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

GB/T 26645.1-2011

**Determination of particle size distribution by gravitational liquid
sedimentation methods -- Part 1: General principles and
guidelines**

粒度分析 液体重力沉降法 第1部分：通则

(English Translation)

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Foreword

GB/T 26645.1 "Particle size analysis liquid gravity sedimentation method" is divided into three parts.

--- Part 1. General;

--- Part 2. pipetting;

Part --- Section 3. X-ray gravitational sedimentation.

This section GB/T 26645.1 - Part 1.

This part identical with ISO 13317-1:2001 "Liquid gravity settling particle size analysis - Part 1. General" (in English).

For ease of use, this section made the following editorial changes.

a) "international standards in this section" to "this Part";

b) Remove the preface to the international standards;

- c) use the decimal symbol instead of as the decimal point symbol " , " . " , " ;
- d) on the ISO 13317-1:2001 and other international standards referenced, there is tantamount to the adoption of a standard for the use of standards in place Corresponding to international standards, it has not been adopted as the standard of a direct use of international standards.

This section of the Appendix A, Appendix B, Appendix C, Appendix D are informative appendices.

This standard by the national particle characterization and sorting and screen Standardization Technical Committee (SAC/TC168) and focal points.

This section is drafted. Shanghai Institute of Measurement and Testing Technology, Shanghai nano-technology and application National Engineering Center Limited.

Introduction

Gravity sedimentation particle size analysis is one of many methods of powder particle size distribution measuring a present, the method is applicable to a particle size in the range of Samples $0.5\mu\text{m} \sim 100\mu\text{m}$, while meeting the Reynolds number 1 Scope this section GB/T 26645 specifies the method of analysis of the particle size distribution of the particulate material by liquid gravity settling, the typical particle size measurement an amount in the range of $0.5\mu\text{m} \sim 100\mu\text{m}$.

This section applies to the measurement of particle size distribution of the slurry or dispersed in a liquid particulate material. Often dispersed and continuous phases is the density difference between the positive, but can also be used to measure the ratio of the low density of the dispersed phase droplet particle size distribution of the emulsion. Particles in suspension can not Physical or chemical changes. Hazardous materials need to adopt basic protective measures, particularly the use of volatile liquid used as a low boiling point even when the continuous phase, the analyst should first test explosion.

Note: This section may contain materials, operations and equipment is dangerous. This section does not indicate all of the safety issues involved in the process. The use of are concerned, should be fully considered before using security, understand the rules of operation, and skills training.

2 Normative references

The following documents contain provisions which, through reference GB/T 26645 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, we are encouraged to reach agreement under this section all parties that proposed to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 1713 pigment density Pycnometer method (GB/T 1713-2008, ISO 787-10:1993, IDT)
GB/T 2000 coking products solid sampling methods GB/T 15445.1 size analysis results
presentation - Part 1. graphical representation (GB/T 15445-2008, ISO 9276-1.

1998, IDT)

GB/T 20099 for preparing a powder sample in a liquid dispersion method (GB/T
20099-2006, ISO 14887:2000, IDT) ISO 758 with a liquid chemical products for industrial
measurement at 20 °C Density ISO 2591-1 screening test - Part 1. Metal braid and a metal
plate punching screening test ISO 13317-2 particle size analysis liquid gravity settling Part
2. pipetting ISO 13317-3 particle size analysis liquid gravity settling - Part 3. X-ray
gravitational sedimentation

3.1 Terms and Definitions

The following terms and definitions apply to this section.

3.1.1

Eventually settling velocity terminalsettlingvelocity in the stationary particles in the liquid by
gravity and the speed of the liquid applied to the resistance particles equilibrium.

3.1.2

Stokes diameter Stokesdiameter Laminar flow in the fluid in the same particle settling
velocity equal freedom homogeneous sphere diameter.

3.1.3

Opening openpores

Hole communicating with the outer surface of the particles.