



www.genspeed-biotech.com

# **GENSPEED® OEM test system**

Quantification with high sensitivity at the Point of Care

#### We offer our OEM partners state of the art technology with great potential



The following example illustrates the sensitivity of our testsystem by the quantification of the inflammatory biomarker C-reactive protein (CRP)

#### Short turnaround time

At a glance:

(15-20 min)

Quantitative output

down to the pg/ml range

- LOD: 40 pg/ml
- CV: < 10%
- Dynamic range: 3 logs

#### log CRP concentration [pg/ml]

#### Do not hesitate to contact us, if you want to

- transfer your ELISA test to the Point of Care
- add multiplexing capabilities to your lateral flow immuno assay
- increase sensitivity of your immuno assay
- meet the increasing demands of regulatory guidelines for IVDs

We would be happy to start with a feasibility study to demonstrate the great potential of GENSPEED for your assay.



## Advantages of the GENSPEED<sup>®</sup> test system

Electronic evaluation of measurement data guarantees objective results. The test system can be individually connected to your LIMS\* if needed.

# USPs of the GENSPEED<sup>®</sup> test system

- Automation for ease of use
- Multiplexing (up to 8 different analytes)
- High sensitivity for qualitative and quantitative assays
- Easily adoptable to different diagnostic applications
- CE-IVD certified
- Possible combination of competitive and sandwich assay protocols

# The system comprises a unique combination of

- Novel microfludic architecture using capillary flow and enabling accelerated hybridization
- Miniaturized dispensing unit for automated release of reagents from a replaceable cartridge (for 48 tests)
- A proprietary simple and highly sensitive optical detection system

# THE GENSPEED<sup>®</sup> equipment

- Low initial costs, small footprint for minimum space requirement, integrated calibration
- Automated assay procedure for minimum hands-on time
- Detailed individual reports and statistical analysis

#### **GENSPEED® - Potential applications**

GENSPEED®	DIRECT		INDIRECT
Target - type	RNA	Proteins (micro-ELISA)	DNA
Sample - type	swab	blood, serum, saliva	swab, stool
Sample pre-amplification	no	no	PCR
Turnaround time (TAT)	15-30min	15-20min	75-120min
Limit of detection (LOD)	10 <sup>4</sup> cfu/ml	10-100pg/ml	~ 1-10 copies/sample

# GENSPEED® IMMUNO multiplex Demokit

## Multiplexing and quantification of hsCRP and D-dimer

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The following example demonstrates the simultaneous quantification of human high sensitivity C-reactive protein (hsCRP) and D-dimer together with internal controls



log hsCRP / D-dimer concentration [ng/ml]

#### At a glance:

- Short turnaround time: ~20 min
- Short hands-on time: <2 min (preanalytics included)
- Combination of sandwich (D-dimer) and competitive (hsCRP) assay protocol
- Inclusion of several internal controls possible
- Quantification of D-dimer and hsCRP with only 100µl human capillary blood within the clinically relevant range





## **Components of the** GENSPEED<sup>®</sup> test system

#### THE GENSPEED® R2 ANALYZER

In order to offer optimal ease of use, the analyzer features:

- Power supply and control via USB
- Dispensing unit for automated release of reagents from a replaceable cartridge (for 48 tests)
- Barcode module to identify test chips & Patient-ID
- Internal automated system check
- Patented optoelectronics for highly sensitive detection
- Higher sample rate up to four devices can be used at the same time with one notebook
- Exchangeable cartridge (48 tests)







#### THE GENSPEED® TEST CHIP

- Novel microfludic architecture (using capillary forces based flow and accelerated hybridization driven by shear forces)
- Contains up to 10 capture probes for different analytes and controls for both DNA or proteins (reaction channel)

### GENSPEED<sup>®</sup> REPORT SOFTWARE

- Controls the GENSPEED<sup>®</sup> R2
- Offers intuitive user guidance through test procedure
- Analyses measurement data
- Creates individualised reports
- Allows optional connection to the LIMS

## TECHNICAL ADVANTAGES OF THE GENSPEED® R2 ANALYZER

- Easy handling
- Objective results
- Optional interfacing with your LIMS\*
- Parallel usage of up to four devices

- Clear and comprehensive reporting
- Integrated statistical analysis

\* laboratory information management system

## **KEY PATENTS:**

EP2652479 B1: »Measuring arrangement for quantitative optical evaluation of a chemical reaction«

US9707560 B2: »Method for filling a microfluidic device using a dispensing system and corresponding test system«

### SPECIFICATIONS OF THE GENSPEED R2 TEST SYSTEM

Test chip capacity:	1 test chip per run		
Test chip size:	width: 75mm; length: 25mm; thickness: 1.7mm		
Barcode identification:	Identification of the test chip by barcode		
Calibration	Internal optical system-test (System-Check)		
Ambient conditions:	-20 - 50°C (transport and storage); relative humidity: $\leq$ 70% (no condensation)		
Computer specifications:	runs with Windows 7 and higher		
Computer connection:	USB 2.0		
Reagents	1 x Cartridge for 48 Tests		
Electrical requirements:	5V, < 500mA (by computer via USB)		
Dimensions:	width: 80mm, height: 160mm, depth: 200mm (closed) width: 80mm, height: 300mm, depth: 280mm (open)		
Weight:	1kg		
Software:	GENSPEED <sup>®</sup> Report Software package		
Conformity:	GENSPEED <sup>®</sup> R2: EN 61010-1, EN 61010-2-101, EN 61326-1, EN 61326-2-6 GENSPEED <sup>®</sup> Report Software: EN 62304		



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

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