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**Calibration Specification for UV Analyzers
(English Translation)**

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6 Calibration conditions(2)

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Environmental conditions (2)

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Calibration equipment and supporting equipment(2)

7 Calibration Items and Calibration Methods(2)

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Appendix A Recommended Format for Original Records (5)

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Introduction

JJF 1001 "General Metrology Terms and Definitions", JJF 1032 "Terms and Definitions of Optical Radiation Metrology", JJF 1059.1 "Assessment and Expression of Measurement Uncertainty", JJF 1071 "Rules for Writing National Metrology Calibration Standards", JJF 1094 "Characteristics Evaluation of Measuring Instruments" together constitute the basic series of regulations formulated in this specification:

This specification is published for the first time:

Specifications for Calibration of UV Analyzers

1 Scope

This specification is applicable to the observation, analysis and photographing of substances by using the fluorescence emitted by substances under the irradiation of ultraviolet light sources:

Calibration of various UV analyzers:

2 References

This specification references the following documents:

JJG879 UV Illuminance Meter GB/T 19258 Ultraviolet Germicidal Lamps QB/T 2989 Measurement method of ultraviolet irradiance and electrical parameters of ultraviolet high-pressure mercury lamp for dated references, only the dated version applies to this specification; for undated references document, its latest version (including all amendments) applies to this specification:

3 terms

3.1 Fluorescence A luminescence phenomenon called photoluminescence: Light produced by radiative transitions between states of equal multiplicity: when to stop when the incident

light is stopped, the luminescence phenomenon also disappears:

4 Overview

The ultraviolet analyzer uses the ultraviolet light source to emit and filter out the ultraviolet radiation after the residual visible light, and uniformly irradiates the ultraviolet radiation to be treated:

Instrumentation for analyzing fluorescent samples: According to the different ways of observing fluorescence, UV analyzers are divided into reflection type and transmission type: opposite the commonly used wavelengths of radiant ultraviolet analyzers are 254nm and 365nm, which are suitable for fluorescence detection and analysis of various opaque materials:

Analysis; transmission UV analyzers commonly use radiation in the range of 280nm~320nm, suitable for DNA and RNA electrophoresis gels Observation and photography of transparent samples: The UV analyzer consists of a UV light source, a filter, and an operating table: Figure 1 is the UV Analyzer block diagram:

a) Structural diagram of reflective UV analyzer b) Structural diagram of transmissive UV analyzer

Figure 1 Schematic diagram of the structure of the UV analyzer