

Bacterial Identification and Susceptibility – Aerobic Information Sheet

Overview

MDL Test Name

Bacterial Identification and Susceptibility – Aerobic

Pure culture isolate on suitable agar (solid) medium; slant or plate

Specimen Requirements

Container/Tube

Suitable agar (solid) medium for isolate submitted. It can be slant or sealed plate.

Specimen Volume (minimum)

Pure culture with viable growth must be submitted

Sample Stability Time

Stability varies with the organism and transport system; usually up to 48 hours at ambient temperatures but fastidious organisms should be sent promptly.

Transport/Storage Conditions

Ambient (20 – 25°C)

Patient Preparation / Collection Instructions

N/A

Performance

Days Performed

Daily; Monday – Sunday

Report Available (TAT) – (Once received at MDL)

2 – 4 days

Specimen Retention Time

7 days

Method Description

- Identification methods may include any of the following: conventional biochemical testing, matrix-assisted laser desorption/ionization time-of-flight (MALDI-TOF) mass spectrometry, and commercial identification panels. Genus and species are reported on aerobic bacterial isolates whenever possible.
- Susceptibility testing may include minimal inhibitory concentration (MIC) ~~EURKLFURGLOWRQRUJJDGLQMLSGLIIXLRQUGLVFGLIIXLRQ~~
- NOTE: Susceptibility testing is performed depending on source and identification. If the source and identification do not warrant susceptibility testing per CLSI guidelines, MDL will notify the client prior to continuing with testing.

Reference Values

- Identification of organism.
- Susceptibility results are reported as minimal inhibitory concentration (MIC) in $\mu\text{g/mL}$, or zone size (in mm) for disc diffusion. Breakpoints are used to categorize an organism as susceptible, susceptible-dose dependent, intermediate, resistant, or nonsusceptible according to either U.S. Food and Drug Administration (FDA) and/or Clinical Laboratory Standards Institute (CLSI).

Cautions

- Testing cannot be performed on mixed cultures, submitted isolate must be pure.
- Testing ability depends on the viability of the organism submitted.
- Verify labeled appropriately and securely sealed for transport to avoid breaking or leakage. Recommend securing the lid with parafilm or similar material. Place in an individually sealed bag.
- MDL does not perform identification testing of possible agents of bioterrorism and/or identification confirmation of Salmonella or Shigella species. Please reference your local state health department on how to proceed with these isolates.

- In vitro susceptibility does not guarantee a clinical response. Therefore, the decision to treat with a particular agent should not be based solely on the antimicrobial susceptibility testing result.