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Calibration Specification for Infrared Standard Filter

红外标准滤光器校准规范

(English Translation)

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Introduction

JJF 1032-2005 "Terms and Definitions of Optical Radiation Measurement Terms", JJF 1071-2010 "National Meter Calibration Regulations" "Fan Compilation Rules", JJF 1059.1-2012 "Measurement Uncertainty Evaluation and Representation" constitute the supporting calibration specification the basic series of specifications for the revision work.

This specification is the first release.

Infrared standard filter calibration specifications

1 Scope

This specification applies to the calibration of standard filters and Fourier transform infrared spectrometers for the verification of dispersive infrared spectrophotometers Standard calibration of standard filters.

2 Reference documents this specification refers to the following documents.

JJG681-1990 Verification Regulation of Dispersive Infrared Spectrophotometer JJF 1032-2005 Terms and definitions of optical radiation measurement terms JJF 1317-2011 liquid chromatography-mass spectrometer calibration specification JJF 1319-2011 Fourier transform infrared spectrometer calibration specification for dated reference documents, only the dated version 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 Infrared radiation this specification refers to light radiation with a wavelength of (2.5 ~ 300) μm, and its corresponding wavenumber range is (4000 ~ 33) cm-1.

3.2 wavenumber

The reciprocal of the wavelength (symbol lambda) is the wave number (symbol upsilon),

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and the unit of measurement is cm-1.

3.3 Infrared wavelength standard filter the wavelength (or wave number) corresponding to the absorption peak or transmission peak in the infrared band is used to transfer the standard of the wavelength (or wave number) magnitude Quasi-filter, its main measurement technical index is wavelength or wave number, measurement unit is μm or cm-1.

3.4 Infrared transmission standard filter the standard filter used to transmit the spectral transmittance in the infrared band, whose main parameter is the spectral transmittance tau), the dimension is 1.

3.5 Infrared Stray Radiation Standard Filter infraredstraylightstandardfilter the standard filter used to evaluate the relative amount of stray radiation in the infrared cut-off region of the instrument Spectral transmittance indicates that the dimension is 1.For the stray radiation in this specification, please refer to 4.83 heterochromatic spurious in JJF 1032-2005 Definition of radiation.

4 Overview

Infrared standard filter is a measurement standard used to verify or calibrate the wavelength, transmittance and stray radiation of infrared spectrometer Quasi-apparatus.

Commonly used infrared standard filters are divided into infrared wavelength standard filters (polystyrene film filters), infrared transmission Than standard filters (neutral transmittance standard filters, rotating sector disks), infrared stray radiation standard filters (melt

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