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BD GENEOHM™ MRSA ASSAY
AT-A-GLANCE BACKGROUNDER

The technological innovation of rapid molecular testing is enabling new ways to approach the eradication the transmission of methicillin-resistant *Staphylococcus aureus* (MRSA) infections.

The BD GeneOhm™ MRSA assay is a qualitative *in vitro* molecular diagnostic test cleared by the U.S. Food & Drug Administration for the direct detection of nasal colonization by MRSA. The BD assay provides definitive results within two hours of laboratory time in a single assay, compared to the 24 to 72 hours necessary for analyzing a conventional microbiology-based culture. Because this rapid test leads to faster detection of MRSA colonization in patients, it enables hospitals to swiftly implement appropriate interventions which can prevent the transmission of infection, limit the costs associated with complications and treatment, and improve patient outcomes.

With the rapidity at which MRSA infections can be transmitted, especially in healthcare settings where carriers of microbes are common, the capability of providing rapid molecular results for MRSA nasal colonization on the day of admission represents an advantage for infection control programs by:

- Identifying carriers so that appropriate interventions can be swiftly implemented;
- Avoiding costs associated with unnecessary pre-emptive isolation;
- Avoiding administration of unnecessary or inappropriate antibiotics which would not only be ineffective in treating the patient's condition but also have been attributed to the emergence of antibiotic resistant organisms.

Unlike traditional culture which must be grown on plated media for 24 to 72 hours, the BD assay detects a gene sequence that is unique to the drug-resistant strain of this organism. The test is performed directly on a specimen taken from the patient's nasal cavity. A simple and efficient bacterial lysis procedure is then followed by real-time polymerase chain reaction (PCR) to detect MRSA. A commercially available instrument (PCR-thermocycler) is used to amplify MRSA genetic material if present, and dedicated software interprets the data into a definitive assay result. The assay detects a unique gene sequence found at the junction between the staphylococcal cassette chromosome *mec* (SCC*mec)* and a *Staphylococcus aureus* specific sequence located within the *orfX* gene.

The BD assay is a molecular method to definitively identify MRSA in patients' specimens, which can contain a mixed population of other methicillin-resistant coagulase negative *Staphylococci* and *mec*A negative *Staphylococcus aureus*. Normally this type of combination would yield false-positives in other PCR methods when performed directly on a specimen. This unique and proprietary molecular target provides definitive identification of MRSA.

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About BD

BD is a leading global medical technology company that develops, manufactures and sells medical devices, instrument systems and reagents. The Company is dedicated to improving people's health throughout the world. BD is focused on improving drug delivery, enhancing the quality and speed of diagnosing infectious diseases and cancers, and advancing research, discovery and production of new drugs and vaccines. BD's capabilities are instrumental in combating many of the world's most pressing diseases. Founded in 1897 and headquartered in Franklin Lakes, New Jersey, BD employs approximately 28,000 people in approximately 50 countries throughout the world. The Company serves healthcare institutions, life science researchers, clinical laboratories, the pharmaceutical industry and the general public. For more information, please visit www.bd.com.