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General rule for liquid chromatography-mass spectrometry

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Foreword

This guidance technical document was drafted in accordance with the rules given in GB/T 1.1-2009. This guidance technical document was proposed by the China Petroleum and Chemical Industry Federation. This guidance document is under the jurisdiction of the National Chemical Standardization Technical Committee (SAC/TC63). This guiding technical document drafting unit. Maoming City, Guangdong Province, Quality Measurement Supervision and Inspection Institute, China Academy of Inspection and Quarantine, China Inspection and Certification Group Ningbo Co., Ltd., China Petroleum and Chemical Industry Federation, CNOOC Tianjin Chemical Research and Design Institute Co., Ltd., Chongqing Inspection and Quarantine Technology Center of Entry-Exit Inspection and Quarantine Bureau, South China Normal University, China Petrochemical Co., Ltd. Beijing Beihua Institute Yanshan Branch Institute, Hangzhou Special Equipment Testing and Research Institute. The main drafters of this guiding technical document. An Xiaochun, Ma Hongyuan, Chen Huiming, Wang Zhenxin, Yang Jianhai, Wu Xiaotao, Wang Qi, Song Naining, Chen Shitai, Li Xuan, Liu Yi, Guan Min, Zheng Lei. This guidance technical document is for reference only. For advice and comments on this guidance document, please contact the State Council Standardization Administration The department reflected. General rules for liquid chromatography-mass spectrometry

1 Scope

This guiding technical document specifies the general rules for carrying out qualitative and quantitative analysis using the liquid chromatography-mass spectrometry method. This guiding technical document applies to the general requirements for the qualitative and quantitative analysis of compounds using the liquid chromatography-mass spectrometry

method.

This guidance document specifies general rules for qualitative and quantitative analysis using liquid chromatography-mass spectrometry. This guidance document applies to the general requirements for the qualitative and quantitative analysis of compounds using liquid chromatography-mass spectrometry.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 6041 General rules for mass spectrometry

GB/T 6682 Analytical laboratory water specifications and test methods

GB/T 16631-2008 General rules for high performance liquid chromatography

3 Terms and definitions

The following terms and definitions as defined in GB/T 6041 and GB/T 16631 apply to this document.

3.1 Liquid chromatography liquid chromatography; LC Chromatography using a liquid as the mobile phase.

3.2 Mass spectrometry mass spectrometry; MS After the sample is ionized, ions of different mass-to-charge ratios are formed, and the sample is analyzed according to the mass and relative abundance of the ions.

3.3 Liquid chromatography-mass spectrometry coupled with liquid chromatography-mass spectrometry; LC-MS An analytical technique in which liquid chromatography used as a separation function and mass spectrometry with qualitative and quantitative functions are linked online.

3.4 Mass-to-charge ratio mass-to-charge ratio m/z The ratio of the mass m of the ion to the number z of charges it carries, expressed in m/z .

3.5 Full spectrum scanning full scan All masses of ions are detected over a continuous mass range.

3.6 Multiple reaction monitoring multiple reaction monitoring; MRM The process of multiple pairs of parent ions and their corresponding daughter ions is monitored.

3.7 Extracted ion chromatogram extracted ion chromatogram; EIC Select a mass-to-charge ratio ion on a total ion chromatogram to obtain a plot of the intensity of the ion as a function of time.