

McFarland Standard Set

Manufacturer/Supplier:

Scientific Device Laboratory
411 Jarvis Ave, Des Plaines, IL 60018 USA
General and Technical Information
Phone Number: 847-803-9495
Website: www.scientificdevice.com

Intended Use:

The McFarland Equivalence Standards are intended to be part of a quality control program for adjusting densities of bacterial suspensions that are used for identification and susceptibility testing. Each standard is made from different concentrations of latex beads mixed in a buffer liquid. The original McFarland Standards were made from the combination of Barium chloride and Sulfuric acid that result in a flocculate. Problems were encountered with this technique which included instability, storage, and reproducibility of the resulting suspension. These problems have been overcome by using latex particles in a buffer solution to make Colorimeter and McFarland Standards.

Summary and Explanation:

The McFarland Standard tubes contain latex particles suspended in a special buffer that are adjusted to an acceptable transmission range using a spectrophotometer at a wave length of either 600 or 625 nm. A bacterial suspension once adjusted to the same turbidity of a McFarland Standard produces expected bacterial plate counts and can be used in a variety of identification or susceptibility kits and methods.

Principle of the Procedure:

The McFarland Equivalence Standards are used for adjusting densities of bacterial suspensions.

Components:

Each McFarland Standard Set includes: one tube 0.5, one tube 1.0, one tube 2.0, one tube 3.0. and one tube 4.0

Warnings:

Do not use product beyond the expiration date.
Directions should be carefully read prior to use.
The same size tube should be used in comparing bacterial suspensions to the McFarland Standards.

Storage:

Store at room temperature (15°C to 30°C)

Procedure:

Prior to use, gently invert the McFarland Equivalence Standard tube several times to assure uniformity of the suspension of latex particles.
Adjust the turbidity of the log growth of the bacterial suspension to that of a known McFarland Equivalence Standard.
Compare the turbidity visually by holding bacterial sample and McFarland Standard tubes up against the black and white bars printed on enclosed card.

Expected Results:

Equal disappearance or distortion of the black bar indicates a similar turbidity.

McFarland Standard	Approximate cell Count Density (x10 ⁸ cells)
0.5	1.5
1.0	3.0
2.0	6.0
3.0	9.0
4.0	12.0

Quality Control:

Each lot of McFarland Equivalence Standard Set is tested and results fall into a tight range of acceptability.

Limitations:

Colored media may not provide the proper contrast with McFarland Equivalence Standards. Incorrect results will occur. Bacterial suspensions of older cultures may not compare to expected bacterial counts.
These standards have been adjusted by a spectrophotometer. Use of any other instrumentation may not give reliable results.

Safety:

For *In vitro* diagnostic use. See SDS for additional information.









References:

McFarland, J., J.Amer.Med.Assoc. 14:1176, 1907.
NCCLS Document, Performance Standards for Antimicrobial Disk Susceptibility Tests. 4th ed. 10:7, p 10, 1990.

Related Product Information:

Catalog # 2350: McFarland Standard Set (one each 0.5,1.0,2.0,3.0, & 4.0)

SYMBOL LEGEND

	Catalog Number
	In Vitro Diagnostic Medical Device
	Consult Instructions for Use (IFU)
	Temperature Limitations (Storage Temp.)
	Batch Code (Lot Number)
	Use By (Expiration Date)
	Quantity Included
	Dimensions

Supported Products Page **(QUALITY FILE ONLY)**

This Technical Insert is used for the following products:

SDL Prod ID	Description		
623	2300 McFarland 0.5 - Not sold individually - Minimum quantity order of 10	minimum order 10	Sold only in set in #2350 - except for distributors
634	2350 McFarland Set	1 each of 5 levels/pkg	includes 1 each of 0.5,1.0,2.0,3.0, & 4.0

Revision History

CR NUMBER	REVISION
0809-007	00
1009-002	01
0512-002	02
1017-003	03
0420-001	04