catalog number	Grade	Dimensions	Quantity/pack
NS10NFS52030	NFS5	200 x 300mm	50
NS10NGF642030	NGF64	200 x 300mm	50
NS10NPF142030	NPF14	200 x 300mm	50

Lateral-flow immunoassays

Absorption pad



Absorption pads at the downstream end of tests control sample flow along the strip. Choosing an absorbent with sufficient capacity is an important consideration when designing an immunoassay. NEWSTaR has also developed pads with excellent wicking characteristics that give rise to greater consistencies.

Features

- Consistent absorbency: Ensures test-to-test reproducibility
- Product manufactured in controlled environments from highest-quality materials: No false results due to contamination
- Naturally hydrophilic: Minimal loss of analyte, so test sensitivity is maintained
- Wide range of thickness, absorbency and wicking rate: Rapid rewetting after prolonged storage
- Minimal leakage along the strip: No contamination of test results

Specifications

Grade	Material	Features	Thickness (µm@53KPa)	Wicking rate (s/4cm)	Water absorption (g/m^2)
NF8	Cotton linter	Medium weight	400	25	300
NF9	Cotton linter	Medium weight	600	30	500
NF10	Cotton linter	Medium weight	1000	35	900
NF25	Cotton linter	High absorbency	1200	30	1400
NF16	Cotton linter	High wicking rate	700	20	850
NF17	Cotton linter	High wicking rate	450	25	650
NF18	Cotton linter	Medium weight	400	35	400
NF21	Cotton linter	Medium weight	600	60	800

Ordering information

Catalog number	Grade	Dimensions	Quantity/pack
NS10NF82030	NF8	20cm x 30cm	100
NS10NF92030	NF9	20cm x 30cm	100
NS10NF102030	NF10	20cm x 30cm	100

Flow-through immunoassays

Flow-through immunoassay

In a flow-through immunoassay the sample is applied directly to the membrane surface and is allowed to wick through the membrane into an absorbent paper below.

Absorbent pad

The absorbents used for flow-through assays must wick quickly and be highly water absorbent. The volumes of liquids used in flow-through assays can be much higher than those in lateral flow. Thicker cellulose materials with fast wicking are therefore the material of choice.

Specifications

Grade	Material	Thickness(µm@53KPa)	Wicking rate (s/4cm)	Water absorption (g/m^2)
NF15	Cotton linter	1100	40	1200
NF25	Cotton linter	1200	30	1400

Ordering information

Catalog number	Grade	Dimensions	Quantity/pack
NS10NF15R1	NF15	25mm x 100m	1
NS10NF25R1	NF25	25mm x 100m	1

Environmental monitoring

PM 2.5 air monitoring membrane(PTFE)

NEWSTaR PM 2.5 air monitoring membrane is a high-purity, thin PTFE membrane in a sequentially numbered, chemically resistant polypropylene support ring.PM 2.5 air monitoring membranes have low tare mass for accurate gravimetric determinations. The thermally stable design prevents curling, keeps the membrane flat, and makes the filter robot-friendly. These chemically resistant, low chemical background filters permit sensitive, interference-free determinations. No glues or adhesives are used in making these products.

Specifications

Filter media	PTFE	Particle retention (0.3 μm)	99.7%
Filter thickness	30-50μm	Pressure drop (0.3 μm) @ 16.67 L/min	30cm H_2O
Filter diameter	46.2mm	Alkalinity	< 25μeq/g of filter
Filter pore size	2.0μm	Temperature weight loss stability	< 20μg
Support ring media	Polypropylene	Drop test weight loss stability	< 20μg
Support ring thickness	0.38mm	Moisture weight gain stability	< 10μg
Support ring width	3.68mm		

Ordering information

Catalog number	Description	Quantity/pack
PM4620	PM 2.5 air monitoring membrane,diameter:46.2mm,pore size:2.0μm	50

Atmospheric particulate detection filter membrane(PTFE)

NEWSTaR Atmospheric particulate detection filter membrane, suitable for automatic monitoring equipment such as CO, SO_2, NO_2, VOC, O_3, etc.It can filter out liquid and mist moisture, large particles, and floating dust in the environment, without adsorbing gas components It can effectively protect detection equipment, reduce maintenance costs, and improve the accuracy of monitoring results.

Features

· Higher particle loading capacity, stronger dust filtering ability;
· Natural hydrophobicity, can block liquid and mist moisture;
· Extremely low chemical background;
· No adsorption of gas components;
· Ultra-high strength, easy operation, good deformation resistance, withstand 180°C high temperature.

Specifications

Thickness	Diameter	Pore size
130μm	47mm	5.0μm

Ordering Information

Catalog number	Description	Package(Qty/pk)
NS30874750P	Atmospheric particulate detection filter membrane, Diameter:47mm, Pore size:5.0μm	25

Glass microfiber filter

NEWSTaR glass microfiber filters are manufactured from 100% borosilicate glass without binder. These depth filters combine fast flow rates with high loading capacity and the retention of very fine particles. Glass microfiber filters can be used at temperaturesup to 550°C.Glass microfiber filters are biologically inert and resistant to most solvents and reagents with the exception of hydrofluoric acid and highly concentrated alkali solutions.

93A:1.6μm

Features:
· Fine particle retention
· High flow rate
· Good loading capacity

Application:
· Water pollution monitoring of effluents, for filtration of water, algae and bacteria cultures
· Food stuff analyses, protein filtration
· Radioimmunoassay of weak β emitters
· Recommended for gravimetric determination of airborne particulates, stack sampling, and absorption methods of air pollution monitoring

Typical properties

Grade	Nominal basis weight(g/m^2)	Nominal thickness(mm)	Typical particle retention in liquid(μm)	Typical water flow rate(ml/min)	Pressure drop (mbar)*
93A	52	0.23	1.6	510	38

*A=$10cm^2$, flow rate $400cm^3/s$

Ordering information

Catalog number	Description	Package (quantity/pack)
NS1093A047	93A glass microfiber filters, diameter: 47mm, typical particle retention in liquid: 1.6μm	100
NS1093A090	93A glass microfiber filters, diameter: 90mm, typical particle retention in liquid: 1.6μm	50
NS1093A110	93A glass microfiber filters, diameter: 110mm, typical particle retention in liquid: 1.6μm	50

93C:1.2μm

Features:
- Fine particle retention
- Good flow rate.

Application:
- The standard filter in many parts of the world for the collection of suspended solids in potable water and natural and industrial wastes
- Fast and efficient clarification of aqueous liquids containing low to medium levels of fine particulates
- Widely used for cell harvesting
- Liquid scintillation counting, and binding assays

Typical properties

Grade	Nominal basis weight(g/m²)	Nominal thickness(mm)	Typical particle retention in liquid(μm)	Typical water flow rate(ml/min)	Pressure drop (mbar)*
93C	52	0.24	1.2	335	55

*A=10cm², flow rate 400cm³/s

Ordering information

Catalog number	Description	Package (quantity/pack)
NS1093C047	93C glass microfiber filters, diameter: 47mm, typical particle retention in liquid: 1.2μm	100
NS1093C090	93C glass microfiber filters, diameter: 90mm, typical particle retention in liquid: 1.2μm	50
NS1093C110	93C glass microfiber filters, diameter: 110mm, typical particle retention in liquid: 1.2μm	50

93AH:1.5μm

Features:
- High retention efficiency at high flow rates, high loading capacity
- Smooth surface
- Be pre-fired and withstand temperatures over 550°C

Application:
- Recommended for water pollution monitoring
- Cell harvesting
- Air pollution monitoring

Typical properties

Grade	Nominal basis weight(g/m²)	Nominal thickness(mm)	Typical particle retention in liquid(μm)	Typical water flow rate(ml/min)	Pressure drop (mbar)*
93AH	65	0.3	1.5	400	--

*A=10cm², flow rate 400cm³/s

Ordering information

Catalog number	Description	Package (quantity/pack)
NS1093AH090	93AH glass microfiber filters, diameter: 90mm, typical particle retention in liquid: 1.5μm	50
NS1093AH110	93AH glass microfiber filters, diameter: 110mm, typical particle retention in liquid: 1.5μm	50

Quartz fiber filter

Quartz fiber filters are made with 100% pure quartz microfiber with zero binders. Exhibit greater chemical resistance at high temperatures than glass microfiber. Excellent choice for use in environments with extreme temperature up to 900°C and/or aggressive chemical exposure.

Features and benefits
- Excellent retention of very fine particles.
- Exceptional chemical and thermal resistance.
- Excellent weight and dimensional stability with lowest trace metal content.
- High Permeation enables large volume of air to pass through.
- Higher temperature stability than glass microfiber filters; up to 900°C.
- Excellent chemical stability with practically no filter-mass loss in the presence of acid gases.

Typical properties

Nominal basis weight	Nominal thickness	Pore size	Typical retention efficiency in air (0.3μm)
85g/m²	2.2μm	440μm	＞99.99%

Ordering information

Catalog number	Description	Package (quantity/pack)
Qua47	Quartz fiber filters, diameter: 47mm	100
Qua90	Quartz fiber filters, diameter: 90mm	100
Qua8*10"	Quartz fiber filters,size:203*254mm	100

Environmental monitoring

High-purity glass microfiber thimble

High-purity glass microfiber thimbles manufactured from 100% pure borosilicate glass are available for specialized applications. The thimbles are completely free of binders or additives and can be used at temperatures up to 600°C. These thimbles are used in pollution monitoring techniques.

Features and benefits

- No binders are added.
- Can be used at temperatures up to 600°C.
- High retention efficiency.
- High strength.
- Low weight loss.

Applications

- Smoke stack gas monitoring

Specifications

Grade	1# ϕ32*120mm	2# ϕ25*90mm	3# ϕ28*70mm
Weight	2.0±0.2g	1.2±0.1g	1.0±0.2g
Background Value (μg/g)	SiO_2 57.12 Fe_2O_3 0.36	Al_2O_3 14.66 CaO 16.53	MgO 3.36 K_2O 0.16 Na_2O 0.36
Withstand temperature	⩽600°C		
	At the condition of gas flow rate 20L/min		
Resistance	14-16mmHg	Between 1 # and 3 #	18-20mmHg
Retention efficiency	＞99.99%（@0.3μm）		
Weight loss	When the temperature is ⩽ 300 ℃, there is basically no weight loss. When the temperature is ⩽ 600 ℃, if it is dried at the test temperature for 60 minutes before use and cooled for 30 minutes before use, the weight loss rate within 120 minutes is ⩽ 0.2%		

Ordering information

Catalog number	Grade	Dimensions	Package（quantity/pack）
NS1093T01	1#	ϕ32*120mm	30
NS1093T02	2#	ϕ25*90mm	25
NS1093T03	3#	ϕ28*70mm	20

Environmental monitoring

Quartz microfiber thimbles

NEWSTaR Quartz microfiber thimble is made of quartz microfiber without added materials.It is designed specifically for smoke monitoring. It is mainly used to monitor the concentration of smoke and dust emissions, as well as heavy metals and dioxin of fixed pollution sources.

Features

- Excellent retention of very fine particles, typical retention efficiency in air (%@0.3μm) ＞99.9%
- High mechanic strength
- Higher temperature stability than glass microfiber filter, ＞900°C
- Low background of heavy metals

Specifications

Test Items	Testing result
Weight(g)	1
Length (mm)	70
Inner diameter (mm)	24.2
Wall thickness (μm)	1200
Retention efficiency (% 0.3μm@8l/min)	99.98
Pressure drop resistance (mmH_2O @8l/min)	45

Ordering Information

Catalog number	Description	Package(Qty/pk)
NSQuaT03	Quartz microfiber thimble, 28mm*70mm	1

Cellulose thimbles

Cellulose thimbles are widely used in Soxhlet extraction units, providing a safe, convenient, and efficient method of solvent extraction from solids and semi-solids. NEWSTaR Cellulose thimbles are produced from high-quality alpha cellulose cotton linter and have excellent mechanical strength and retention. The high purity of the materials ensures reliable and reproducible analytical results.They are widely Used for the analysis of fats or pesticides in foods and soil materials as well as in many other procedures that involve a solid-liquid extraction.

Features

- Uniform pore size, with a liquid particle retention diameter of 6.0-10μm
- Uniform wall thickness, 1.5-2mm
- High mechanical strength
- High retention efficiency

Ordering Information

Catalog number	Description	Package (Qty/pk)
NSSET2870	Cellulose thimbles, 28mm*70mm	25
NSSET28100	Cellulose thimbles, 28mm*100mm	25
NSSET3380	Cellulose thimbles, 33mm*80mm	25
NSSET30100	Cellulose thimbles, 30mm*100mm	25

Glass fiber filter in reel

Glass fiber filter with binder in reel is hydrophobic.It is more economical and suitable for automatic on-line monitoring.

Features and benefits

- Unique hydrophobic design to avoid the influence of water vapor on weight and flow path
- Withstand high temperature of 180 °C
- Good toughness
- The retention efficiency of 0.3-0.5μm standard particles is more than 99.9%

Applications

- It can also be used to detect particulate matter in automobile and engine exhaust.

Specifications

Nominal basis weight	Nominal thickness	Typical retention efficiency in air (0.3-0.5μm)
59g/m²	0.25mm	＞99.9%

Ordering information

Catalog number	Description	Package (quantity/pack)
NS109361	Glass fiber filter in reel, size：30mm×30m, core：40mm	1
NS109310	Glass fiber filter in reel, size：40mm×36m, core：28mm	1

Industrial filtration

Industrial filtration

Industrial filter paper

Industrial filter paper is made of a mixture of pure cotton and wood pulp, specially designed for industrial applications. The industrial filter paper is available on request.

Specifications

Product name	Basis weight (g/m^2)	Filtration Speed(s) ①	Wet Bursting Strength(KPa) ②	Ash Content (<%)	Size (cm)	Packing
Industrial Filter Paper	80±4	35-70	140	0.15	60x60	100sheets/pack 10packs/CTN

①Filtration speed is the time for filtering 10ml (23±1℃) distillated water through 10cm2 filter paper.
②Wet bursting strength is measured by wet bursting strength instrument LSY-100.

Food and beverage

Oil filter paper, hardened

The hardened oil filter paper is based on the original oil filter paper. The wet bursting strength is improved to be used at high pressure and harsh environments.

Applications

· Plate and frame filter press
· High pressure filtration

Specifications

Product name	Basis weight(g/m²)	Filtration speed(s) ①	Wet bursting strength(KPa)②	Water extractionpH③
Oil Filter Paper	270±15	45-65	＞700	5-8

① Filtration speed is the time for filtering 10ml (23±1℃) distilled water through 10cm2 filter paper. ② Wet bursting strength is measured by wet bursting strength instrument LSY-100. ③ Water extraction pH: Represents the acidity and alkalinity of the paper.

Ordering information

Product name	Size (cm)	Packing
Oil filter paper	61x63	100sheets/pack, 4packs/CTN

Sheets and rolls with custom-made size are available.

Creped filter paper

Creped filter paper is made by a unique molding process to increase the specific surface area of the paper and increase the filtration flux. It is used in fields such as edible oil, chemical and industrial oils

Applications

· Fried edible oil filtration.
· Wipe the pipeline.
· High viscosity chemical filtration

Specifications

Product name	Basis weight(g/m²)	Filtration speed(s) ①	Wet bursting strength (KPa)②	Water extractionpH③
Creped Filter Paper	150±10	<10	>300	5-8

① Filtration speed is the time for filtering 10ml (23±1℃) distilled water through 10cm2 filter paper. ② Wet bursting strength is measured by wet bursting strength instrument LSY-100. ③ Water extraction pH: Represents the acidity and alkalinity of the paper.

Food and beverage

Ordering information

Product name	Size(cm)	Packing
Creped filter paper	34.5x88	100sheets/pack, 4000sheets/CTN

Sheets and rolls with custom-made size are available.

Oil filter paper

Oil filter paper is made of high-grade cotton and wood pulp.It is mainly used in petrochemical, crude oil and other fields.

Applications

· Transformer oil, capacitor oil, mechanical oil and hydraulic oil filtration;
· Refinery refining lubricants, vaseline and waste oil regeneration filtration;
· Insulation paint, dyes and fine chemical filtration.

Specifications

Product name	Basis weight(g/m²)	Filtration speed(s) ①	Wet bursting strength(KPa)②	Water extraction pH③
Oil Filter Paper	270±15	25-45	＞200	5-8

① Filtration speed is the time for filtering 10ml (23±1℃) distilled water through 10cm2 filter paper. ② Wet bursting strength is measured by wet bursting strength instrument LSY-100. ③ Water extraction pH: Represents the acidity and alkalinity of the paper.

Ordering information

Product name	Size (cm)	Packing
Oil Filter Paper	30x30、40x40、50x50	100sheets/pack, 500sheets/CTN
	60x60、70x70、80x80、90x90、100x100	100sheets/pack, 400sheets/CTN
	110x110、120x120	100sheets/pack, 300sheets/CTN

Sheets and rolls with custom-made size are available.

Specialty products

Specialty products

Seed testing paper

Seed testing paper is made of high quality cotton, used in germination tests of seed specimen to improve seed growth and growth velocity.

Ordering information

Product name	Size (cm)	Packing
Seed testing paper	11.5x11.5　19x13	16000sheets/CTN
	60x60	100sheets/pack, 1000sheets/CTN

Other sheet sizes and rolls available upon request.

Lens cleaning tissue

Lens Cleaning Tissues provide a solution to safely remove moisture and grease from lenses or optical surfaces. Soft texture will not damage lenses or optical surfaces and leaves no fibers. High absorbency leads to increased safety upon removal of surface moisture and grease.

Ordering information

Product name	Basis weight(g/m²)	Size	Packing
Lens cleaning tissue	11±2	10x10　8.5x11	100sheets/pack, 200packs/CTN

Sheets and rolls with custom-made size are available.

Specialty products

Flower paper

Flower paper is a soft paper with high dyeing performance, mainly used for manufacturing paper flowers and other paper crafts with various colors.

Ordering information

Product name	Basis weight(g/m²)	Size(cm)	Packing
Flower paper	62±2　80±4　98±4　118±4	11.5x11.5　19x13　60x60	100sheets/pack, 10packs/CTN

Sheets and rolls with custom-made size are available.

Absorbent paper

Absorbent paper is made of high quality wood pulp, which is ideal for drying small parts and components, and especially for drying slides in biological. pathological and bacteriological laboratories.

Applications

- Coaster paper production;
- Water absorption in laboratory;
- Production of environmental friendly fiber drier.

Specifications

Product name	Grade	Basis weight(g/m²)	Thickness (mm)	Water absorption (g/m²) ①
Absorbent paper	C04	240±15	0.4±0.05	——
	A06	330±20	0.5±0.05	——
	B08	380±25	0.75±0.05	——
	G07	260±20	0.6±0.05	650-750
	E04	110±10	0.4±0.05	450-600
	F10	410±30	1.0±0.05	1000-1300

① water absorption : at room temperature , put the paper in distilled water for 2 min , then vertically drying for 30 s , measure the weight of the paper

Specialty products

Specifications

Product name	Width of the reel(cm)	Diameter of the reel(cm)
Absorbent paper	35	40

Sheets and rolls with custom-made size are available.

Drilling fluid filter paper

LTP type drilling fluid filter paper is used for measuring the filtration loss of drilling fluid at room temperature and medium pressure. HTP-1 type drilling fluid filter paper is used for measuring the filtration loss of drilling fluid at high-temperature and high-pressure or filter cake adhesion coefficient test.

Ordering information

Product name	Grade	Grade	Packing
Drilling fluid filter paper	LTP(987)	90	100sheets/pack, 50packs/CTN
	HTP-1(988)	63.5	100sheets/pack, 50packs/CTN

Oil testing filter paper

The oil testing filter paper is made of cotton fiber and refined by modern and unique technology. Professional testing of automotive oil can determine a reasonable oil change timing to avoid the waste of lubricating oil caused by premature oil changes. The analysis of abnormal oil phenomena can detect and eliminate potential engine faults as soon as possible to improve the reliability and service life of the engine.

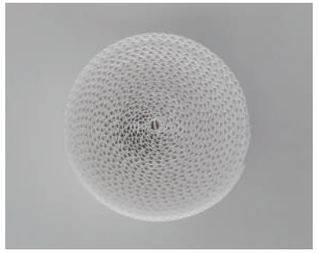
Ordering information

Product name	Diameter(cm)	Flow rate	Packing
Oil detection filter paper	9	High	50

Specialty products

Heat and moisture exchange filter paper

Invasive ventilation is used to assist or replace breathing when a person is unable to breathe adequately on their own. Additionally, in recent decades, Heat and Moisture Exchange (HME) devices have been employed increasingly for short-term use in anesthesia and long-term use in intensive care units.Our heat and moisture exchange filter papers are specifically developed for devices which are in common use in the treatment of patients with respiratory disorders.These filter papers offer protection by removing bacteria and viruses before they enter the patient’ s airway, bringing thus a crucial contribution in the prevention of healthcare-associated infection.At the same time, these media can reduce the number of pathogens a patient exhales into the air, contributing to protecting healthcare staff and other patients.



Specifications

Grade	Basis weight (g/m^2)	Water absorption height(mm/10min)
HME06-A	75	＞60
HME06-C	90	＞100

Compatibility tables

NEWSTaR syringe filter chemical compatibility table

Legend: Compatible ·· , Partial Compatibility · , Incompatible - , Unanalyzed None

	Filter	NYL	PES	MCE	CA	RC	PVDF	PTFE	GF	PP
	Solvent									
1	Acetone	••	-	-	-	••	-	••	••	••
2	Acetonitrile	••	-	-	-	••	•	••	••	•
3	Benzene	••	•	•	•	••	••	••	••	-
4	Benzyl Achohol	••	-	-	-	••	•	••	••	••
5	n-butyl acetate	••	-	-	-	••	None	••	••	None
6	n-Butanol	••	•	•	•	••	••	••	••	••
7	Cellosolve	••	•	-	-	••	None	••	••	•
8	Chloroform	-	-	-	-	••	•	••	••	•
9	Cyclohexanone	••	-	-	•	••	-	••	••	••
10	Dimethylsulfoxide(DMSO)	••	-	-	-	••	-	••	••	••
11	Diethyl ether	••	-	•	•	••	••	••	••	•
12	Dimethyl formamide(DMF)	•	-	-	-	•	•	••	••	••
13	Dioxane	••	-	-	-	••	•	••	••	•
14	Ethanol	••	•	-	••	••	••	••	••	••
15	Ethyl acetate	••	-	-	-	••	••	••	••	None
16	Ethylene glycol	••	•	-	•	••	••	••	••	••
17	Formamide	••	••	-	-	•	•	••	••	None
18	Gasoline	••	•	•	•	••	••	••	••	••
19	Glycerin	••	••	••	••	••	••	••	••	••
20	n-Heptane	••	•	•	•	••	••	••	••	-
21	n-Hexane	••	•	•	•	••	••	••	••	-
22	Isobutanol	••	••	•	•	••	••	••	••	••
23	Isopropanol	••	••	z	•	••	••	••	••	••
24	Isopropyl acetate	••	-	-	-	••	••	••	••	None
25	30% Methanol	••	••	None	None	••	••	••	••	••
26	98% /Methanol	••	•	-	-	••	•	••	••	••
27	Methyl acetate	••	-	-	-	••	-	••	••	•
28	Methylene chloride	None	-	-	-	••	-	••	••	-
29	Methyl ethyl ketone	••	-	-	-	••	-	••	••	•
30	Methyl isobutyl ketone	••	-	-	-	••	-	••	••	-
31	Monochlorobenzene	••	•	-	•	••	•	••	••	••
32	Nitrobenzene	•	-	-	-	••	••	••	••	-
33	n-Pentane	••	••	•	•	••	•	••	••	-
34	Pyridine	None	-	-	-	••	•	•	••	••
35	Petroleum Ether	••	None	-	-	••	••	•	••	-
36	Carbon tetrachloride	None	•	••	-	••	••	•	••	None
37	Tetrahydrofuran（THF）	••	-	-	-	••	-	••	••	-
38	Toluene	••	-	•	•	••	••	••	••	-
39	Trichloroethane	None	-	-	-	••	None	••	••	-
40	Trichloroethylene	None	-	-	-	••	••	••	••	-
41	Xylene	••	-	•	•	••	••	••	••	-

Compatibility tables

NEWSTaR syringe filter chemical compatibility table

Legend: Compatible ·· , Partial Compatibility · , Incompatible - , Unanalyzed None

	Filter	NYL	PES	MCE	CA	RC	PVDF	PTFE	GF	PP
	Acids									
1	25% Acetic acid	-	•	-	•	••	••	••	••	••
2	80% Acetic acid	-	None	-	-	••	••	••	•	••
3	20% Hydrochloric acid	-	••	-	-	-	••	••	••	••
4	25% Hydrofluoric acid	-	•	-	-	•	••	••	•	•
5	25% Nitric acid	-	•	-	-	-	••	••	••	••
6	1% Phosphoric acid	-	••	-	•	-	••	••	••	••
7	25% Sulfuric acid	-	•	-	-	•	••	••	••	••
8	98% Sulfuric acid	-	-	-	-	-	•	••	••	-
9	10% Trichloroacetic acid	-	-	-	-	••	••	••	••	••
	Alkalines									
1	25% Ammonium hydroxide	••	•	-	•	•	•	••	•	••
2	1N Sodium Hydroxide	••	••	-	-	•	•	••	•	••
3	32% Potassium hydroxide	•	••	-	-	-	•	••	•	••
	Aqueous Solution									
1	30% formalin	••	•	••	••	•	••	••	••	••
2	30% Hydrogen peroxide	-	••	-	-	-	••	••	••	None
3	5% Sodium hypochlorite	-	••	-	-	-	••	••	••	None
4	30% Formaldehyde	••	•	-	•	•	••	••	••	••
	pH Range									
	pH 1-14	-	-	-	-	-	-	••	••	••
	pH 1-8	-	-	-	•	-	••	••	••	••
	pH 3-14	••	•	-	-	•	-	••	••	••
	pH 3-12	••	••	-	•	••	•	••	••	••
	pH 4-8	•	••	•	••	••	••	••	••	••
	pH 6-14	••	•	••	-	•	-	••	••	••

Compatibility tables

Septa chemical compatibility

Sample \ Septa	PTFE	PTFE/Silicone	PTFE/ Silicone /PTFE
Acetonitrile	✓	✓	✓
Hydrocarbons (hexane, heptane, methane)	✓		✓
Methanol	✓	✓	✓
Benzene	✓		✓
THF	✓		✓
Toluene	✓		✓
DMF	✓	✓	✓
DMSO	✓	✓	✓
Ether	✓	✓	✓
Chlorinated Solvents (methylene chloride)	✓		✓
Alcohols (ethanol)	✓	✓	✓
Acetic Acid	✓	✓	✓
Acetone	✓	✓	✓
Phenol	✓	✓	✓
Cyclohexane	✓		✓

*PTFE/silicone/ PTFE has the same chemical compatibility of PTFE ONLY UNTIL PUNCTURED

Compatibility tables

Samples vials compatibility

Manufacturer	Autosampler	8-425 Screw top	9-425 Screw top	13-425 Screw top	11-425 Crimp top	Headspace
Agilent	1050,1090,1100, 79855A		✓		✓	
	5880,5890(GCs) 6880,6890(GCs) 7673A,7683A		✓	✓	✓	
	7694 G1888A					10mL/20mL Crimp top, 20mL Screwtop
	Tekmar3100 7695A					40mL EPA
Shimadzu	AOC14/1400 AOC88/9 LC 2010 SIL-HT/10ADVP	✓	✓		✓	
	AOC-20		✓	✓	✓	
	AOC-5000	✓	✓		✓	Round bottom withmagnetic
	HSS-2B/4B					✓
	SIL-6A/6B/9A	With flange				
	SIL-10A,SIL-10Ai,SIL-10AxL	✓	✓			
Waters	717Plus				✓	
	Acquity	✓	✓		✓	
	Alliance 2690	✓	✓			
	Cap LC	✓	✓		✓	
	WISP			✓		
Thermo scientific/ Dionex	A-200S/AS 150/800/8000	✓	✓		✓	
	AS 3000/TRACE GC TriPlus		✓		✓	
	ASI-100 SURVEYOR LC WPS-3000RS WPS-3000SL		✓		✓	
	HS2000,HS850					10mL/20mL Crimp top
	HS250,HS500,HS800					10mLRound bottom Crimp top
	In Kombinationmit Combi PAL					10mL/20mL Round bettom Crimp top, 10mL/20mL screw top