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**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 31109-2014**

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**Method of evaluation for the acoustic quality of musical  
instruments**

乐器声学品质评价方法

**Issued on: September 3, 2014**

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**Issued by: General Administration of Quality Supervision, Inspection and  
Quarantine;  
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## Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents. The standard proposed by China National Light Industry Council. This standard by the National Standardization Technical Committee Instrument (SAC/TC371) centralized. This standard was drafted. Wuhan Eric card Electronics Co., Ltd., Yin-Fei Technology (Jiangsu) Co., Ltd., Guangzhou Pearl River Piano Group shares have Ltd., Beijing Institute of Musical Instruments, Shanghai National Musical Instruments Factory, Wuhan Conservatory of Music. The main drafters. Zhang Jian Tong, Wang Wei, solemn, Fanting Guo, Liang Zhiwei, Wang Guozhen, Pan Qishan, Thomas Chan, Li Jian, Wu Dongliang, Qin Hongwei, Zhou Yun, Gu Jie. Quality Evaluation Method of acoustic instruments

## 1 Scope

China's national method for evaluating the acoustic quality of musical instruments. It specifies the terms and definitions used in evaluating the sound quality of an instrument, the principles of evaluation, the requirements, the evaluation items and the evaluation procedure, and it applies to the subjective assessment of the acoustic quality of musical instruments. It expressly does not apply to the objective measurement of the physical acoustic quantities of an instrument. That exclusion is the key to the document. The physical acoustics of an instrument can be measured precisely - the frequency response, the decay times, the harmonic content, the radiation pattern - and none of those measurements answers the question a buyer is actually asking, which is whether the instrument sounds good. The relationship between the measurable quantities and the perceived quality is not known well enough to be calculated, and it never has been, which is why instruments are still bought by being played and listened to. What the standard does is make that subjective judgement structured and repeatable rather than replacing it. It defines the descriptive vocabulary explicitly, each term with its opposite: clear, against vague or muddy; soft,

meaning comfortable to listen to, against stiff or harsh; bright, a full and active tone rich in overtones, against dull; full, meaning thick and elastic, against thin; mellow, meaning beautiful and moist rather than sharp and rough; and balanced, meaning that the volume and tone are evenly distributed across the instrument's whole range. Those definitions, with an evaluation procedure around them, are what allow two evaluators to describe the same instrument in the same words. Issued on 3 September 2014 and in force since 1 August 2015.

This standard specifies the terms and definitions in the quality of acoustic instruments sound assessment, evaluation principles, requirements, evaluation of projects and evaluation procedures. This standard applies to the acoustic quality of the instrument in the subjective assessment of sound quality. This standard does not apply to the objective detection instruments and sound quality of physical quantities.

## 2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 2900.86-2009 Electrotechnical terminology acoustic and electro-acoustics

GB/T 3947-1996 Acoustics Terminology

## 3 Terms and Definitions

GB/T 2900.86-2009, GB/T 3947-1996 and defined the following terms and definitions apply to this document.

3.1 Clear definitional Pure sound, level, overtone discernible. NOTE. it is the opposite of vague, cloudy.

3.2 Soft mellow Voice through song, listening comfort. NOTE. it is the opposite of stiff, harsh.

3.3 Bright bright Plump and powerful tenor, treble full, rich overtones, bright active. NOTE. it is the opposite of dull and boring.

3.4 Plump ful Full sound, thick and elastic.

Note. the opposite of its thin, shriveled.

3.5 Mellow smooth Sound beautiful, loose pass, plump and moist, not pointed rough. NOTE. it is the opposite of rough and sharp.

3.6 Balance balanced Volume within instrument range full-range of each zone to coordinate the distribution, unified tone. NOTE. it is the opposite of the imbalance, uneven.