M07-A9
Vol. 32 No. 2
Replaces M07-A8
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Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria That Grow Aerobically; Approved Standard—Ninth Edition

This document addresses reference methods for the determination of minimal inhibitory concentrations of aerobic bacteria by broth macrodilution, broth microdilution, and agar dilution.

A standard for global application developed through the Clinical and Laboratory Standards Institute consensus process.

CLINICAL AND LABORATORY STANDARDS INSTITUTE®

M100-S22
Vol. 32 No. 3
Replaces M100-S21
Vol. 31 No. 1

January 2012

Performance Standards for Antimicrobial Susceptibility Testing; Twenty-Second Informational Supplement

This document provides updated tables for the Clinical and Laboratory Standards Institute antimicrobial susceptibility testing standards M02-A11 and M07-A9.

An informational supplement for global application developed through the Clinical and Laboratory Standards Institute consensus process.

CLINICAL AND LABORATORY STANDARDS INSTITUTE®

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Advancing Quality in Health Care Testing

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In addition to developing and promoting the use of voluntary consensus standards and guidelines, we provide an open and unbiased forum to address critical issues affecting the quality of patient testing and health care.

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A document is published as a standard, guideline, or report.

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Guideline A document developed through the consensus process describing criteria for a general operating practice, procedure, or material for voluntary use. A guideline may be used as written or modified by the user to fit specific needs.

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APPEALS PROCESS

CLSI consensus procedures include an appeals process that is described in detail in Section 8 of the Administrative Procedures.

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Health care professionals in all specialties are urged to volunteer for participation in CLSI projects.

For further information on committee participation or to submit comments, contact CLSI.

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Performance Standards for Antimicrobial Susceptibility Testing; Twenty-Second Informational Supplement

Abstract

The supplemental information presented in this document is intended for use with the antimicrobial susceptibility testing procedures published in the following Clinical and Laboratory Standards Institute (CLSI)–approved standards: M02-A11—*Performance Standards for Antimicrobial Disk Susceptibility Tests; Approved Standard—Eleventh Edition*; and M07-A9—*Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria That Grow Aerobically; Approved Standard—Ninth Edition*. The standards contain information about both disk (M02) and dilution (M07) test procedures for aerobic bacteria.

Clinicians depend heavily on information from the clinical microbiology laboratory for treatment of their seriously ill patients. The clinical importance of antimicrobial susceptibility test results requires that these tests be performed under optimal conditions and that laboratories have the capability to provide results for the newest antimicrobial agents.

The tabular information presented here represents the most current information for drug selection, interpretation, and quality control using the procedures standardized in the most current editions of M02, M07, and M11. Users should replace the tables published earlier with these new tables. (Changes in the tables since the most current edition appear in boldface type.)

Clinical and Laboratory Standards Institute. *Performance Standards for Antimicrobial Susceptibility Testing; Twenty-Second Informational Supplement.* CLSI document M100-S22 (ISBN 1-56238-785-5 [Print]; ISBN 1-56238-786-3 [Electronic]). Clinical and Laboratory Standards Institute, 950 West Valley Road, Suite 2500, Wayne, Pennsylvania 19087 USA, 2012.

The data in the interpretive tables in this supplement are valid only if the methodologies in M02-A11—*Performance Standards for Antimicrobial Disk Susceptibility Tests; Approved Standard—Eleventh Edition*; and M07-A9—*Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria That Grow Aerobically; Approved Standard—Ninth Edition* are followed.

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Contents

Contents (Continued)

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Abstract

Susceptibility testing is indicated for any organism that contributes to an infectious process warranting antimicrobial chemotherapy, if its susceptibility cannot be reliably predicted from knowledge of the organism's identity. Susceptibility tests are most often indicated when the causative organism is thought to belong to a species capable of exhibiting resistance to commonly used antimicrobial agents.

A variety of laboratory methods can be used to measure the *in vitro* susceptibility of bacteria to antimicrobial agents. This document describes standard broth dilution (macrodilution and microdilution [the microdilution method described in M07 is the same methodology outlined in ISO 20776-1])[1] and agar dilution techniques, and it includes a series of procedures to standardize the way the tests are performed. The performance, applications, and limitations of the current CLSI-recommended methods are also described.

The supplemental information (M100[2] tables) presented with this standard represents the most current information for drug selection, interpretation, and quality control using the procedures standardized in M07. These tables, as in previous years, have been updated and should replace tables published in earlier years. Changes in the tables since the previous edition (M100-S21[3]) appear in boldface type and are also summarized in the front of the document.

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Contents

Contents (Continued)

Contents (Continued)