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**General rules for microwave plasma atomic emission
spectrometry**

微波等离子体原子发射光谱方法通则

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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:

Please note that some of the contents of this document may involve patents: The issuing organization of this document does not assume the responsibility for identifying patents:

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General rules for microwave plasma atomic emission spectrometry

1 Scope

This document establishes the use of microwave plasma atomic emission spectrometer to qualitatively and quantitatively analyze metal and some non-metal elements in samples:

General rules for analysis:

This document is applicable to the analysis of major to trace metals and some Qualitative and quantitative analysis of non-metallic elements:

This document does not apply to direct solid injection methods:

2 Normative references

GB/T 602

GB/T 622

GB/T 626

GB/T 4842

GB/T 4844

GB/T 6379

GB/T 6682

GB/T 8979

GB/T 13966

GB/T 23942-2009

GB/T 27417-2017

3 Terms and definitions

Terms and definitions defined in GB/T 6379:1, GB/T 13966, GB/T 23942-2009 and JY/T 0567-2020 and the following Applicable to this document: 3:1 Microwave plasma An excited plasma light source formed by coupling microwave energy:

4 Principles of the method

The sample is atomized by the atomization system to form an aerosol, which is carried into the microwave plasma by the carrier gas (nitrogen, helium or argon) and is stable at high temperature:

The atoms or ions of the measured element are fully evaporated, atomized, excited and ionized in the atmosphere: When the atoms or ions of the measured element are excited, the electrons move between different energy levels in the atoms: