

## Quantitative/Hardened Filter Papers

- **100% cotton linter cellulose**
- **Ash Content:** 0.01%(Except No.4A 0.025%)
- **Acid washed:** Double acid washed in hydrochloric then hydrofluoric acid (No. 3, 5A, 5B, 5C, 6, 7), then rinsed with ultrapure water to neutralize. No. 4A is further treated with nitric acid before washing

## APPLICATIONS

- Gravimetric analysis
- Environmental monitoring



Quantitative filter papers

## CHARACTERISTICS AND APPLICATIONS: CONVERSIONS – QUANTITATIVE PAPERS

Grade	Comments	Weight (g/m <sup>2</sup> )	Thickness (mm)	Flow Time* <sup>1</sup> (sec)	Absorption speed* <sup>2</sup> (cm)	Wet Strength* <sup>3</sup> (kPa)	Nominal Rating (µm)	Collection Efficiency (%; 0.3 µm DOP)	Conversion* <sup>4</sup>	
									Whatman	ex-Schleicher & Schuell
<b>No. 3</b> Ashless	Medium retention (5-10 µm), fast flow rate Analysis of soils, fertilizers, cement, and minerals	113	0.23	130	7.5	12	5 (Medium)	80	43	593-A
<b>No. 5A</b> Ashless	Fast flow rate, retains coarse particulates and gelatinous precipitates (>10 µm). Filter hydroxides and metallic aerosols, environmental monitoring, determine silica content in steel	97	0.22	60	9.5	10	7 (Coarse and gelatinous)	75	41	589-IH
<b>No. 5B</b> Ashless	Retains medium particles (5-10 µm) such as CaCO <sub>3</sub> , PbSO <sub>4</sub> , CaCO <sub>4</sub> , MnCO <sub>3</sub> , ZnCO <sub>3</sub> , ZnS, AgCl	108	0.21	195	7.0	12	4 (Medium)	90	40	589 / 6 Green
<b>No. 5C</b> Ashless	Collect fine precipitates (<5 µm) such as SrSO <sub>4</sub> , BaSO <sub>4</sub> , HgCrO <sub>4</sub> , and colloidal dispersions; gravimetric analysis	118	0.22	570	6.0	12	1 (Fine)	93	44	589 / 3 Blue
<b>No. 6</b> Ashless	Retains medium-fine particulates (2-10 µm), trace and precious metals	103	0.20	300	6.0	12	3 (Medium Fine)	90	-	589 / 2 White
<b>No. 7</b> Ashless	Highest purity for retaining medium particles (5-10 µm), precise gravimetric analysis	87	0.18	200	7.0	10	4 (Medium)	85	-	-
<b>No. 4A</b> Hardened	High wet strength, suitable for use under high pressure, high chemical and pH resistance, retains fine crystalline precipitates (<5 µm), slow flow	96	0.12	915	4.0	52	1 (Very Fine)	90	50	-

Footnotes: See facing page

**Ash content of Quantitative Papers (mg per disc)**

mm	No. 3	No. 5A	No. 5B	No. 5C	No. 6	No. 7
55	0.03	0.02	0.03	0.03	0.02	0.02
70	0.04	0.04	0.04	0.05	0.04	0.03
90	0.07	0.06	0.07	0.08	0.07	0.06
110	0.11	0.09	0.10	0.11	0.10	0.08
125	0.14	0.12	0.13	0.15	0.13	0.11
150	0.20	0.17	0.19	0.21	0.18	0.15
185	0.30	0.26	0.29	0.32	0.28	0.23

**Metal Content**

(µg/g)	Si	Na	K	Ca	Mg	Fe	Pb	Cu	Mn	Ni	Al	Zn	Cd
Qualitative	46	62	3	140	17	<5	<1	<1	<1	<1	<2	1	<0.5
Quantitative	32	<10	<2	<10	<1	8	<1	<1	<0.5	<1	2	<1	<0.5

**ORDERING INFORMATION: QUALITATIVE PAPERS**

- Available in discs in the following diameters (mm): 55, 70, 90, 110, 125, 150, 185, 240, 285, 300, 330, 360, 400, 500, 600
- Additional sizes available upon request.
- Order by specifying first the grade of filter then the diameter, e.g. (NO112. 5CM), (NO2325. 5CM)
- Package of 100

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- Additional sizes available upon request.
- Order by specifying first the grade of filter then the diameter, e.g. (No.5A, 125 mm), (No.6, 55 mm)
- Package of 100

**Chromatography Papers**

- **High quality papers** are carefully tested for spot formation, capillary action, water flow rate and absorption speed to assure uniformity and reproducibility
- **Better resolution** with slower flow rate papers

**APPLICATIONS**

- Chromatography
- Electrophoresis and blotting
- Separation of heavily loaded solutes

**SPECIFICATIONS AND CONVERSION GUIDE**

Grade	Weight (g/m <sup>2</sup> )	Thickness (mm)	Absorption Speed* <sup>1</sup> (cm)	Wet Strength* <sup>2</sup>	Ash (%)	Whatman equivalent
No. 50	140	0.25	6.0	8	0.1	20 Chr
No. 51A	87	0.18	7.5	7	0.01	4 Chr
No. 51B	87	0.17	7.0	5	0.06	1 Chr
No. 514A	185	0.32	7.5	8	0.06	3MM Chr
No. 526	325	0.70	11.0	29	0.1	17 Chr
No. 590	285	0.93	18	10	0.1	17 Chr

\*1. Absorption speed is the distance in cm that water will travel in an upright strip of filter paper in ten (10) minutes at 20°C.

\*2. Wet Strength is the pressure measured by Mullen Burst Strength Tester after soaking in water.

**ORDERING INFORMATION**

All grades above are available in the following size (mm) and quantities:

Size	Qty / Pkg
20 x 400	100 / Pkg
200 x 200	50 / Pkg
600 x 600	50 / Pkg

Order by specifying first the grade of paper then the size, e.g. (NO51A20MMX400MM)