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**INDUSTRY STANDARD OF THE
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**Calibration Specification for Superconducting Pulsed Fourier
Transform Nuclear Magnetic Resonance Spectrometers
(English Translation)**

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Introduction

Part of this specification with reference to the use of international instruments
ASTME386-90 (2011) High-resolution nuclear magnetic resonance (NMR) Spectroscopic
characterization implement data standards

[Standard Practice for Data Presentation Relating to High-Resolution Nuclear Magnetic Resonance (NMR) Spectroscopy].

This specification is the first release.

Superconducting pulse Fourier transform NMR spectrometer Calibration Specification

1 Scope

This instruction applies to 300MHz and above the superconducting pulse Fourier transform NMR spectrometer (hereinafter referred to as equipment) Calibration.

2. References

Characterization of the implementation of standards ASTM E386-90 (2011) High-resolution nuclear magnetic resonance (NMR) spectroscopy data (Standard Practice for Data Presentation Relating to High-Resolution Nuclear Magnetic Resonance (NMR) Spectroscopy) "Handbook of Analytical Chemistry --- Seventh Volume NMR Spectroscopy" Beijing. Chemical Industry Press for dated references, only the dated edition applies to this specification; undated reference documents Member, the latest edition (including any amendments Version) applicable to this specification.

3 terminology and units of measurement 3.1 chemical shift Proton magnetic field in the same or other magnetic core, which because of its different chemical environment in the molecule, and in Phenomenon of resonance at different frequencies, and whose scale commonly used to measure the reference material and the sample resonance frequency difference list Shown, denoted delta, dimensionless 1.

delta =

$\nu_S - \nu_R$

$\nu_{\text{instrument}} \times 10$

Where.

ν_S --- the resonance frequency of the sample, Hz;

ν_R --- the resonance frequency of the reference material, Hz;

$\nu_{\text{instruments}}$ --- instrument operating frequency, Hz.

3.2 free induction decay (FID) free induction decay Spin system under pulsed accept induction coil signal occurs, its intensity over time and decay.

3.3 linewidth factor line broadening factor for each data point free induction decay signal is exponential weighting factor used. When the factor is equal to Zero, not weighted.

4 Overview

4.1 Principle

Nuclear magnetic resonance spectroscopy, the study has some moments of nuclei in a static magnetic field and the magnetic field due to the interaction of the magnetic moment. Resonance is formed by a set of split levels, appropriate action under the RF frequency, energy level transitions occur between now and the emergence of