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Terms for liquid chromatography

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document replaces GB/T 9008-2007 "Terminology for Liquid Chromatography - Column Chromatography and Planar Chromatography" and is consistent with GB/T 9008-2007 Compared with the previous version, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) The description of the scope has been changed (see Chapter 1, Chapter 1 of the.2007 edition);
- b) Added "hydrophilic interaction chromatography" (see 3.6.1.3), "strong cation exchange chromatography" and "weak cation exchange chromatography" to Chapter 3 "Strong anion exchange chromatography", "weak anion exchange chromatography" (see 3.6.4.2~3.6.4.5), "supercritical fluid chromatography" (See 3.6.8) Terms and definitions; added the abbreviations of "normal phase liquid chromatography" (see 3.4), "gel filtration chromatography" English abbreviations (see 3.6.2.1), English abbreviations for "affinity chromatography" (see 3.6.3), English abbreviations for "ion chromatography" (See 3.6.4.1), "ion suppression chromatography", "ion pair chromatography", "reversed phase ion pair chromatography", "hydrophobic interaction chromatography" abbreviations (see 3.6.5 to 3.6.7), the abbreviations of "preparative liquid chromatography" (see 3.6.9), the abbreviations of "paper chromatography" Abbreviations (see 3.7.1);
- c) In Chapter 3, the definition of "high performance liquid chromatography" (see 3.6.1, 3.6.1 of the.2007 edition), "ultra-high performance liquid chromatography" and "ultra-high performance liquid chromatography" were changed. Terms and definitions (see 3.6.1.1,

3.6.1.1 of the.2007 edition), English abbreviations for "reversed phase high performance liquid chromatography" (see 3.6.1.2, 3.6.2 of the.2007 edition), the term "size exclusion chromatography" (see 3.6.2, 3.6.3 of the.2007 edition), "hydrophobic Definition of "chromatographic method" (see 3.6.7, 3.6.8 of the.2007 edition);

d) In Chapter 4, "high performance liquid chromatograph", "ultra-high performance liquid chromatograph" (see 4.1.1.1, 4.1.1.2), "supercritical fluid chromatograph" were added. Spectrometer", "Preparative Liquid Chromatograph" (see 4.1.1.5, 4.1.1.6), "Pump" (see 4.3), "Switching Valve" (see 4.4), "Column [Thermostat] Box" (see 4.6), "Chromatographic column" (see 4.7.7), "Pre-column filter" (see 4.8.1), "Cation suppressor" and "Anion suppressor" (see 4.9.1, 4.9.2), "high resolution mass spectrometer" (see 4.11.9.1), "charged aerosol detector" (see 4.11.10), "chemiluminescence detector" "Conductivity detector" (see 4.11.12), "Ampereometric detector" (see 4.11.13.1, 4.11.13.2), "Viscosity detector" (see 4.11.15) Terms and definitions; added the abbreviations of "UV-visible detector" and "photodiode array detector" (see 4.11.5, 4.11.6), "[differential] refractive index detector" (see 4.11.7), "evaporative light scattering detector", "mass spectrometer" abbreviations for "detector" (see 4.11.8, 4.11.9), "fluorescence detector" (see 4.11.11), "electrochemical The English abbreviation of "detector" (see 4.11.13);

e) In Chapter 4, the terms "liquid chromatograph", "thin layer chromatograph" and "multi-purpose chromatograph" were changed (see

4.1.3 of the.2007 edition) 4.1.3), the definition of "column inlet" and "column outlet" (see 4.7.1, 4.7.2, 4.7.1,

1 Scope

GB/T 9008-2024 is the Chinese vocabulary of liquid chromatography. Liquid chromatography is the most used analytical technique in the world and the vocabulary underneath it is deceptively treacherous: efficiency, resolution, selectivity, capacity factor and retention are related quantities that are routinely confused, and the newer terms of ultra-high performance, superficially porous particles, and two-dimensional and hydrophilic interaction separations arrived faster than any settled Chinese usage. The standard defines the terms across the field: the general chromatographic terms, the separation modes and mechanisms, the stationary and mobile phases and their properties, the column and its packing, the instrument and its components from pump to detector, the retention, efficiency, selectivity and resolution quantities with their definitions and symbols, the peak shape and integration terms, the qualitative and quantitative analysis terms, and the terms of the coupled and hyphenated techniques. It takes effect on 1 July 2025.

This document defines terms, definitions and symbols for liquid chromatography. This

document is applicable to the preparation of liquid chromatography standards, technical documents and books. This document does not apply to electrophoresis.

2 Normative references

This document has no normative references.

3 General terms

3.1 Chromatography using a liquid as the mobile phase.

3.2 A liquid chromatography method in which a stationary liquid is coated on a carrier as a stationary phase.

3.3 Liquid-solid chromatography; LSC Liquid chromatography using a solid (generally referred to as an adsorbent) as the stationary phase.

3.4 Liquid chromatography in which the stationary phase is more polar than the mobile phase.

3.5 Liquid chromatography in which the stationary phase is less polar than the mobile phase.

3.6 Liquid chromatography that separates components within a column.

Note. In this document, column chromatography only includes column liquid chromatography.

3.6.1 Column liquid chromatography using $2\mu\text{m}$ ~ $20\mu\text{m}$ particle size stationary phase, high operating pressure (up to 50MPa) and high separation efficiency Spectrum method.

3.6.1.1 Column liquid chromatography with a stationary phase particle size less than $2\mu\text{m}$ and an operating pressure greater than 50MPa.