

GENSPEED
BIOTECH



COVID-19 IgG Antibody Test
Fast antibody detection at the Point
of Need in lab quality

www.genspeed-biotech.com

COVID-19 IgG xPOC

Detection of antibodies against SARS-CoV-2 in just 15 minutes

The GENSPEED® COVID-19 IgG xPOC test is an in vitro diagnostic for the detection of SARS-CoV-2 specific immunoglobulin G from human capillary blood, serum or plasma. The test can be carried out with 20µl blood from the finger tip in just 15 minutes in laboratory quality.

This is enabled by the patented GENSPEED® micro-ELISA technology. Combined use of microfluidics and state-of-the-art optical readout technology reduces the test duration of a standard laboratory ELISA from 2-4 h to just 15 minutes with comparable quality. The GENSPEED® system is compact, fully automated and can be used virtually anywhere.

The GENSPEED® R2 Analyzer is delivered with a tablet (incl. keyboard), is powered via USB and intuitively operated via installed software



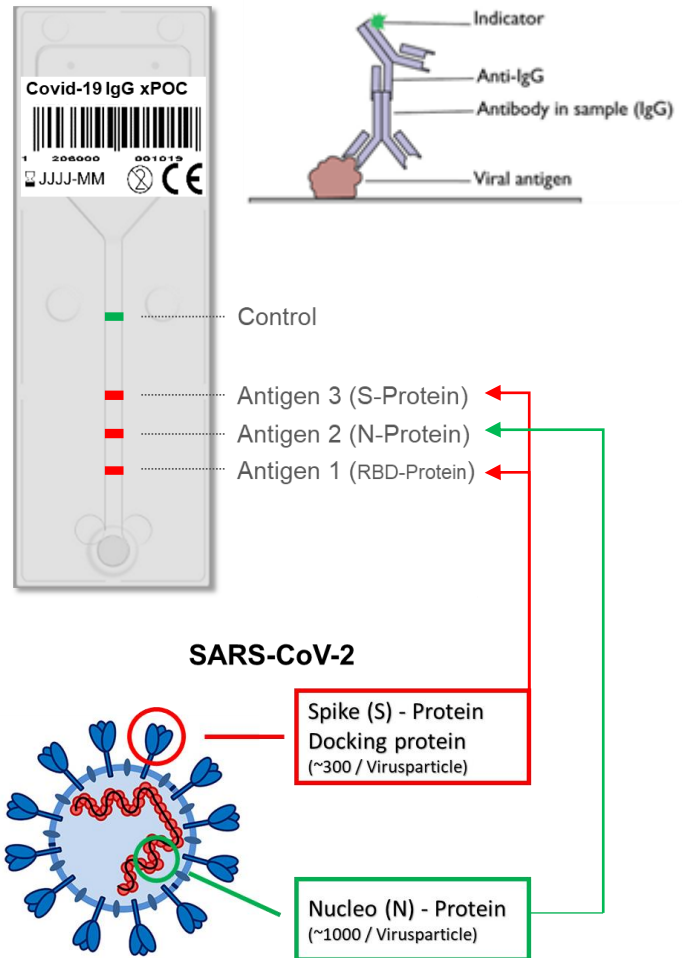
COVID-19 IgG xPOC

The fast micro-ELISA with added value

The unique GENSPEED® technology allows to achieve an enormous amount of information from a single measurement.

The basic biochemical test principle of the GENSPEED® COVID-19 IgG xPOC is similar to that of a miniaturized laboratory ELISA (see top right). Immobilized viral antigens act as catchers for antibodies (immunoglobulline G - IgG) in the sample, which in turn are bound by a second antibody with a special indicator that allows optical detection.

However, while **standard laboratory ELISA methods** or conventional stripe tests can only use a **single type of viral proteins** (antigens) as captures for the antibodies, **GENSPEED® allows to measure the binding of existing antibodies against three different SARS-CoV-2 antigens** in a single test run. The test chip layout on the right shows how.



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Features and benefits

- ❑ Measurement from a drop of blood (20 µl) from the fingertip
- ❑ Result in 15 minutes
- ❑ High sensitivity
 - ❑ Comparable to Laboratory ELISA Test ¹
- ❑ High specificity
 - ❑ The GENSPEED test chip detects whether antibodies against three different antigens of SARS-CoV-2 are present in the blood ¹
- ❑ Information on the quantity and quality of antibodies
 - ❑ Semi-quantitative measurements enable progress control
 - ❑ Binding behaviour of the antibodies against special antigens (Receptor Binding Domain and Spike Protein) allows conclusions to be made about the quality of protection against new infection ^{2,3}

¹ C. Wechselberger et al., Performance evaluation of serological assays to determine the immunoglobulin status in SARS-CoV-2 infected patients, Journal of Clinical Virology 131, 2020

² F. Amanat, F. Krammer, SARS-CoV-2 Vaccines: Status Report. Immunity 52, 583-589 (2020).

³ Ni et al., 2020, Immunity 52, 971–977 June 16, 2020

COVID-19 IgG xPOC

Comparison of methods for testing at the point of need

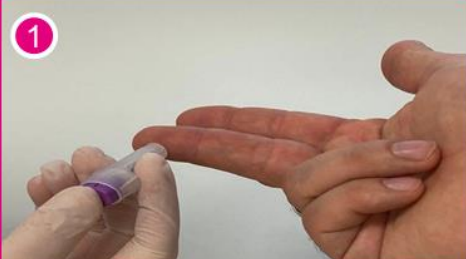

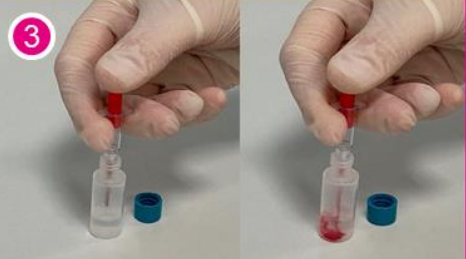
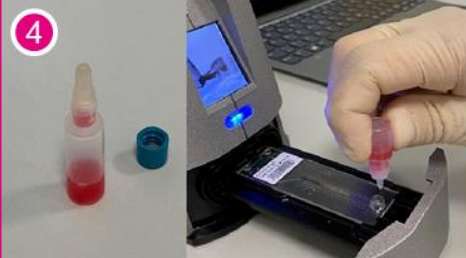

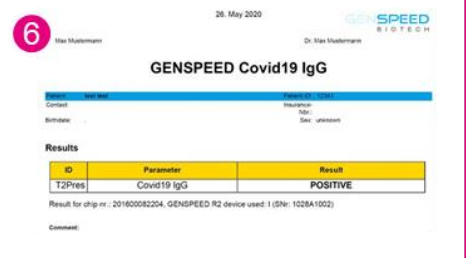
Testtyp Kriterium	Strip test	Lab ELISA	GENSPEED® micro-ELISA
Sensitivity	++ (technologically related)	+++ (gold standard)	+++ (Signals from 3 bands!)
Specificity	+ (often only N-protein)	++ (only S-protein)	+++ (S-, RBD-, N-Protein)
Handling	+++ (~ 1 Min)	- (depending on automation)	+++ (~ 1 Min)
Can be used on site	+++ (mobile)	- (big devices)	+++ (mobile)
Speed	+++ (15 Min)	- (2-4h)	+++ (15 Min)

- + *good or suitable*
- ++ *very good*
- +++ *best*
- *bad or unsuitable*

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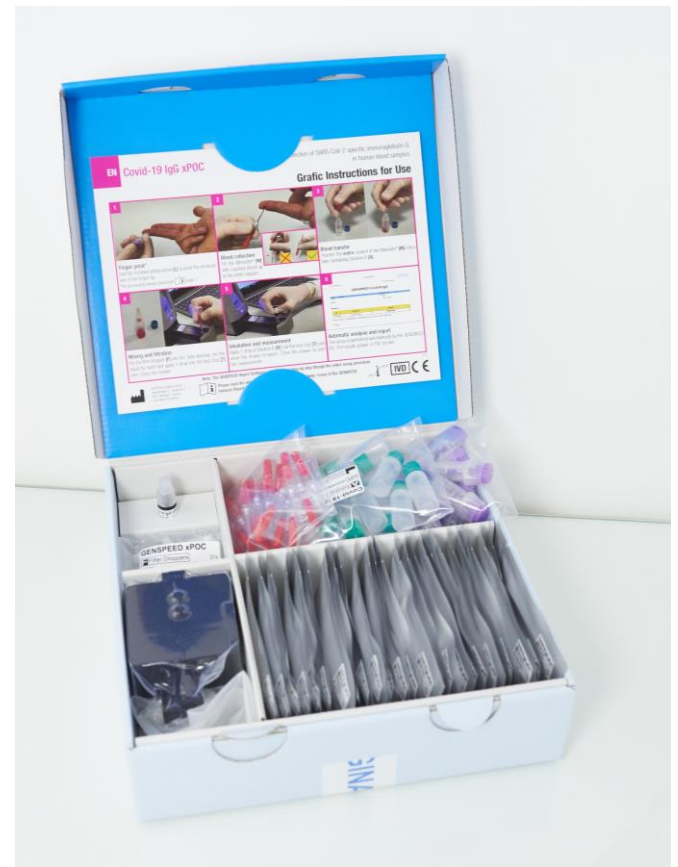
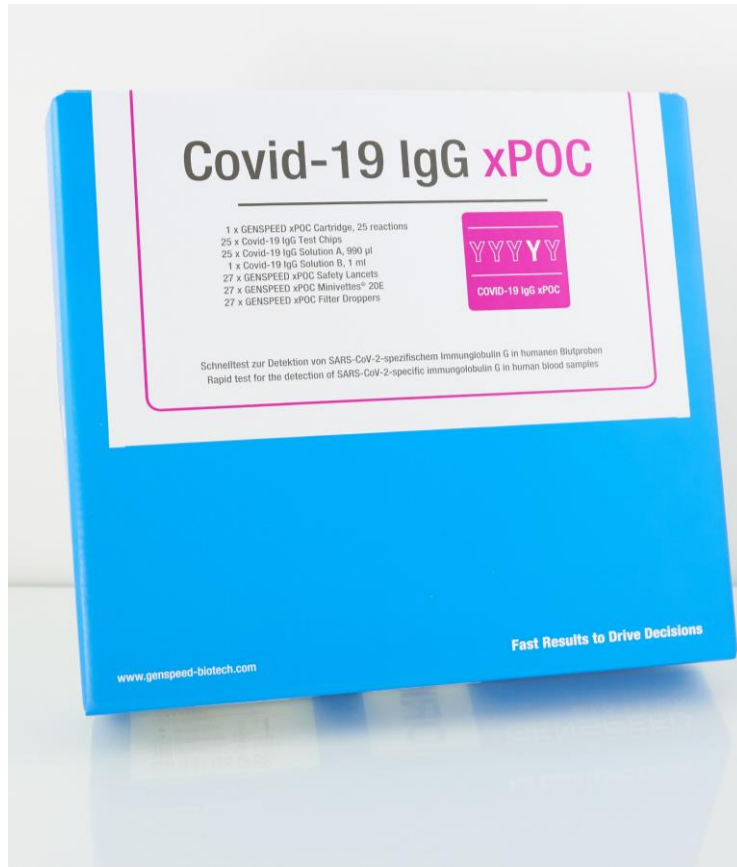
Quick and easy access to immune status

The GENSPEED® COVID-19 IgG xPOC test is easy to perform (see below). The Immuno Report software on the tablet guides the user step by step through the measurement process from sampling to the result. This is available electronically as a .pdf file and can be sent to the patient, for example, by e-mail or simply printed out and handed over.

 <p>1</p>	 <p>2</p>	 <p>3</p>
<p>Finger Prick Use the included safety lancette to prick the sterilized fingertip</p>	<p>Blood collection Take 20 µl capillary blood by filling the included Minivette®</p>	<p>Blood transfer Transfer the entire content of the Minivette® into a tube containing Solution A</p>
 <p>4</p>	 <p>5</p>	 <p>6</p>
<p>Mix and filter Fix the filter dropper into the tube opening, mix the liquid and apply 1 drop into the test chip inlet. Close the drawer.</p>	<p>Inkubation and measurement Apply 1 drop of Solution B into the test chip inlet when the drawer re-opens. Close the drawer to start the measurement.</p>	<p>Automatic analysis and report The assay is performed automatically by the GENSPEED R2. The results appear in PDF format</p>

COVID-19 IgG xPOC

Testkit & components



Product overview COVID-19 IgG xPOC Antibody test

Art. Nr.	Description	
IATK204	COVID-19 IgG xPOC	25 analyses
GSHW104	GENSPEED Testsystem Immuno - GENSPEED R2 Analyzer - Tablet incl. Software	1 piece



For more information, please visit our website www.genspeed-biotech.com

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