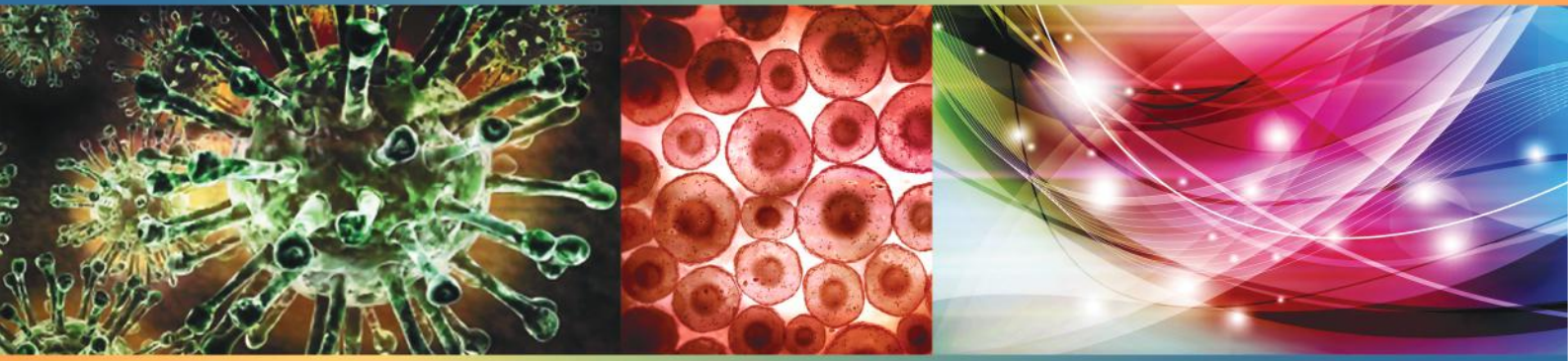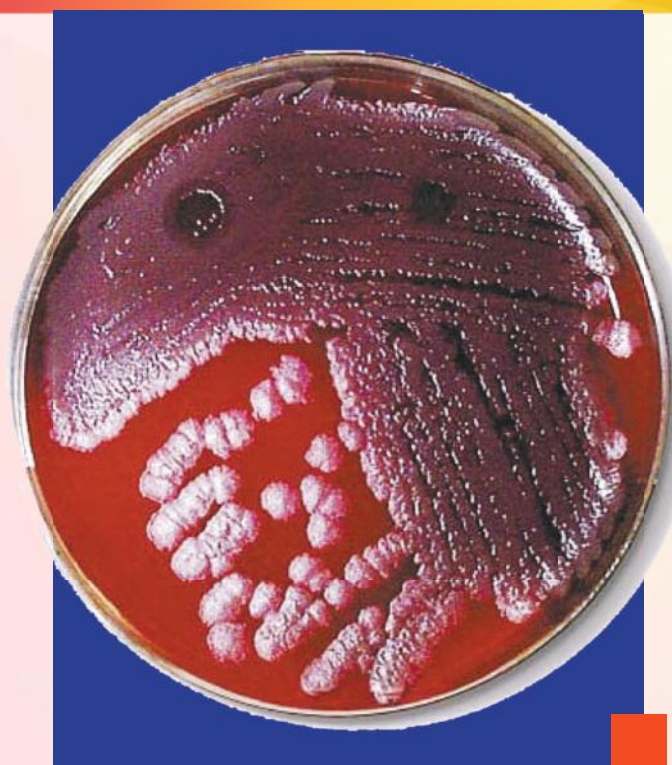# MIDI

SHERLOCK MICROBIAL IDENTIFICATION SYSTEM

What is it?
Sherlock® knows!
Microbial Identification Systems

Background on the Sherlock® MIS

Clinical and environmental laboratories worldwide have used the Sherlock® Microbial Identification System (MIS) since 1991. The SherlockMIS identifies bacteria and yeast by analyzing the unique cellular fatty acid patterns present in the cell membrane. The fatty acids are extracted from the microbe, converted to their corresponding Fatty Acid Methyl Esters (FAMEs) and then separated with an Agilent Technologies Gas Chromatograph (GC).

The Sherlock software then names each fatty acid in the sample and uses pattern recognition algorithms to compare the overall pattern to libraries of stored patterns to make an identification. Additional software tools allow for clustering, strain tracking, custom library generation, 21CFR Part 11 compliance and combination of results with DNA sequencing analyses. In addition, Sherlock can be used for direct fatty acid analysis of oils and biofuel feedstocks.

New Instant Sample Preparation Methods

Sherlock Instant Methods are new sample preparation kits for the Sherlock® Microbial Identification System. There are two kits available: Instant FAMETM for aerobic bacteria and yeast and Instant AnaerobeTM for anaerobic bacteria.

Is it accurate?
• Established technology with 15 years of clinical and environmental use.
• CDC method for Aerobic Bacteria ID (NIOSH Method# 0801).
• FDA 510(k) cleared for Anthrax ID [510(k) # k052485].
• US Department of Homeland Security method for Anthrax ID (AOAC Method# 2004.11).
• Identifies all six major bioterrorism bacteria

How does it work?
The Sherlock Microbial Identification System identifies bacteria and yeast based on GC profiles of extracted microbial fatty acid methyl esters (GC- FAME), unique for each species, which are matched to searchable libraries created from reference strains grown under standardized conditions.

Libraries: Yeast - 190 species, Anaerobic Bacteria - 725 species, Aerobic Bacteria - 695 environmental species and 430 clinical species.

Features:
• Rapid extract-to-ID in 10-30 minutes.
• Easy-to-use automated analysis and naming.
• Analyze up to 200 samples a day.
• Standardized procedure for all bacteria with no biochemical cards or offline tests.
• Microbes are killed during sample preparation.
• Comprehensive data analysis tools including clustering, dendrogram, data export and strain tracking.
• Enables FDA 21CFR Part 11- Electronic Records and Signatures compliance. Validation package available

Markets Using Sherlock
• Animal Science
• Bioremediation
• Biodefense / Bioterrorism
• Clinical Diagnosis
• Dental Research
• Entomology
• Epidemiology
• Food Microbiology
• Marine Science
• Medical Research
• Pharmaceutical QC
• Plant Pathology
• Soil Science
• Water Quality
• Taxonomy Studies