3M Science. Applied to Life.™

Collaboration that improves care.

As the world forever changes and evolves, so does healthcare. Advancements in care have led to an increased need for point-of-care diagnostics that allow patients to gain information on their health sooner. With these improvements to health information, point-of-care testing has also been able to reach patients in areas it hasn't been able to before. **Whether a patient is in the hospital, at home or in the field, they can receive care.**

The importance of point-of-care testing.

Point-of-care testing, or POCT, answers pressing health questions and allows clinicians and patients to get insight onsite, rather than needing to send tests to a lab. POCT can answer common questions. What's my blood glucose level? Am I pregnant? Do I have an infectious disease?

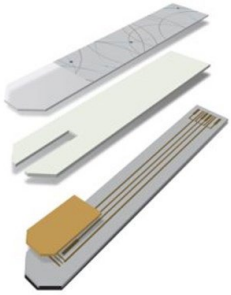
Additionally, POCT has gained traction with the medical community because of its speed and prevention of hospital visits. It also disrupts traditional testing methods by enabling easy and early access to results that may mitigate health risks. During the pandemic, these devices became even more critical.

The science behind point-of-care testing.

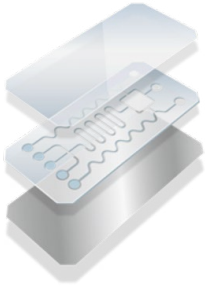
How does POCT actually work? Microfluidics — or the manipulation of fluid on a micro scale — are the secret ingredient in POCT. Microfluidic devices capture and immobilize biological samples, like blood or mucus, to get the insights patients and clinicians seek. The devices control and move fluid, typically on less than one millimeter of surface area.

Microfluidic devices require many different materials, all of which must be manufactured to ensure consistently reliable performance. Common critical materials include cover tapes, test strip components and lab-on-a-chip components.

Cover tapes



Test strip components



Lab-on-a-chip components

Driving success through collaboration.

Developing POCT technology that meets market needs and performs reliably is complex. Collaboration — both within individual companies and across the industry — **is a key factor in bringing these devices to life.**

We're an organization that lives our value of collaboration. Though our 3M Medical Materials and Technologies team might be the ones to first initiate a project and then bring a product across the finish line, countless teams will provide input along the way. One team might have deep knowledge of a subset of technology elements such as adhesives, biomaterials and films, but may not know details on other elements within 3M's periodic table of technologies. At 3M, this isn't a roadblock. Our scientists and engineers will utilize their connections and tap into information through our world-class Analytical Lab. **We'll leverage the capabilities and vast expertise across the whole corporation to solve problems** and aid in the development of novel diagnostic devices.

Our teams also partner with outside organizations, like Auer Precision. Together, we've created a successful, mutually beneficial relationship with many collaborative successes. We've collaborated on Coagulation DX strips, Hematology DX strips, Lab Slide preparation, Stick to Skin products, Point of Care DX and Microfluidics. We rely on the power of internal and external collaboration to deliver solutions — and results.

Creating solutions for advanced care.

By collaborating with different teams and partners, we can identify problems and create technologies to address the needs of both our partners and customers. This collaborative spirit helps us create products that will help accelerate the advancement of healthcare and deliver innovative solutions for POCT devices.

That's exactly how 3M™ Microfluidic Diagnostic Tape 9795R and 3M™ Microfluidic Diagnostic Tape 9795T came to be. Many diagnostic devices rely on pressure sensitive adhesives, like the previously stated tapes, to hold their devices together. These adhesives are needed for diagnostic tests like PCR COVID-19 tests, applications for blood glucose and diabetes care, and for remote diagnosis of infectious diseases such as flu, strep and various hospital-acquired infections. The adhesives can also be used in devices that monitor chronic disease conditions.

3M Microfluidic Diagnostic Tape 9795R and 3M Microfluidic Diagnostic Tape 9795T are biologically inert adhesives that have a delayed tack, making them a great option for POCT device assembly. Their silicone adhesive bonds well to most plastics, including low surface energy plastics like polypropylene. They can withstand elevated temperatures common with PCR, along with featuring a low fluorescent adhesive and backing.

The 3M Microfluidic Diagnostic Tape 9795T is also known for its thicker backing and displays less cross-sectional bulging under pressure. This provides better control of fluid and a more consistent optical path length.

Extending the reach of care.

As point-of-care testing advances and evolves in post-pandemic life, 3M scientists are ready and eager to help customers solve challenges — and bring their life-saving devices to patients and clinicians around the world.

Learn more about how our adhesive solutions can advance POCT devices.

Medical Materials & Technologies
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