

STN	Všeobecné metódy skúšania pigmentov a plnidiel Časť 4: Stanovenie acidity alebo alkality vodného výluhu (ISO 787-4: 1981)	STN EN ISO 787-4 67 0520
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General methods of test for pigments and extenders - Part 4: Determination of acidity or alkalinity of the aqueous extract (ISO 787-4:1981)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/18

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EUROPEAN STANDARD

EN ISO 787-4

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English Version

**General methods of test for pigments and extenders - Part
4: Determination of acidity or alkalinity of the aqueous
extract (ISO 787-4:1981)**

Méthodes générales d'essai des pigments et matières
de charge - Partie 4: Détermination de l'acidité ou de
l'alcalinité de l'extrait aqueux (ISO 787-4:1981)

Allgemeine Prüfverfahren für Pigmente und Füllstoffe -
Teil 4: Bestimmung der Acidität oder Alkalität des
wässrigen Extraktes (ISO 787-4:1981)

This European Standard was approved by CEN on 21 September 2017.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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EN ISO 787-4:2017 (E)

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European foreword

The text of ISO 787-4:1981 has been prepared by Technical Committee ISO/TC 256 “Pigments, dyestuffs and extenders” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 787-4:2017 by Technical Committee CEN/TC 298 “Pigments and extenders” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2018, and conflicting national standards shall be withdrawn at the latest by April 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 787-4:1981 has been approved by CEN as EN ISO 787-4:2017 without any modification.

International Standard



787/4

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

General methods of test for pigments and extenders — Part 4 : Determination of acidity or alkalinity of the aqueous extract

Méthodes générales d'essai des pigments et matières de charge — Partie 4 : Détermination de l'acidité ou de l'alcalinité de l'extrait aqueux

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Descriptors : paints, pigments, tests, chemical analysis, determination, acidity, alkalinity, extraction analysis.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 787/4 was developed by Technical Committee ISO/TC 35, *Paints and varnishes*, and was circulated to the member bodies in December 1979.

It has been approved by the member bodies of the following countries :

Australia	India	Poland
Austria	Ireland	Romania
Brazil	Israel	South Africa, Rep. of
Canada	Italy	Spain
China	Kenya	Sweden
Egypt, Arab Rep. of	Korea, Rep. of	Switzerland
France	Netherlands	United Kingdom
Germany, F. R.	Norway	USSR

No member body expressed disapproval of the document.

This International Standard cancels and replaces ISO Recommendation R 787/4-1968, of which it constitutes a technical revision.

The purpose of this International Standard is to establish a series of general test methods for pigments and extenders which are suitable for all or many of the individual pigments and extenders for which specifications might be required. In such cases, a cross-reference to the general method should be included in the International Standard relating to that pigment or extender, with a note of any detailed modifications which might be needed in view of the special properties of the product in question.

Technical Committee ISO/TC 35, *Paints and varnishes*, decided that all the general methods should be published as they become available, as parts of a single International Standard, in order to emphasize the relationship of each to the whole series.

The Technical Committee also decided that, where two or more procedures were widely used for determining the same or a similar characteristic of a pigment or extender, there would be no objection to including more than one of them in the ISO series. In such cases it will, however, be essential to state clearly in a specification which method is to be used and, in the test report, which method has been used.

Parts of the series already published are as follows :

- Part 1 : Comparison of colour of pigments
- Part 2 : Determination of matter volatile at 105 °C
- Part 3 : Determination of matter soluble in water — Hot extraction method
- Part 4 : Determination of acidity or alkalinity of the aqueous extract
- Part 5 : Determination of oil absorption value
- Part 6 : Determination of residue on sieve — Oil method
- Part 7 : Determination of residue on sieve — Water method — Manual procedure
- Part 8 : Determination of matter soluble in water — Cold extraction method
- Part 9 : Determination of pH value of an aqueous suspension
- Part 10 : Determination of density — Pyknometer method
- Part 11 : Determination of tamped volume and apparent density after tamping
- Part 13 : Determination of water-soluble sulphates, chlorides and nitrates
- Part 14 : Determination of resistivity of aqueous extract
- Part 15 : Comparison of resistance of coloured pigments of similar types to light from a specified light source
- Part 16 : Comparison of relative tinting strength (or equivalent colouring value) and colour on reduction in linseed stand oil using the automatic muller
- Part 17 : Comparison of lightening power of white pigments
- Part 18 : Determination of residue on sieve — Water method — Mechanical flushing procedure
- Part 19 : Determination of water-soluble nitrates — Salicylic acid method
- Part 20 : Comparison of ease of dispersion — Oscillatory shaking method
- Part 21 : Comparison of heat stability of pigments using a stoving medium
- Part 22 : Comparison of resistance to bleeding of pigments
- Part 23 : Determination of density (using a centrifuge to remove entrained air)
- Part 24 : Determination of relative tinting strength of coloured pigments and relative scattering power of white pigments — Photometric method

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General methods of test for pigments and extenders — Part 4 : Determination of acidity or alkalinity of the aqueous extract

0 Introduction

This document is a part of ISO 787, *General methods of test for pigments and extenders*.

1 Scope and field of application

This part of ISO 787 specifies a general method of test for determining the acidity or alkalinity of the aqueous extract of a sample of pigment or extender.

NOTE — When this general method is applicable to a given pigment or extender, only a cross-reference to it should be included in the International Standard relating to that pigment or extender, with a note of any detailed modification which may be needed in view of the special properties of the material in question. Only when this general method is not applicable to a particular material should a special method for determination of acidity or alkalinity be specified.

2 References

ISO/R 385, *Burettes*.

ISO 787, *General methods of test for pigments and extenders*

— *Part 3 : Determination of matter soluble in water — Hot extraction method.*

— *Part 8 : Determination of matter soluble in water — Cold extraction method.*

ISO 842, *Raw materials for paints and varnishes — Sampling.*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

ISO 787/4-1981 (E)**6.2.2 Potentiometric determination (method B)**

Take 100 ml of the test solution (6.1), insert the electrodes of the pH measuring device and read the pH value.

If the pH value is between 4 and 8, consider the solution as being neutral.

If the pH value is more than 8 (alkaline), titrate the solution with the hydrochloric acid solution (3.1) to a pH value just less than 8.

If the pH value is less than 4 (acid), titrate the solution with the sodium or potassium hydroxide solution (3.2) to a pH value just more than 4.

6.2.3 Repeat determinations

If the results of the duplicate determinations differ by more than 5 % of the higher value, the procedure (clause 6) should be repeated.

7 Expression of results**7.1 Calculation**

Calculate the acidity (alkalinity) by the equation

$$A = \frac{V \times 2,5 \times 100}{2 \times m}$$

$$= 125 \frac{V}{m}$$

where

A is the acidity (alkalinity) expressed as millilitres of 0,1 mol/l alkali (hydrochloric acid) solution required to neutralise the extract of 100 g of product;

m is the mass, in grams, of the sample taken to prepare the test solution (6.1);

V is the volume, in millilitres, of the sodium or potassium hydroxide solution (3.2) or hydrochloric acid solution (3.1).

If the extract is neutral, report the result as "neutral".

For titrimetric measurements report the mean of the two determinations.

7.2 Precision

No precision data are currently available.

8 Test report

The test report shall contain at least the following information :

- the type and identification of the product tested;
- a reference to this International Standard (ISO 787/4);
- the result of the test as indicated in clause 7;
- any deviation, by agreement or otherwise, from the procedure specified;
- the date of the test.

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