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

GB/T 5211.6-2020

Replacing GB/T 1717-1986

**General methods of test for pigments and extenders - Part 6:
Determination of pH value of an aqueous suspension**

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3 reagent

3.2 Potassium chloride solution. 0.1% by mass, prepared with water that meets 3.1.

3.3 Wetting agent. suitable, such as absolute ethanol and methanol.

4 Equipment

4.3 Balance. the actual graduation value $\geq 0.01\text{g}$ or higher actual graduation.

5 samples

6 Test procedure

6.1 Preparation of suspension

Foreword

GB/T 5211 "General Test Methods for Pigments and Extender Pigments" is divided into the following parts.

---Part 1.Determination of water-soluble matter by cold extraction method;

---Part 2.Determination of water-soluble matter by thermal extraction method;

---Part 3.Determination of volatile matter at 105 degrees C;

---Part 4.Determination of filling volume and apparent density;

---Part 5.Tolerance test method;

---Part 6.Determination of pH value of water suspension;

---Part 11.Determination of water-soluble sulfate, chloride and nitrate;

---Part 12.Determination of resistivity of water extract;

---Part 13.Determination of the pH of the water extract;

---Part 14.Determination of the residue on the sieve, mechanical flushing method;

---Part 15.Determination of oil absorption;

---Part 16.Comparison of white pigment's decoloring power;

---Part 17.Comparison of white pigment contrast ratio (hiding power);

---Part 18.Determination of residue on sieve water method (manual operation);

--- Part 19.Determination of relative tinting strength and diluted color of colored pigments by visual comparison method;

---Part 20.Comparison of the color of white, black and colored pigments in the natural color system.

This part is Part 6 of GB/T 5211.

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

This part replaces GB/T 1717-1986 "Determination of pH Value of Pigment Suspension". Compared with GB/T 1717-1986, the main technical

The technical differences are as follows.

---Added scope, normative reference documents, samples (see Chapter 1, Chapter 2, and Chapter 5);

--- Added "unless otherwise specified, only use reagents confirmed to be analytically pure and above purity in the test" (see Chapter 3);

---Modified the requirements for test water; added potassium chloride solution, wetting agent and requirements (see Chapter 3, Chapter 1 of the 1986 edition);

---Modified the description of test container and requirements, balance accuracy (see Chapter 4, Chapter 2 of the 1986 edition);

---Modified the test procedure (see Chapter 6, Chapter 3 of the 1986 edition);

--- Modify the content of the test report (see Chapter 8, Chapter 5 of the 1986 edition).

This part uses the redrafting method to modify and adopt the international standard ISO 787-9:2019 "General Test Methods for Pigments and Extender Pigments No. 9

Part. Determination of pH Value of Water Suspension.

Compared with ISO 787-9:2019, this part has structural differences. The "catalog", "foreword" and "terms and definitions" of international standards have been deleted.

"Foreword" and "Informative Appendix A" that meet the requirements of national standards have been added, and Chapter 6 "Test Procedures" has been adjusted to be divided into "Preparation of Suspensions".

"Preparation" and "Determination".

Compared with ISO 787-9:2019, there are technical differences in this part. The clauses involved in these differences have been

The vertical single line () is marked, and the corresponding technical differences and their

reasons are listed in Appendix A.

This section also made the following editorial changes.

---Change the standard name, in order to be consistent with the existing standard numbering method, change the standard name to "General Test Methods for Pigments and Extender Pigments"

Part 6.Determination of pH value of water suspension.

This part was proposed by the China Petroleum and Chemical Industry Federation.

This part is under the jurisdiction of the National Paint and Pigment Standardization Technical Committee (SAC/TC5).

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1 Scope

This part of GB/T 5211 specifies a general test method for determining the pH value of aqueous suspensions of pigments and extender pigments.

This section applies to the determination of the pH value of aqueous suspensions of pigments and extender pigments.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 3186 Paint, varnish, and raw material sampling for paint and varnish (GB/T 3186-2006, ISO 15528.2000, IDT)

GB/T 6682-2008 Analytical laboratory water specifications and test methods (ISO 3696:1987, MOD)

3 reagent

Unless otherwise specified, only reagents of analytical purity and above are used in the test.

3.1 Water. Distilled water or deionized water that meets the requirements of Grade 3 water in GB/T 6682-2008. Water is quickly absorbed when exposed to the air

Oxide carbon, so avoid contact with air.

4 Equipment

4.1 Container with stopper. made of chemical resistant glass or other suitable materials. The container should be thoroughly rinsed with water (3.1) before each use.

4.2 pH measuring device. It can measure to 0.1 unit, and it is calibrated with a buffer solution of known pH value at the test temperature.

5 samples

Take a representative sample of the tested product according to GB/T 3186.

6.1 Preparation of suspension

Test at room temperature.

Weigh a certain amount of sample (accurate to 0.01g) with a balance (4.3) and put it into a container with a stopper (4.1). Use water (3.1) or potassium chloride solution

(3.2) Prepare 5%~10% (mass fraction) of the sample suspension, plug it with a stopper, shake vigorously or stir for a long enough time until it is suspended