MRSA?

= 75 min

GENSPEED® MRSA Test System
Setting the pace - Precise MRSA results within 75 minutes

in cooperation with Amplex Diagnostics

www.gbo.com
The new, revolutionary GENSPEED® MRSA Test System from Greiner Bio-One is an in vitro diagnostic tool for qualitative detection of methicillin resistant *staphylococcus aureus* (MRSA) in human nasal and pharyngeal smears. This bacterium is recognized worldwide as the most significant cause of nosocomial infections.

GENSPEED® MRSA was developed as a time and cost saving rapid test for low throughput testing applications in hospitals and laboratories. The main advantage of the product lies in the acceleration of the analysis, providing reliable results within merely 75 minutes.

GENSPEED® MRSA was developed in cooperation with Amplex Diagnostics, our partner with years of expertise in developing tests for detecting nosocomial infections.
Sensitivity owing to PCR technology, combined with the speed and specificity of the GENSPEED® Test System - ready to use with a short turnaround time!

With an average 7-day prolongation and additional expenses of 1,600.- Euro per patient / day, the question is no longer whether an MRSA screening should be carried out nor not, but rather, which test system should be used.

Conventional culture for MRSA analysis takes up to 48 hours, leading to additional care and treatment costs for the necessary quarantine days. Other molecular biological systems have been developed for high throughput application. Since due to economic reasons it is often necessary to wait for a certain number of patient samples before testing, the results for one patient are often not available until the next day.

The GENSPEED® MRSA Test System is particularly suitable for low throughput applications with a turnaround time (TAT) of only 75 minutes!

Precise MRSA results within 75 minutes

1. Lysis & DNA amplification
2. Denaturation & Hybridization
3. Detection & Reporting
The advantages of the **GENSPEED® MRSA** Test System

✔️ **Fast turnaround time (TAT)**

**Speed**

The speed of the test speaks for itself. With only 75 minutes from sample collection to result, **GENSPEED® MRSA** is among the fastest test systems on the market.

**Individual sample analysis at any time**

Each sample can be analyzed immediately. No batching required.

✔️ **Unique detection of the new resistance gene mecC**

**GENSPEED® MRSA** is the first test system in the world for the detection of mecC.

Preliminary studies have demanded new detection methods for mecC, to ensure identification of MRSA in the future. ²³⁴⁵⁶

✔️ **Differential diagnostics**

**GENSPEED® MRSA** distinguishes MRSA from MRSE or mecA/C positive *S.haemolyticus* using its ability to simultaneously detect multiple analytes (multiplexing).

✔️ **High degree of accuracy**

Three controls (Negative control, PCR control, and implementation control) ensure the accuracy of the results.

✔️ **One swab for everything**

One and the same swab for **GENSPEED® MRSA** and bacterial culture.
Electronic evaluation of measurement data guarantees objective results. The test system can be individually connected to your LIMS* if needed.

Technical advantages at a glance

- Easy handling
- Objective results
- Optional interfacing with your LIMS*
Components of the **GENSPEED® MRSA Test System**

**The GENSPEED® MRSA Test-Chip**
- facilitates rapid testing by special microfluidics for accelerated hybridization
- contains DNA probes for
  - *S. aureus*
  - *S. epidermidis/haemolyticus*
  - the resistance genes *mecA* and *mecC*
- as well as three on-chip controls to assure the MRSA test results.

**The GENSPEED® Reader**
In order to offer optimal ease of use, the Reader features:
- power supply and control via USB
- an integrated calibrator
- an integrated barcode module for identifying the Test-Chip
- patented optoelectronics for highly sensitive detection

**The Notebook with integrated GENSPEED® Report Software**
- controls the **GENSPEED® Reader**
- offers intuitive user guidance through test procedure
- analyses measurement data
- creates individualised reports
- allows optional connection to the LIMS

**Accessories**
- 2 fixed volume pipettes
- 2 tube racks
- 1 box GBO filter tips

Swabs are not provided by Greiner Bio-One as a system component. We recommend “108C Amies Agar Gel - Single plastic swab - blue cap”. These swabs can be used additionally after PCR for bacterial culture. [www.copaninnovation.com](http://www.copaninnovation.com).
Full Speed - just a view steps to a reliable test result

DNA amplification

After successful sample collection by means of nasal or pharyngeal swab, the DNA is released from the cells and amplified for the subsequent detection via PCR.

Hybridization

The PCR products are then denatured and pipetted into the Test-Chip inlet, where hybridization takes place.

(Binding of the labelled DNA to the complementary probes in the Test-Chip)

Detection & Reporting

The detection takes place via optoelectronic readout of a biochemical light reaction in the GENSPEED® Reader.

The GENSPEED® Report Software analyses the data and generates the test report.

Article Overview GENSPEED® MRSA Test System

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<tr>
<th>Item N°</th>
<th>Description</th>
<th>Packaging</th>
</tr>
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<tbody>
<tr>
<td>453200</td>
<td>GENSPEED® MRSA Test-Kit</td>
<td>48 rxn.</td>
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<tr>
<td>453201</td>
<td>GENSPEED® Reader</td>
<td>1 pc.</td>
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<td>453203</td>
<td>PCR-Cycler</td>
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<tr>
<td>453205</td>
<td>Accessories</td>
<td>1 pc.</td>
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GENSPEED® MRSA Starter Package

References

1 Medizinische Wirksamkeit und Kosten-Effektivität von Präventions- und Kontrollmaßnahmen gegen Methicillin-resistente Staphylococcus aureus (MRSA) – Infektionen im Krankenhaus, HTA Bericht 100. DMDI (Deutsches Institut für Medizinische Dokumentation und Information)

2 November 2011 EURL course DTU Food, Technical University of Denmark (EURL=European Union Reference Laboratory) - Antimicrobial Resistance National Food Institute


6 The Lancet Infectious Diseases, Volume 11, Issue 8, Pages 595 - 603, August 2011 Background

7 http://www.fennerlabor.de/uploads/media/MRSA.pdf
