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General methods of test for pigments and extenders —

Part 9: Determination of pH value of an aqueous suspension

Méthodes générales d'essai des pigments et matières de charge — Partie 9: Détermination du pH d'une suspension aqueuse

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 256, *Pigments, dyestuffs and extenders.*

This second edition cancels and replaces the first edition (ISO 787-9:1981), which has been technically revised. The main changes compared to the previous edition are as follows:

- in Clause 3, a reference to ISO 18451-1 has been added;
- the preparation of the glass container (5.1) has been changed;
- the duplicate determination has been changed to single determination;
- in addition to ethanol, methanol has been added as an alternative wetting agent in Clause 7;
- the text has been editorially revised and the normative references has been updated.

A list of all parts in the ISO 787 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

General methods of test for pigments and extenders —

Part 9:
Determination of pH value of an aqueous suspension

1 Scope

This document specifies a general method of test for determining the pH value of an aqueous suspension of a sample of pigment or extender.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

ISO 18451-1, *Pigments, dyestuffs and extenders — Terminology — Part 1: General terms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18451-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Reagents

4.1 Distilled or demineralized water, in the pH range of 5,0 to 8,0.

Because water rapidly absorbs carbon dioxide, the water shall be protected from access to the atmosphere.

4.2 Buffer solution, 0,1 % KCl (p.a.), prepared using water specified in 4.1.

The preparation of a buffer solution is optional but recommended.

5 Apparatus

5.1 Glass container, made of chemically resistant glass, fitted with a ground glass or rubber stopper.

Glass container shall be cleaned before each use and to be rinsed with the corresponding water, see above. The rubber stopper shall not have been used for any other purpose.

5.2 pH measuring device, capable of measurement to 0,1 unit, calibrated against buffer solutions of known pH value at the temperature of the test.

5.3 Balance, with an appropriate accuracy.

6 Sampling

Take a representative sample of the product to be tested according to ISO 15528.

7 Procedure

Carry out the determination at room temperature.

Prepare a 5 % to 10 % (mass fraction) suspension of the product under test, using water (4.1) or the buffer solution (4.2), in the glass container (5.1). Stopper the container and shake, roll or stir it vigorously for sufficient time. Allow it to stand for 5 min, and determine, to the nearest 0,1 unit, the pH value of the suspension. Alternatively, the suspension may be filtered beforehand.

If the product does not disperse easily in water, a wetting agent should be used. In this case, up to 5 ml pure ethanol or methanol may be used but care should be taken to ensure that the minimum quantity is used. The neutrality of the wetting agent should be checked once by making a blank determination. If a wetting agent is used, the volume of water shall be reduced so that the original concentration of the suspension is maintained.

The type and quantity of wetting agent used shall be stated in the test report.

Record the pH value to the nearest 0,1 unit and record the temperature of the suspension to the nearest 1 °C.

8 Expression of results

Report the result to the nearest 0,1 unit.

9 Test report

The test report shall contain at least the following information:

a) the identification of the product tested;

b) a reference to this document, i.e. ISO 787-9;

c) if used, the type and quantity of wetting agent;

d) the result of the test as indicated in Clause 8, and the test temperature;

e) any deviation, by agreement or otherwise, from the procedure specified;

f) the date of the test.

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