Double Ring filter paper

Double Ring cellulose filter papers are manufactured from high-quality cotton linters for use in general filtration and determination of the extent of particle retention. Sample volumes from high-milliliter to low-microliter levels can be filtered. Double Ring cellulose filter papers offer a wide choice of retention and flow rate combinations for numerous laboratory applications.

Qualitative filter paper

Qualitative filter paper (Fig 1) is widely used in routine laboratory applications, including liquid clarification. The speed of filtration and particle retention depends on the particular grade of qualitative filter paper.

Slow grade qualitative filter papers retain the fine precipitates encountered in chemical analysis because they have excellent absorption separation capabilities. Therefore, slow grade qualitative filter papers are very useful for the clarification of cloudy suspensions for water and soil analysis.

Medium grade qualitative filter papers are suitable for the filtration of highly dense liquids, such as sweet fruit pulps, wines, syrups, resin solutions, oil or plant extracts, and soaks of Chinese traditional medicine.

Fast grade qualitative filter papers are thicker than medium grade papers in order to increase the capacity for particle retention. They are suitable for the filtration of coarse granules, culture media, and colloidal sediments.

Fig 1. Qualitative filter paper.

In addition to general laboratory applications, qualitative filter paper can be used for industrial production processes, such as pre-filtration and final filtration steps in the pharmaceutical industry, filtration steps in the production of medicines, filtration of chemical products, and filtration of electroplating liquids. For industrial use, the filter paper can be supported by placing a filter cloth, oil filter paper, filter boards, or metal filter net underneath.

Specifications

Grade	Separation performance	Filtration speed (s)	Ash (%)	Wet burst (mm H_2O)	Basis weight (g/m^2)	pH	Whiteness (%)
FAST 101	$Fe(OH)_3$	≤ 35	≤ 0.11	130	80.0 ± 4.0	6.0–8.0	≥ 85.0
MEDIUM 102	$PbSO_4$	> 35 to ≤ 70	≤ 0.11	150	80.0 ± 4.0	6.0–8.0	≥ 85.0
SLOW 103	$BaSO_4$(warm)	> 70 to ≤ 140	≤ 0.11	200	80.0 ± 4.0	6.0–8.0	≥ 85.0

Ordering information

Circles

Grade	Quantity	∅ 7 cm	∅ 9 cm	∅ 11 cm	∅ 12.5 cm	∅ 15 cm	∅ 18 cm
FAST 101	100 pcs/pk	99-191-070	99-191-090	99-191-110	99-191-125	99-191-150	99-191-180
MEDIUM 102	100 pcs/pk	99-192-070	99-192-090	99-192-110	99-192-125	99-192-150	99-192-180
SLOW 103	100 pcs/pk	99-193-070	99-193-090	99-193-110	99-193-125	99-193-150	99-193-180

Sheets

Grade	Size	Code number
FAST 101	60 × 60 cm	99-191-952
MEDIUM 102	60 × 60 cm	99-192-952
SLOW 103	60 × 60 cm	99-193-952

Wet strengthened qualitative filter paper

In response to our customers' needs, we improved the wet strength of our regular qualitative filter paper by adding a small quantity of chemically stable resin. Wet strengthened qualitative filter paper has approximately twice the wet strength of our regular qualitative paper.

Since some trace nitrogen is usually introduced into the paper after treatment, we recommend that you do not use the wet strength qualitative filter paper for Kjedahl and nitrogen-related analyses (e.g, protein and total nitrogen analysis in the food/pharmaceutical industry) due to the risk of contamination of the final products.

The wet strengthen filter paper is suitable for applications with filtration under vacuum or pressure, high loading capacity requirement applications, such as electroplating, chemical compounds, ceramic production and lanthanum refinery.

Specifications

Grade	Separation performance	Filtration speed (s)	Ash (%)	Wet burst (mm H_2O)	Basis weight (g/m^2)	pH	Whiteness (%)
Wet Strengthened 502 (MEDIUM)	$PbSO_4$	> 35 to ≤ 70	≤ 0.11	≥ 300	75.0–84.0	6.0–8.0	≥ 85.0

Ordering information

Product	Grade	Size	Code number
Wet Strengthened	MEDIUM 502	60 × 60 cm	99-592-952

Diffusion filter paper and dispersion filter paper

Diffusion and dispersion filter papers are predominantly used in the dye-stuffs industry. These papers have low background interference, which is beneficial when observing liquid diffusion in order to identify liquid features.

Specification

Grade	Separation performance	Filtration speed (s)	Ash (%)	Wet burst (mm H_2O)	Basis weight (g/m^2)	Rupture length (km)	pH	Whiteness (%)
Diffusion 701	$Fe(OH)_3$	≤ 25	≤ 0.11	130	80.0 ± 4.0	≥ 1.50	6.0–8.0	≥ 85.0
Dispersion 702	$PbSO_4$	> 35 to ≤ 45	≤ 0.11	150	80.0 ± 4.0	≥ 1.90	6.0–8.0	≥ 85.0

Ordering information

Product	Quantity	Code number
Diffusion Filter Paper, 11 cm	100 circles	99-791-110
Dispersion Filter Paper, 11 cm	100 circles	99-792-110

Chromatography paper

Double Ring chromatography paper is made from 100% pure cotton linter without any additives, which guarantees its high quality and purity level. This is extremely important to chromatography tests. Double Ring chromatography paper is robust enough to withstand the high resolution test demands of busy laboratories and research institutes. In addition, Double Ring chromatography paper can be used as raw materials for chemical and biochemical test papers, such as pH test papers, metal test strips, and urine test strips.

Specifications

Grade	Fe content (%)	Rupture length (km)	Ash (%)	Water absorption (mm)	Basis weight (g/m^2)	pH	Whiteness (%)
1#	≤ 0.003	≥ 1.80	≤ 0.10	91–120	95.0 ± 5.0	6.5–7.5	≥ 85.0
3#	≤ 0.003	≥ 1.80	≤ 0.10	91–120	180.0 ± 9.0	6.5–7.5	≥ 85.0

Ordering information

Product	Size	Code number
Chromatography 1#	60 × 60 cm	99-891-952
Chromatography 3#	60 × 60 cm	99-893-952

Quantitative filter paper

Quantitative filter paper (Fig 2) has a smooth surface, extremely low ash content, high capacity, good filtration performance, and excellent retention of particles. Quantitative filter paper is designed for gravimetric analysis and the preparation of samples for instrumental analysis. Double Ring is a versatile filter paper with fast, medium, or slow flow rates. Quantitative filter paper has a wide range of applications, such as food and soil analysis, particle collection during air monitoring, inorganic chemical analysis of building materials, mineral analysis, and applications in the steel industry.

Fig 2. Quantitative filter paper.

Specifications

Grade	Separation performance	Filtration speed (s)	Ash (%)	Wet burst (mm H_2O)	Basis weight (g/m^2)	pH	Whiteness (%)
FAST 201	$Fe(OH)_3$	≤ 35	≤ 0.009	130	80.0 ± 4.0	5.0–8.0	≥ 85.0
MEDIUM 202	$PbSO_4$	> 35 to ≤ 70	≤ 0.009	150	80.0 ± 4.0	5.0–8.0	≥ 85.0
SLOW 203	$BaSO_4$(warm)	> 70 to ≤ 140	≤ 0.009	200	80.0 ± 4.0	5.0–8.0	≥ 85.0

Ordering information

Grade	Quantity	∅ 7 cm	∅ 9 cm	∅ 11 cm	∅ 12.5 cm	∅ 15 cm	∅ 18 cm
FAST 201	100 pcs/pk	99-291-070	99-291-090	99-291-110	99-291-125	99-291-150	99-291-180
MEDIUM 202	100 pcs/pk	99-292-070	99-292-090	99-292-110	99-292-125	99-292-150	99-292-180
SLOW 203	100 pcs/pk	99-293-070	99-293-090	99-293-110	99-293-125	99-293-150	99-293-180

Quantitative filter paper for mining/cement applications

GE Healthcare Life Sciences has developed a series of new grades that are specially recommended for mining and cement applications. These grades have higher basis weight, load capacity, and particle retention than our regular quantitative papers, all of which make these papers suitable for metal analysis in ore samples and SO_3 analysis in cement industries.

Specifications

Grade	Separation performance	Filtration speed (s)	Ash (%)	Wet burst (mm H_2O)	Basis weight (g/m^2)	pH	Whiteness (%)
FAST 201S	$Fe(OH)_3$	≤ 35	≤ 0.009	180	97.0 ± 7.0	5.0–8.0	≥ 85.0
MEDIUM 202S	$PbSO_4$	> 35 to ≤ 70	≤ 0.009	180	97.0 ± 7.0	5.0–8.0	≥ 85.0
SLOW 203S	$BaSO_4$(warm)	> 70 to ≤ 140	≤ 0.009	200	97.0 ± 7.0	5.0–8.0	≥ 85.0

Ordering information

Grade	Quantity	∅ 11 cm	∅ 12.5 cm	∅ 15 cm
FAST 201S	100 pcs/pk	98-291-110	98-291-125	98-291-150
MEDIUM 202S	100 pcs/pk	98-292-110	98-292-125	98-292-150
SLOW 203S	100 pcs/pk	98-293-110	98-293-125	98-293-150

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