Hahnemühle

Analysis of Beverages

Filtration and Separation

Hahnemühle products meet the regulations on quality control

Beverages are one of the most controlled products of our daily life. Its quality becomes increasingly important for customers' purchase decisions in the course of a conscious and sustainable consumption. On the other hand the list of potential contaminants becomes longer day by day. Quality requirements often go far beyond faultless conditions of the product itself. The most important factors for customer retention are safety, trust and transparency when buying beverages. For the required quality assurance and raw material control knowledge about the composition of foodstuffs is essential.

Hahnemühle FineArt GmbH offer outstanding products suitable for common processes in the analysis of beverages and the detection of contaminants. We have more than 130 years of experience in producing premium filter papers for the filtration of sensitive liquids and exquisite beverages. Through our adaptability and long-term customer relationships we have met the requirements of the market. We are very aware of the purity and reliability which customers expect from tools for their specific filtration application.

made by Hahnemühle FineArt GmbH Dassel, Germany

That's why all of our filter papers are made from the finest raw materials. The pureness of the cotton linters and the cellulose we use allows the filters to be used for food and beverages. For selected types, the conformity to both the U.S. FDA recommendation 21 CFR and the German BfR (Federal Institute for Risk Evaluation) recommendation XXXVI and XXXVI/1 (1.6.2009) can be approved.

During the development of the analytical methods used in the labs of breweries, certain high quality grades of our filter papers have been established for analysis and strict QC in this area. In the newest edition of the instructions for "Analytical methods in breweries - Wort, Beer, Beer based Beverages", published by the Middle European Brewery Analysis Commission (MEBAK, 2013), high value Hahnemühle filter papers are recommended.

Signs & Symbols

= Disc Folded / Folded filter
= Disc Plain / Filter circle
= Membranes, with or without grid
= Syringe Filter
= Sheets

General analytical methods for beverages

Filter papers:

	Type of filter	Order information
Determination of the ash content in food-stuff according to LFBG §64* (gravimetrical analysis)	589/1 black (fast), 589/2 white (medium), 589/3 blue (slow)	DP5891090, 90 mm DP5892110, 110 mm DP5893150, 150 mm
Analysis in food industries according to LFBG §64*	604 (fast), 595 (medium), 602h (slow)	DP604150, 150 mm DF595240, 240 mm DF602320, 320 mm
Control of drinking water: chemical elements, radioactive traces	589/3 blue	DP5893150, 150 mm
Clarification of samples	0856 (sweetened, viscous), 0858 (non-sweetened)	DF0856240, 240 mm DF0858320, 320 mm
Determination of the nitrogen content	597L	DP597150, 150 mm DF597320, 320 mm

Membranes:

	Type of filter	Order information
HPLC: Clarification of aqueous samples	Cellulose acetate, 0.45 µm	AC04547BL, 47mm SAC04525100, 25mm
HPLC: Clarification of acidic, organic samples and organic mobile phases	Regenerated cellulose, 0.45 µm	CR04547BL, 47mm SCR04525100, 25mm

Microbiological analysis:

	Type of filter	Order information
	Cellulose nitrate, 0.45 µm, non-sterile	white: NC04547BL, 47 mm black: NC04550NC, 50 mm
	Cellulose nitrate, 0.45 µm, sterile, gridded	white: NCS04547BC, 47 mm black: NCS04547NC, 47 mm black: NCS04550NC, 50 mm
	Cellulose nitrate, 0.2 µm, sterile, gridded	white: NCS02047BC, 47 mm white: NCS02050BC, 50 mm black: NCS02047NC, 47 mm
	Mixed cellulose ester, 0.45 µm, sterile, gridded	white: MCES04547BC, 47 mm
	Monitor, cellulose nitrate, 0.45 µm, sterile, gridded, 100 ml	white: ENCS04547BC, 47 mm black: ENCS04547NC, 47 mm
	Cellulose acetate 0.2 µm, 47mm,	AC02047BL, 47 mm SAC02025100, 25 mm

Sterilisation of culture media:

	Type of filter	Order information
	Cellulose nitrate, 0.45 µm, non-sterile	white: NC04547BL, 47 mm black: NC04550NC, 50 mm

* German law for food, feed and utensiles

Analytical methods in breweries

Filter papers for qualitative analysis:

	Type of filter	Order information
Sample preparation for extract determination of malt	2555, 0858 grained	DF2555320, 320 mm DF0858320, 320 mm
Removal of CO_2 and turbidity	602h 597	DF602320, 320 mm DF597320, 320 mm
Determination of solids in wort (Labor Veritas method)	GF52	GF52050, 50 mm
Filtration of lees	597 GF52	DF597320, 320 mm GF52050, 50 mm
Determination of the coagulated proteins (Nitrogen)	597	DF597320, 320 mm DP597125, 125mm
Determination of the grade of fermentation	597	DF597320, 320 mm
Sample preparation of beverages	595	DF595320, 320 mm DF595185, 185mm

Filter papers for quantitative analysis:

	Type of filter	Order information
Determination of solids and turbidity (Feld method)	589/1 black	DP5891110, 110mm
Determination of proteins in wort and beer via $MgSO_4$-precipitation	589/1 black 589/2 white	DP5891110, 110 mm DP5892110, 110 mm
Determination of nitrogen-compounds by phosphor molybdenum precipitation	589/2 white	DP5892110, 110 mm
Determination of carbohydrates by hydrolysis	589/2 white	DP5892110, 110 mm

Membranes:

	Type of filter	Order information
Membrane filter test (Esser)	Cellulose nitrate, 0.2 µm, 47 mm	NC02047BL
Determination of sulfate	Cellulose nitrate, 3 µm, 47 mm	NC30047BL
Determination (HPLC) of vitamin B_2, niacin, ascorbic acid, coffeine/theobromine, total carotene, quinine, sweeteners, benzoic and sorbic acid	Regenerated cellulose, 0.2 µm	CR02047BL, 47 mm SCR02025100, 25 mm
Determination of vitamin B_6 (HPLC)	PTFE, 0.2 µm	SPT02025100, 25 mm

Analytical methods on milk

Filter papers:

	Type of filter	Order information
Elimination of metals in fat	0858	DF0858320, 320 mm DF0858240, 240 mm
Measurement of solids in suspensions	Glass fibre GF52	GF52050, 50 mm SGF15100 or SGF25100, 25mm
HPLC: Clarification of acidic, organic samples and organic mobile phases[2)]	Regenerated Cellulose, 0.45 µm	CR04547BL, 47mm SCR04525100, 25 mm
Degree of whiteness	0048	DP0048050, 50 mm

2) Commission Regulation (EC) No 213/2001: detailed rules for the application of Council Regulation (EC) No 1255/1999 as regards methods for the analysis and quality evaluation of milk and milk products.

Analytical methods applied on drinking water, juices, wine and spirits

Filter papers:

	Type of filter	Order information
Clarification of samples (i.e. spectrophotometry)	Glass fibre GF50	GF50050, 50 mm SGF15100 or SGF25100, 15 resp. 25mm
Determination of solids	GF52	GF52050, 50 mm
Analysis of acids with chromatography papers (i.e. malo-lactic fermentation)	2040 a/b, 3469, 2043 a/b	DP2040a150, 150 mm DP3469125, 125mm
Solid-liquid separation filtration	604, 597, 595, 593	DP604150, 150 mm DF604240, 240 mm
Preparation of samples (for L-Ascorbic acid analysis, separation of PVPP (E1202) and of activated carbon)	0858	DF0858320, 320 mm DF0858240, 240 mm
Removal of turbidity with a low ash filter	602h	DF602320, 320 mm
Gravimetrical analysis (ash content)	589/3	DP5893110, 110 mm DP5893150, 150 mm

Membranes:

	Type of filter	Order information
Colour characteristic[1)]	Cellulose acetate 0.45 µm	AC04547BL, 47mm SAC04525100, 25 mm
Clarification of samples (i.e. spectrophotometry)	Cellulose acetate 0.45 µm	SAC04525100, 25 mm

1) LEGISLATION: Commission Regulation 2676/90, of September 17, 1990, establishing the analytical methods which apply in the wine sector

Large volume filtration:

	Type of filter
Clarification of sweetened viscous juices, spirits and syrups	1450nf, 3205, 3144L*, 520bII*, 520b*, 520a*, 0856
Filtration of unsweetened juices, spirits and wines	572, 2048, 3605, 0858
Clarification of resin solutions, essential oils, essences, plant extracts and low viscosity oils and syrups	1450nf, 3205, 3144L, 520bII, 520b, 520a
Protective papers in filter presses	2410, 610, 1577

*creped filter papers

Ordering information

Filter papers are available as:

DP: Disc Plain / Filter circle

DF: Disc Folded / Folded filter

Sheets

The filter paper types are available as filter circles and folded filters with the following sizes as standard (in mm):

47 – 55 – 70 – 90 – 110 – 125 – 150 – 185 – 240 – 320 (folded filters from 70 mm).

Other sizes, sheets, rolls and special cuts are available on request.

Package size for filter circle, folded filters and sheets is 100 units per box (if not stated differently).

Service

Please ask for DINA4 paper samples for your evaluation. Formats can be customized, even based on dye cutting.

Hahnemühle FineArt GmbH manufacture and supply filter papers for industrial and laboratory applications

- Consistent quality and reliable performance!
- 'State of the Art' in-line controlled manufacturing process.
- Precisely documented production process with 100% batch traceability down to the raw material used.
- Production batches are released only after passing industry standardised testing procedures that are set at the highest possible monitoring level and product specification.
- Water used to prepare the pulp (99% water, 1% cellulose) complies with the German drinking water regulation: TrinkwV 2001
- The average ash content of quantitative papers is 0,004%, of hardened quantitative papers 0,002%, of qualitative papers 0,08 and of hardened qualitative papers 0,05%

Hahnemühle hardened quantitative filters – the purest paper in the market!

Please contact your local Sales Office for a copy of our latest Filtration or Microfiltration Catalogue!
www.hahnemuehle.com/filtration

Germany
Hahnemühle FineArt GmbH
Hahnestrasse 5
D-37586 Dassel

Sales area
Germany, Austria, Suisse
and the Netherlands:
Phone: + 49 5561 791 687

Sales area
Rest-Europe and other Countries:
Phone: + 49 5561 791 688

Fax: + 49 55 61 79 13 77
filtration@hahnemuehle.com
www.hahnemuehle.com

United Kingdom
Hahnemühle FineArt UK
Suite 6, St. Mary's Court
Carleton Forehoe
GB-Norwich,
NR9 4AL

Phone: + 44 (0) 845 3300 129
Fax: + 44 (0) 1603 757 915
ukfiltration@hahnemuehle.com
www.hahnemuehle.com

facebook.com/hahnemuehle

twitter.com/hahnemuehle_DE

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