

# NEWS on diagnostics

2025 Medica Special Edition



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Welcome to the Medica 2025 special edition of News on Diagnostics! **Visit us in Hall 3, Stand C25** to meet our team of specialists—ready to discuss your assay development needs, arrange samples, and explore any topic featured in this newsletter. Plus, join us as we celebrate the **50<sup>th</sup> anniversary of Estapor® Microspheres**.

## Lateral Flow Membranes

Accelerate time to market with products from Merck offering the quality, consistency, and documentation necessary for every step of your IVD LFA development and manufacturing needs.



### Hi-Flow™ Plus Membranes for speed and consistency.

- 5 flow ranges to suit any assay sensitivity.
- Consistent performance speeds assay design and simplifies troubleshooting.
- Available as membrane cards to simplify your manufacturing design process and production.

### SureWick® Pad Materials for use as sample, absorbent, and conjugate pads

- Glass fibre conjugate pads have low extractables and excellent consistency.
- 100% pure cellulose fibre sample and absorbent pads have no binders or glues to interfere with assay performance.

Visit [SigmaAldrich.com/LateralFlow](https://SigmaAldrich.com/LateralFlow) for more information.



## Estapor® Beads

Estapor® Microspheres are a leading brand of polymeric supports for *in vitro* diagnostics, life sciences, biotechnology, cosmetics, electronics and environmental applications. Merck manufactures, develops, produces and provides more than 200 different types of microspheres worldwide.

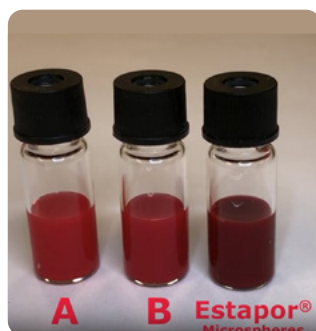
Learn more about our portfolio at  
[MerckMillipore.com/estapor](https://www.MerckMillipore.com/estapor)

## Estapor® Red and Blue Intense Microspheres

Next generation lateral flow tests (LFTs) must be highly sensitive to allow early detection of pathogens, easy to use (rapid and readable) to allow for home utilisation and cost effective to allow their distribution at large scale. Moreover, the trend now is the use of microspheres for multiplex LFTs which use various colored microspheres to indicate the presence of multiple analytes.

To address these challenges, we are developing a new portfolio of intense-coloured, carboxylated microspheres featuring the following unique advantages:

- Improved assay sensitivity through greater signal intensity
- Easy reading, even at low conjugate concentration
- Stable conjugates through easy covalent binding to the carboxyl-modified microspheres
- Reproducible results due to high monodispersity and color stability
- Cost effective
- Versatile with a range of 2 diameters available at 300 nm and 400 nm



Visual comparison of latex color intensity between Estapor® K1-040 Red Intense and key competitors (A and B). Estapor® K1-040 Red Intense display a more intense red color.



Hbs Ag antigen detection assay used as model lateral flow test. Estapor® K1-040 Red Intense shows superior sensitivity compared to competitor A and B even at low conjugation concentration.

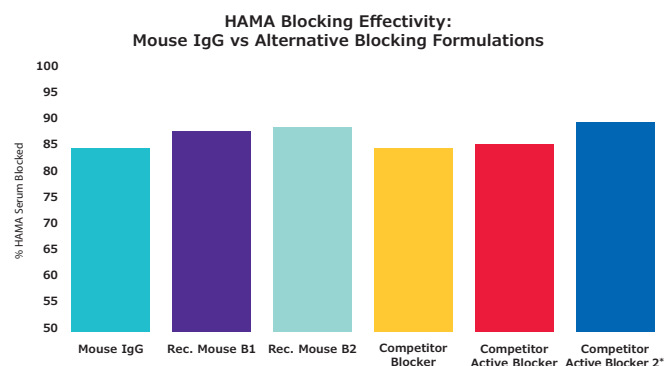
## Antibodies

More than 700 diagnostic antibodies & related products are available from Merck, including:

- Primary Antibodies
- Secondary Antibodies
- Antibody Controls
- Blockers
- Animal Serums

### Recombinant Mouse IgG Blocking Antibodies – B1 & B2

An animal-free solution designed with enhanced blocking capability compared to serum-derived Mouse IgG



Comparison of HAMA blocking effectiveness between recombinant Mouse IgG B1 and B2, serum-derived Mouse IgG, and competitor blockers in ELISA.

\*While all other blockers were used at 1 mg/mL, this product was lyophilized and reconstituted to manufacturer's "for use" instructions (concentration unknown).

Visit us at [SigmaAldrich.com/recombinantmsigg](https://www.SigmaAldrich.com/recombinantmsigg) to request your sample or seek further information.

## Buffers

It's important to protect the integrity of your biomolecules and reagents by choosing the right biological buffer systems. We offer an extensive portfolio of biological buffers for a wide variety of applications, including cell culture buffers, PCR buffers, HEPES buffers, and assay buffers.

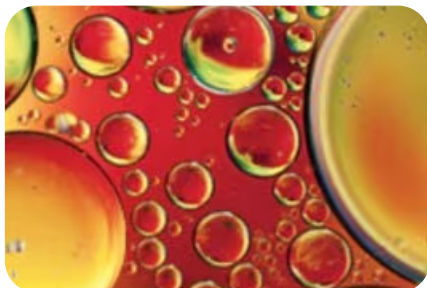
### Key features of our advanced buffer systems:

- High-purity solutions available in a wide range of grades
- Multiple and user-friendly packaging options
- Assured solution stability with pH control
- No interference with biological processes
- Add critical salts and nutrients to cells and tissues
- Scalable from early research to commercial applications
- Customised blending

Visit [SigmaAldrich.com/buffers](https://www.SigmaAldrich.com/buffers) for more information, or to download our Buffer Selection Guide.

## Detergents - Anionic, Cationic, Zwitterionic, Anti-foaming

We offer a broad range of biological detergents and surfactants to meet your research and manufacturing needs, including biodegradable alternatives



per OECD 301F, such as TERGITOL™ 15-S and ECOSURF™ surfactants. Our detergent products include: anionic detergents, cationic detergents, zwitterionic detergents, non-ionic detergents, and anti-foaming agents. Our portfolio of chemically-stable products spans from reagent grade for general lab use to highly purified grades for the most demanding applications. Bulk and custom ordering options provide the same product from bench top to large scale manufacturing under ISO 9001:2015 certifications.

Visit [SigmaAldrich.com/detergents](https://SigmaAldrich.com/detergents) to view our range of products.

## Risk Mitigation

### Risk Mitigation Checklist

- ☐ Do you have change control notification for critical raw materials?
- ☐ Do your suppliers have compliant quality management systems?
- ☐ Are you aware of your suppliers' quality policies?
- ☐ Can your supplier provide manufacturing and supply chain records?
- ☐ Can you validate your suppliers' testing of raw materials?
- ☐ Are you and your suppliers prepared for unannounced audits?
- ☐ Are you confident that your suppliers' raw materials will perform consistently?

Contact your account manager for more information on how Merck can support you, or visit [SigmaAldrich.com/ivd-risk-mitigation](https://SigmaAldrich.com/ivd-risk-mitigation)

## Corning® Plasticware

Corning® manufactures glass and plastic labware, cell culture supplies, syringe filters and membranes, and equipment enabling workflow solutions for chemistry, life science research, drug discovery, and bioproduction. Since the introduction of their first products almost 100 years ago, laboratory professionals have come to rely on the Corning® brand for quality products with features that make it easier to get work done. Their comprehensive portfolio of cell culture flasks and supplies, vacuum filtration systems, microcentrifuges, hotplates, stirrers, tubes, pipettes and pipette tips, syringe filters and filter membranes, and glassware including beakers, bottles, condensers, and funnels consists of high-quality, innovative products for life science applications enabling people around the world to make and deliver life-changing discoveries.

Find out more at [SigmaAldrich.com/corning](https://SigmaAldrich.com/corning)



## Filtration

### Millex® Syringe Filters

Setting the standard in small-volume filtration (1-200 mL), the unsurpassed consistency of Millex® syringe filters in sample preparation has led to the development of many methods specifying their use.



Featuring reduced sample loss due to minimal hold-up volumes, Millex® syringe filters are ideal for use in a variety of applications including:

- HPLC sample prep
- Filtration of antibiotics and tissue culture additives
- Dissolution testing

Our controlled manufacturing process ensures reliable filter performance, and our sterile devices include a certificate of quality. Available with many different membrane and housing options, Millex® syringe filters are compatible with a variety of solvents and sample types.

Find out more at [SigmaAldrich.com/onemillex](https://SigmaAldrich.com/onemillex)

Interested in Per- and polyfluoroalkyl substances (PFAS) testing?

PFAS analysis requires accuracy at every step. Be confident in your results with trusted products and services for your entire workflow. Visit our dedicated resources at [SigmaAldrich.com/PFAS](https://SigmaAldrich.com/PFAS)

## CMO & LFADS

Diagnostic assay development and commercialization is never easy. We can ease that burden because we not only supply fit for use custom and raw materials, but also offer assay design and optimization services as well as contract manufacturing of components and complete commercial kits.

### Contract Manufacturing Services for IVD, Medical Device, and Biologicals

Our quality systems and regulatory expertise combined with a full range of custom and contract manufacturing services provide a global solution for the diagnostics industry with a focus on your satisfaction.

### Lateral Flow Assay Development Services

Discover the technical support from a lateral flow expert to develop your diagnostic lateral flow assay. From component troubleshooting to full development, we can help optimize your assay performance to accelerate commercialisation.

[SigmaAldrich.com/assaydev](https://sigmaaldrich.com/assaydev) is here to support your project.

### Custom Diagnostic Antibody Development & Manufacturing Service

Discover how to simplify a cell line development, scale-up, and learn more about antibody manufacturing with a partner who understands IVD development.

## M-Clarity™ Quality Program

M-Clarity™ Program is your guide for quality and portfolio transparency. The development and manufacture of products in the Life Science industry has become progressively more challenging in recent years. Because of the increasing complexity of the processes, regulatory requirements and local standards, it is crucial to understand, assess and manage risks while ensuring business continuity.



Industry-driven regulations require that products of higher criticality or those used in highly-regulated industries, such as pharma or *in vitro* diagnostics manufacturing, need enhanced supplier quality support.

### The M-Clarity™ Program guides you to:

- Select the right product to meet your needs
- Move smoothly through development phases
- Ensure compliance by informed product selection

Find out more, and download your guide at [SigmaAldrich.com/m-clarity](https://sigmaaldrich.com/m-clarity)

## Custom Oligos for Commercial Use

We offer custom DNA Primers, qPCR Probes, and Next-Gen Sequencing Oligos for

- Life Science Research Tools
- Molecular Diagnostics
- Laboratory Developed Tests

We can also perform component or complete kit manufacturing, including custom formulations, packaging, and private labeling. Learn about our manufacturing capabilities or request a consultation to determine which type of product best fits your needs at [SigmaAldrich.com/compliantoligos](https://sigmaaldrich.com/compliantoligos)



## DID YOU KNOW...

Merck is committed to a greener way of doing business? Find out more at [SigmaAldrich.com/sustainability](https://sigmaaldrich.com/sustainability)

