

GENSPEED® Technology

Automated Multiplexed Quantification at the Point of Care

GENSPEED Biotech is an Austrian company, that develops, produces and distributes IVD-CE certified rapid testing solutions based on the patented GENSPEED® technology.

THE GENSPEED® OEM TECHNOLOGY



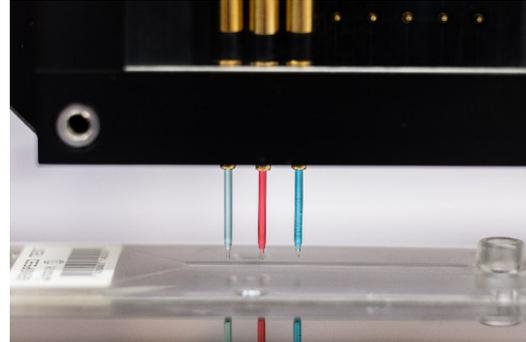
Based on a patented combination of microfluidics, miniaturized opto-electronics and automation, the GENSPEED® system is compact, simple and reliable.

KEY FEATURES

- Multiplex assays (≤ 8 parameters)
- Quantitative results
- Automated rapid testing (results in ~ 15 minutes)
- Easily adaptable to specific OEM customer requirements
- Lab-quality diagnostic results
- IVD-CE certified hardware and software

GENSPEED® APPLICATIONS

The GENSPEED® technology can be applied to both nucleic acid (DNA/RNA) detection of pathogens and protein based or biomarkers respectively. Available GENSPEED® test-panels include rapid tests for detection of **hospital acquired infections** and tests for identification of key pathogens associated with **periodontitis**.



GENSPEED® applies SCIENION technology to produce the IMMUNO multiplex assays.

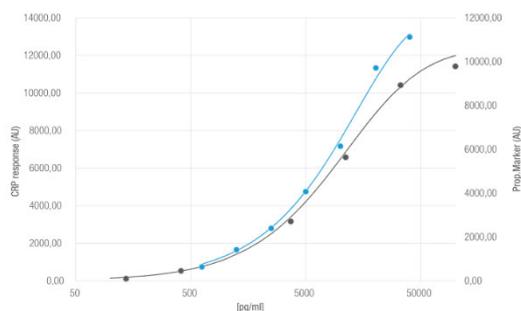
Above all, GENSPEED® enables the direct quantification of up to 8 different protein biomarkers in a single test run within a few minutes.



GENSPEED® Demokit for simultaneous quantification of CRP and D-Dimer in capillary blood



calibration curves of CRP and a second proprietary biomarker below exemplify the capability of GENSPEED to perform quantitative multiplex assays.

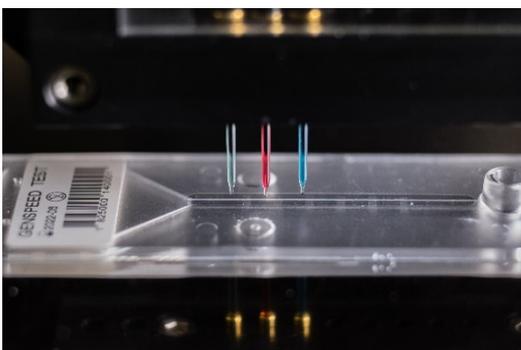
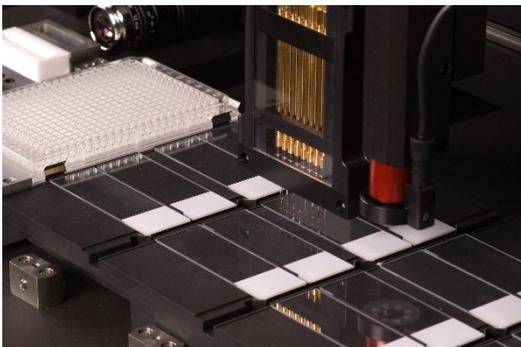


ARRAY MANUFACTURING

Since the beginning of their development they trusted on sciFLEXARRAYER SCIENION's technology to print the arrays, for the production of their IVD tests.

Based on an array printed in a polymer chip, GENSPEED's "Multiplexed Micro-ELISA" system allows the detection of up to 8 different biomarkers in a single run at the point of care within only a few minutes and with high sensitivity.

SCIENION sciDROP proprietary technology dispenses 6 stripe-arrays inside the microfluidic channel with high accuracy and precision; allowing to allocate 6 stripe-arrays of around 120 spots each.



GENSPEED® Multiplexed Micro-ELISA chip printed with SCIENION's microarrayer.

PRINTING ON UNMODIFIED SURFACE

One of the challenges when printing on GENSPEED substrate was to ensure captures molecules would be immobilized on the polymer non-activated surface. This was achieved thanks to our innovative sciPOLY 3D.

This solution developed by SCIENION enables immobilization of biomolecules on most polymeric substrates, without the need for functional groups on the surface or the biomolecule. sciPOLY 3D is dispensed together with e.g. proteins or DNA probes. It contains a photo reactive moiety, which upon UV irradiation couples the polymer chains to polymeric substrates, crosslinks the polymer chains leading to a polymer network and covalently attaches the biomolecules to the network.

Results have proven excellent signal when printing on non-modified PS; capture molecules were directly printed on the PS foil without the need of any prior modification.

"It is great to work with SCIENION and to see how the company is bringing microarray printing to the next level. In particular, the new sciPOLY3D bears the potential to revolutionize microarray printing because it allows to print capture molecules on many surfaces without prior and costly surface modification procedures necessary."

Dr. Max Sonnleitner, GENSPEED CEO.