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NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE PEOPLE'S REPUBLIC OF CHINA

JJF 1826-2020

Calibration Specification for Air Microorganism Samplers

空气微生物采样器校准规范

(English Translation)

Implemented on: April 17, 2020

Issued by: State Administration for Market Regulation

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Introduction

This specification is based on JJF 1071-2010 "Rules for Compiling National Measurement and Calibration Specifications", JJF 1059.1-2012 "Measurement Uncertainty Evaluation and Expression", JJF 1001-2011 "General Measurement Terms and Definitions" provisions. this the main technical indicators of the specification refer to GB/T 16293-2010 "Test of planktonic bacteria in the clean room (area) of the pharmaceutical industry Method "and ISO 14698-1.:2003" Clean Room and Related Controllable Environment Biological Pollution Control Part 1: One "General Principles and Methods" Appendix B Guiding Principles for Air Sampler Verification [Cleanrooms and associatedcon-troledenvironments-Biocontaminationcontrol-Part 1: Generalprinciplesandmeth-ods, AnnexB (informative) Guidanceonvalidatingairsamplers].

This specification is the first release.

Air microbial sampler calibration specification

1 Scope

This specification applies to the calibration of air microbial samplers based on the Anderson impact method.

2 Reference documents this specification refers to the following documents.

GB/T 16293-2010 Test method for planktonic bacteria in clean room (area) of pharmaceutical industry ISO 14698-1.:2003 Clean room and related controllable environment biological pollution control Part 1: General principles Cleanroomsandassociatedcontroledenvironments-Biocontaminationcon-trol-Part 1: Generalprinciplesandmethods) for dated reference documents, only the dated version

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applies to this specification; for those without date references the latest version (including all amendments) is applicable to this specification.

3 Terms and units of measurement

3.1 Bioaerosol

A colloidal system formed by biological particles suspended in air, that is, an aerosol containing biological particles. Including bacteria, Viruses and allergenic pollen, mold spores and fern spores, in addition to the characteristics of general aerosols, Dyeability, sensitization, etc.

3.2 Living unit viableunit, VU One or more living particles (particles can contain one or more living microorganisms), when counted as 1, it is called 1 living individual.

Note: When the number of live individuals is to count the colonies on the agar medium, it is usually called colony forming unit (colony formingunits, CFU). A CFU can contain one or more VUs.

3.3 Physical efficiency of sampling physical efficiency of sampling Sampler's collection efficiency for particles of different sizes.

Note: The particles can be microorganisms, particles carrying microorganisms or non-viable particles. Sampling the above particles with the same particle size the physical efficiency is the same.

4 Overview

Air microbial sampler (hereinafter referred to as sampler) is a sampling instrument specially used to collect microorganisms in the air.

It is based on the principle of the Anderson impact method, which extracts air at a certain flow rate, so that the microbial particles in the air flow accelerate to impact the surface of the petri dish of the nutrient agar medium is cultivated to form colonies visible to the naked eye.

The sample volume calculates the concentration of live individuals in the air.

The sampler is usually composed of a protective cover, a sampling head (including mesh type, radial slit type, centrifugal type, etc.), it consists of data processing system and display system.

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