

CONTINUOUS INNOVATION IN LATERAL FLOW ASSAYS

New generation conjugate
and absorbent pads for high reliability
and improved uniformity



Our improved solutions to support your diagnostic needs

440 Absorbent pad 8980, 8914 and 6614 Conjugate pads

Efficiency and accuracy are two key factors when it comes to improving qualitative and quantitative test methods. This is why we are committed to continuously improve our offering and develop innovative materials.

Ahlstrom-Munksjö new absorbent and conjugate pads designed for Lateral Flow Immuno Assays applications represent a rapid, cost-effective, easy-to-use and close-to-the-patient solution for achieving reliable and consistent results.

Providing added value

– High purity media without contaminate leaching

Our clean and monitored production methods reduce the risk of contamination and interferences during the process

– Lot-to-lot uniformity for consistent performance

Dependable raw material quality, along with stable production settings and specifications, consistent and reliable product excellence

– Wide product range

Our broad offer of grades provides differentiated options to specifically match your development requests

– Long-term supply

The continuous level and quality of our supplies to support your long-term needs

– Customized options

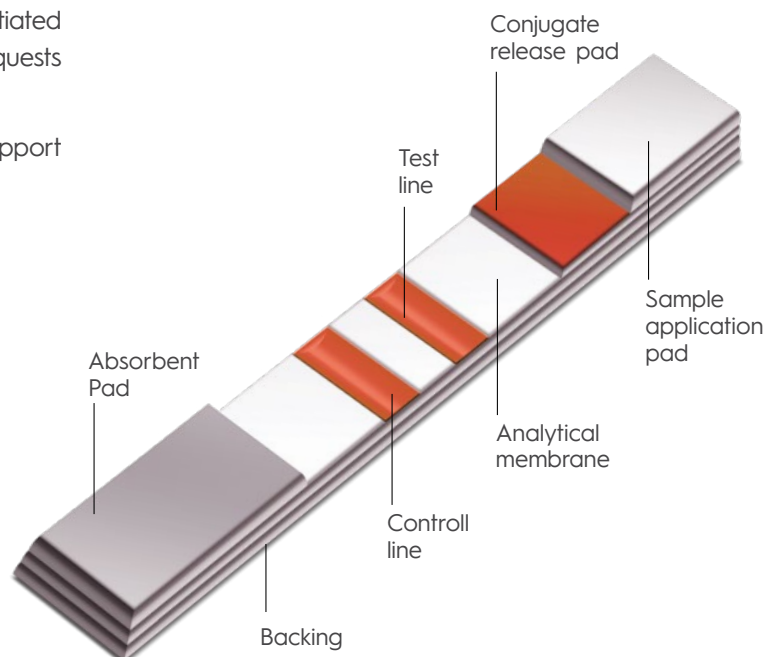
Our pads can be chemically pretreated and customized in terms of cutting and packaging to better meet your requirements

– Treatment capability

Uniform and consistent treatment applied to the media, reducing production steps and chemicals needed

Applications

- Infectious disease screening
- Pregnancy tests
- Drug abuse monitoring
- Veterinary diagnostics
- Food and beverage testing
- Environmental safety



New Absorbent Pad

440 – Fiber blend absorbent pad

Change in absorption kinetic

We are now offering an absorbent pad with an intermediate thickness and absorption capacity between our standard grades 222 and 270. Grade 440 exhibits exceptional dimensional stability and a high wicking rate because it consists of a blend of cotton and glass fibers.



- **New absorption capacity:** Expands design options
- **Quick absorption:** Assists in conjugate release from membrane
- **Low wet swelling:** Preferred for tight tolerances

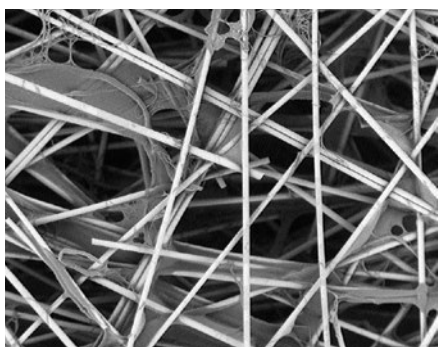
Grade	Basis weight g/m ²	Caliper mm	Wicking rate s/4 cm	Water absorption capacity mg/cm ²
440 (cotton/glass blend)	435	1.44	33	130

New Conjugate Pads

8980 – Glass conjugate pad

New generation conjugate and sample pad for improved uniformity

We continue to investigate ways to improve the performance of the fiber glass with binder type of conjugate pad. We have updated our process methods to produce grade 8980 with an even higher spot-to-spot consistency than our current 8964 and 8951 materials.



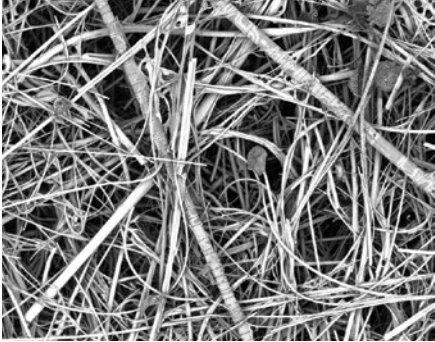
- **Good uniformity:** improved performance consistency of LFA
- **Quick release of conjugate:** contributes to faster test completion
- **Resistant surface:** suitable for spray application of conjugated gold
- **Open porosity:** usable with both Gold nanoparticles and Latex beads
- **Wide compatibility:** design with variety of main signal reagents

Grade	Basis weight g/m ²	Caliper mm	Wicking rate sec/2cm	Water absorption capacity mg/cm ²
8980	80	0.42	2.2	56

8914 – Glass conjugate pad

New conjugate pad with high uniformity for better CV

We have designed a new microfiber glass conjugate pad to offer better uniformity intended to improve the coefficient of variability (CV).



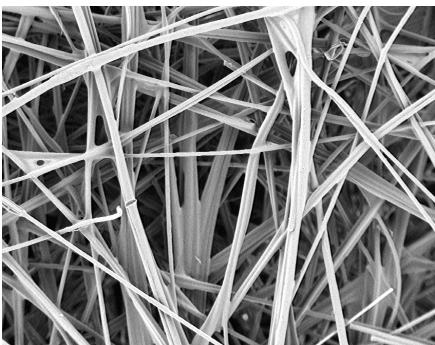
- **Very good uniformity:** Exhibits low coefficient of variability
- **Low porosity:** Conjugate stays within pad when applied
- **Good wicking rate:** Suitable for tests requiring a rapid interpretation
- **Neutral surface pH:** For good stability of conjugate without pretreatment
- **Tensile strength:** Compatible with reel to reel equipment
- **Two blocking agent concentrations:** For additional design optimization

Grade	Basis weight g/m ²	Caliper mm	Wicking rate sec/2 cm	Water absorption capacity mg/cm ²
8914	60	0.34	4.5	35

6614 – Synthetic conjugate pad

New generation hydrophilic polyester conjugate pad

We approached the synthetic conjugate with a new technology platform, resulting in material that is hydrophilic when untreated and composed of small, homogeneous fibers for increased uniformity. Because the media is naturally hydrophilic, pretreatment can be applied more easily.



- **Good uniformity:** Improved performance consistency between devices
- **Hydrophilic:** your pretreatment can be applied without an initial wetting step
- **High absorption:** lower volume of pretreatment chemical needed for same surface areas
- **Good wicking rate:** suitable for tests requiring a rapid interpretation
- **Wide compatibility:** design with variety of main signal reagents

Grade	Basis weight g/m ²	Caliper mm	Wicking rate sec/2 cm	Water absorption capacity mg/cm ²
6614	75	0.42	5	57

Our series of high value materials

Meeting our customers' needs for the development of lateral flow devices

We deliver uniform and consistent products to ensure reproducibility in diagnostic test formats. In Vitro Diagnostic series is available in a wide range of thickness, absorption levels and compositions.

Application	Recommended Grades	Composition
Sample Preparation	121, 141, 142	Glass Fibers
CytoSep® Blood Separation Media	1660, 1662, 1663, HV, HV Plus	Proprietary Fiber Blend
Sample Pad	222, 237, 238, 319, 601, 8950, 8951	Cotton Linters or Glass Fibers
Conjugate Release Pad	8914, 8950, 8951, 8964, 8980, 6613, 6614, 6615, ReliaFlow™	Glass Fiber or Polyester Fibers
Absorbent Pad	222, 237, 238, 270, 320, 440 (cotton/glass blend), 601	Cotton Linter Fibers
Dipstick Material	205, 222, 238, 601	Cotton Linter Fibers

Typical Technical Data

Glass and Synthetic Materials

Grade	Basis Weight g/m ²	Caliper mm	Wicking Rate s/4 cm	Water Absorption mg/cm ²	Composition
121	143	0.66	53	88	Binder-free Microfiber Glass
141	123	0.66	27	132	Binder-free Microfiber Glass
142	120	0.85	29	108	Microfiber Glass w/Binder
6613	100	0.42	-	-	Polyester Fibers
6613H	100	0.42	30	27	Treated Polyester Fibers
6614 <i>new</i>	75	0.42	5 (s/2 cm)	57	Polyester Fibers w/Binder
6615	135	0.51	-	-	Polyester Fibers
ReliaFlow™	100	0.42	21	37	Pretreated Polyester Fibers
8914 <i>new</i>	60	0.34	17	35	Microglass Fiber w/Binder
8950	50	0.25	12 (s/2 cm)	46	Chopped Glass w/Binder
8951	75	0.38	3 (s/2 cm)	63	Chopped Glass w/Binder
8964	75	0.43	5 (s/2 cm)	79	Chopped Glass w/Binder
8980 <i>new</i>	80	0.42	2.2 (s/2 cm)	56	Chopped Glass w/Binder

High Purity Cotton Fibers

Grade	Basis Weight g/m ²	Caliper mm	Wicking Rate s/4 cm	Water Absorption mg/cm ²
601	88	0.19	120	25
238	186	0.34	150	33
1281 (cotton/rayon blend)	70	0.38	65	60
237	183	0.42	86	38
319	179	0.48	18	53
222	291	0.83	20	88
440 (cotton/glass blend) <i>new</i>	435	1.44	33	130
270	439	1.82	25	175
320	702	2.48	10	244

Ahlstrom-Munksjö CytoSep®

Grade	Basis Weight g/m ²	Caliper mm	Wicking Rate s/4 cm	Water Absorption mg/cm ²	Typical Whole Blood Sample Volume μ L/cm ²
HV (1667)	70	0.35	62	48	45-50
HV Plus (1668) - treated	70	0.35	43	48	70-75
1660	73	0.32	74	48	30-35
1662	142	0.61	31	76	40-45
1663	233	1.04	39	102	45-50

Ahlstrom-Munksjö is a global leader in fiber-based materials, supplying innovative and sustainable solutions to its customers. Our mission is to expand the role of fiber-based solutions for sustainable everyday life. Our offering include filter materials, release liners, food and beverage processing materials, decor papers, abrasive and tape backings, electrotechnical paper, glass fiber materials, medical fiber materials and solutions for diagnostics as well as a range of specialty papers for industrial and consumer end-uses. Our annual net sales are about EUR 3 billion and we employ some 8,000 people. The Ahlstrom-Munksjö share is listed on the Nasdaq Helsinki and Stockholm.

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