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**Calibration Specification for Thin Layer Chromatography
Scanners**

(English Translation)

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Introduction

This specification is based on JJF 1001-2011 "General Terms and Definitions of Measurement", JJF 1071-2010 "National Measurement the Rules for the Preparation of Calibration Specifications, JJF 1059.1-2012 "Measurement and Expression of

Measurement Uncertainty" is the basis and basis.

Refer to GB/T 9008-2007 "Liquid Chromatography Terminology Column Chromatography and Planar Chromatography" for the content.

This specification is the first release.

TLC scanner calibration specification

1 Scope

This specification applies to the calibration of thin layer chromatography scanners (hereinafter referred to as instruments).

2 reference files

This specification refers to the following documents.

GB/T 9008-2007 Liquid chromatography terminology column chromatography and plane chromatography for dated references, only dated versions apply to this specification; undated quotations the latest version (including all amendments) applies to this specification.

3 terms

The terms and definitions defined in GB/T 9008-2007 and below apply to this specification.

3.1 ratio shift value (Rf). Rf value [GB/T 9008, 6.16] in the plane chromatography, the solute migration distance divided by the mobile phase migration distance can be expressed by the following formula.

In the formula.

Ds---solute migration distance, mm;

Dm---mobile phase migration distance, mm.

4 Overview

Thin layer chromatography is to place the sample solution on a thin layer plate and spread it with a developing agent in the unfolded container to make the sample contain Separation of ingredients. The basic principle of the instrument is. after the sample is spread on the thin layer plate, it forms spots or forms spots after color development.

Point, use a certain wavelength of light to illuminate the spot, perform spectral scanning on the spot, and obtain the specific shift value and absorb according to the scan.

The maximum absorption wavelength of the curve is qualitative, and the peak area or peak height of the spot is quantified.

The instrument is generally composed of a xenon lamp-tungsten lamp combined light

source, a monochromator, a thin layer plate and a detector, and can be used for single beam, Dual beam or dual wavelength measurement, reflective mode and transmissive mode, linear scanning and sawtooth scanning. instrument the structure diagram is shown in Figure 1.