

# Chromatography Products

Whatman is known as an experienced manufacturer of chromatography products, including chromatography paper, chromatography separation media, High-Performance Liquid Chromatography (HPLC) columns and Thin Layer Chromatography (TLC) plates.

Today's pharmaceutical, chemical and biotechnology industries are facing demands for purity in the development of commercially important products. As a result, chromatography has become a major purification technique on a process and preparative scale. Separation media with assured uniformity

and reproducibility have become vital components in the ultimate goal of bringing a new product to market. Whatman has a complete line of chromatography products to suit these exacting requirements.

## Chromatography Paper

Whatman chromatography papers are the most widely used papers for chromatography worldwide. This acceptance and usage reflect the purity, high quality, and consistency of Whatman papers. These qualities are relied upon by chromatographers and are essential to successful, reproducible chromatography. Whatman chromatography paper media are made from specially selected cotton cellulose. They are rigorously quality controlled for characteristics important to the chromatographer and to ensure uniformity within the grade. The chromatography paper product line includes standard cellulose and ion exchange grades.

### Features and Benefits

- Pure cellulose produced entirely from the highest quality cotton linters with no additives of any kind
- Manufactured and tested specifically for chromatographic techniques – this ensures the wicking capability and uniformity of capillary action that are important in chemical separations.
- Also widely used in protein and nucleic acid blotting (see Blotting Products)

## Cellulose Chromatography Papers

### Grade 1 Chr

The world standard chromatography paper. A smooth surface, 0.18 mm thick with a linear flow rate (water) of 130 mm/30 min. Good resolution for general analytical separations.



### Grade 2 Chr

Thickness 0.18 mm. Flow rate 115 mm/30 min. Slower than 1 Chr for higher resolution applications. Smooth surface. Particularly recommended for optical or radiometric scanning.

### Grade 3 Chr

A medium thickness paper (0.36 mm) with a flow rate of 130 mm/30 min. For general applications with medium/heavy solute loadings. Frequently used for separation of inorganic compounds and for electrophoresis.

### Grade 3MM Chr

Though widely used as a blotting paper, 3MM Chr is also used both in electrophoresis and for general chemistry. A medium thickness paper (0.34 mm) used extensively for general chromatography and electrophoresis. Flow rate is 130 mm/30 min.

#### Grade 4 Chr

Thickness 0.21 mm. Flow rate 180 mm/30 min. Fastest of the thin papers. Recommended for routine and/or repetitive chromatography when loadings are relatively low. Smooth surface. Very suitable where speed is important and very high resolution is not required.

#### Grade 17 Chr

A thick (0.92 mm) and highly absorbent paper with a very high flow rate of 190 mm/30 min. Suitable for the heaviest loadings and for preparative paper chromatography and electrophoresis.

#### Grade 20 Chr

Thickness 0.17 mm. Flow rate 85 mm/30 min. For maximum resolution, this grade is supreme, giving the greatest possible separation of closely related compounds. Smooth surface. Recommended for separation of samples of unknown composition, with outstanding resolution at low loadings.

#### Grade 31ET Chr

Thickness 0.50 mm. Flow rate 225 mm/30 min. Extremely fast. Flow rate is the highest of all chromatography papers in the Whatman range. Thick paper with fairly soft surface. Principal application is in electrophoresis of large molecules.

#### Grade 54 SFC

Thin (0.18 mm) hardened paper with high speed (180 mm/30 min.) and fair to good resolution. Recommended for routine chromatography. High wet strength.

#### Grade 2668 Chr

Thickness 0.9 mm. Flow rate 155 mm/10 min. For separation of relatively large molecules by electrophoresis.

#### Grade 2727 Chr

Thickness 1.40 mm. Flow rate 180 mm/30 min. For separation of very large amounts of substance.

## Ordering Information – Cellulose Chromatography Paper

Catalog Number	Description	Quantity/Pack
<b>Grade 1 Chr</b>		
3001-964	1 Chr chromatography strips, CRL, 11 × 21.3 cm with 12 strips of 1.5 cm 1 Chr sheet divided into 15 mm lanes for running up to 12 samples in parallel	100.
3001-845	1 Chr sheets, 10 × 30 cm	100
3001-861	1 Chr sheets, 20 × 20 cm	100
3001-878	1 Chr sheets, 25 × 25 cm	100
3001-917	1 Chr sheets, 46 × 57 cm	100
3001-931	1 Chr sheets, 58 × 68 cm	100
3001-604	1 Chr roll, 1.0 cm × 100 m	1
3001-614	1 Chr roll, 2.0 cm × 100 m	1
3001-640	1 Chr roll, 3.0 cm × 100 m	1
3001-652	1 Chr roll, 4.0 cm × 100 m	1
3001-653	1 Chr roll, 5.0 cm × 100 m	1
3001-672	1 Chr roll, 10.0 cm × 100 m	1
3001-681	1 Chr roll, 15.0 cm × 100 m	1
3001-633	1 Chr roll, 1" × 300 ft.	1
3001-651	1 Chr roll, 1.5" × 300 ft.	1
<b>Grade 2 Chr</b>		
3002-917	2 Chr sheets, 46 × 57 cm	100
3002-911	2 Chr sheets, 58 × 60 cm	100
<b>Grade 3 Chr</b>		
3003-917	3 Chr sheets, 46 × 57 cm	100
3003-911	3 Chr sheets, 58 × 60 cm	100