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Calibration Specification for McFarland Bacterial Turbidity Analyzers

麦氏细菌浊度分析仪校准规范

(English Translation)

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Introduction

In drafting this specification, reference was made to JJG880-2006 "Turbidity Meter", JJF 1059.1-2012 "Measurement Uncertainty "Assessment and Representation", prepared in accordance with the requirements of JJF 1071-2010 "Rules for Compiling National Measurement and Calibration Specifications".

This specification is the first release.

Calibration Specification of McBee Turbidity Analyzer

1 Scope

This specification applies to the measurement performance of Bacterial Turbidity Analyzer (BacterialTurbidityAnalyzer) calibration.

2 Terminology and units of measurement

2.1 McFarlandmethod

The method of estimating the number of bacteria by measuring the light transmission (turbidity value) of the bacterial suspension, the concentration of the bacterial suspension is Within a certain range, it is inversely proportional to the light transmittance and directly proportional to the optical density.

2.2 McFarlandunit

The unit of bacterial turbidity measured according to the McNeil turbidimetry is MCF.

3 Overview

The McNair bacterial turbidity analyzer (hereinafter referred to as the instrument) is a method for detecting the scattered light of microorganisms in suspension an instrument that reflects the number of microorganisms. The principle is that the greater the content of microorganisms in the suspension, the less light is transmitted through the suspension, the more light is scattered. It is mainly used for bacterial turbidity in the fields of drug sensitivity evaluation, microbial fermentation and microbial detection Detection.

4 Metering characteristics

4.1 Indication stability

4.2 Repeatability

4.3 Indication error

5 Calibration conditions

5.1 Environmental conditions the operating temperature does not exceed 30 ° C, and the relative humidity ranges from 40% to 80%. During the measurement, the ring should be

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measured and recorded.

Environment temperature and humidity.

5.2 Standard materials for calibration Bacterial turbidity certified reference materials should be used during calibration.

0.5MCF, 1.0MCF, 2.0MCF, 3.0MCF, 4.0MCF), relative expansion uncertainty <=10% (k = 2).

6 Calibration items and calibration methods

6.1 Indication stability According to the requirements of the instrument manual, if zero adjustment is required, use a bacterial turbidity standard material with a nominal value of 0.0MCF

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