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

GB/T 31229-2014

Test method for volatility rate by thermogravimetry

热重法测定挥发速率的试验方法

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

"Standard Test Method for Determination of the evaporation rate of the thermal gravimetry"

This standard is consistent with ASTM E2008-2008 technical content.

This standard compared with ASTM E2008-2008, the main technical content amended as follows.

--- 3.1 are listed in the definition of thermal gravimetry and thermogravimetry analysis;

Content --- Chapter 9 re-calibration method in accordance with national regulations;

--- Since "mi" and "mf" units of milligrams, and "rv" in units of micrograms per minute for the unit in order to be consistent with the formula (1) the addition and multiplication 1000;

--- Due to the use of A, at a constant temperature, the evaporation rate of the sample will change with temperature or time, even if there are constant speed volatile it may volatilize entirely within 30min, so the formula $rv = (mi - mf)/30$ does not apply, in 11.2 removed the formula;

Chapter 13 --- The precision and bias section from the body moved to Appendix A (informative);

--- Annex B (informative) lists the number of the standard clauses and clauses
ASTME2008-2008 a control number Lanbiao.

This standard was proposed by the Chinese Academy of Sciences.

This standard by the National Standardization Technical Committee of nano technology (SAC/TC279) centralized.

1 Scope

This standard specifies the method for determining the thermal gravimetry sample volatilization rates.

This standard applies to the use of thermal gravimetric analyzer test 25 °C ~ 500 °C temperature range, the evaporation rate of a single volatile components. This standard is applicable Samples for testing the evaporation rate greater than 5µg/min of. Responsibility of the user of this standard to determine whether the need to repeat the test and repeat the test the number of times to achieve the requirements.

This standard does not include associated with its use of all the security issues. Before using this standard method, users are responsible for establishing appropriate Safety and health standards, specifications and confirm applicability.

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 6425 Thermal Analysis term GB/T 8170 GB numerical rounding rules and limit values
and expressed determination GB/T 27762 TGA quality test methods for
calibration indication ASTM E 177 terms used in the precision and bias of the ASTM test
method (Standard Practice for Use of the Terms Precision and Bias in ASTM Test Methods)
ASTM E473 Thermal Analysis Standard Terminology
(Terminology Relating to Thermal Analysis) Room ASTM E691 laboratory studies Test Method
for precision guidance with Practice
(Standard Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method)
ASTM E 1142 Standard Terminology (Standard Terminology Relating to and
thermo-physical properties related Thermophysical Properties)

3 Terms and Definitions

GB/T 6425, and the following terms and definitions apply ASTM E473 and ASTM E1142 defined in this document.

Thermogravimetry; TG TGA thermogravimetric analysis; TGA Under the program temperature and a certain atmosphere, measuring the technical quality and temperature or the time of the sample.

Volatile volatility

Volatile solid or liquid material is a gas at room temperature trends.

Evaporation rate volatility rate Solid or liquid material at a given temperature becomes the rate of gas. The test results are volatile content per unit of time to represent.